



The Degree of Practice of Digital Education Skills among Early Childhood Teachers in the Northern Triangle Region of the Palestinian Interior

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Abstract: This study aimed to examine the degree to which early childhood teachers in the Arab community of the Northern Triangle region in the Palestinian interior practice digital education skills, and to analyze differences based on teaching experience and academic qualifications. A descriptive-analytical approach was used to realistically assess and interpret the educational phenomena.

Data was collected using a questionnaire developed from theoretical literature and previous relevant studies. The questionnaire covered domains such as digital planning, implementing technology-supported educational activities, and using digital media in learning environments.

The study population included 486 kindergarten teachers in the Northern Triangle area of Haifa District, from which a purposive sample of 70 teachers was selected. Results showed that teachers' digital skills ranged from moderate to high. Teachers demonstrated strong skills in basic computer use and digital file preparation, while gaps were apparent in specialized areas like educational software design and creative technology integration.

Furthermore, no significant differences were found in digital skills related to academic qualifications. However, statistically significant differences favored less experienced teachers. The study recommends specialized training programs, enhanced digital infrastructure, and ongoing pedagogical and technical support to improve teachers' digital competencies.

Keywords: Digital Education, Early Childhood, Northern Triangle Region (Israel).

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Introduction

In the context of the rapid digital revolution, digital education has become the cornerstone for developing modern educational systems. It is no longer seen as an optional addition but as an essential tool to achieve interactive and effective learning, starting from the early stages of education. Early childhood education is considered one of the most critical stages that require reconsideration of teaching methods and media. Recent literature indicates that the use of digital media in kindergartens contributes to the development of children's creative thinking, problem-solving, and social-emotional skills (Neumann, 2022).

Masarwa and Karami-Younes (2023) emphasize the necessity of integrating digital skills into teacher training from the earliest stages, especially in environments suffering from digital divides or social discrimination, as is the case in some Arab communities

within Israel. Early childhood teachers in the Haifa District—particularly in Arab towns—face compounded challenges related to digital infrastructure, limited resources, and a lack of specialized training programs that consider the cultural and social specificities of the local Arab community.

A recent study conducted in Arab kindergartens in the northern region revealed that many teachers lack confidence in using educational technology due to insufficient training. This results in limited or ineffective use of digital technologies, despite the availability of some resources in the institutions (Halabi & Arar, 2024).

This calls for an in-depth study of the degree to which teachers practice digital education skills in this specific context, aiming to understand the reality of digital educational practices and to explore the enabling and inhibiting factors affecting them.



Understanding these practices is also a pivotal step towards formulating systematic, evidence-based educational recommendations aimed at developing the capacities of early childhood teachers, especially amid the rapid changes occurring worldwide in the field of educational technology. With the continuous increase in reliance on digital media, it has become essential to prepare educational staff to efficiently and effectively utilize these tools in classroom settings, ensuring the stimulation of self-directed and interactive learning among children, while taking into account their developmental and psychological characteristics. A recent study has shown that integrating technology into early education significantly enhances children's critical and creative thinking, provided that this integration is carried out by teachers possessing sufficient digital competencies and familiarity with modern technological teaching methods (Falloon, 2020).

Building on this approach, this study aims to shed light on the reality of digital education in early childhood within the Arab community of the Haifa District by examining the extent to which teachers practice digital education skills, and by analyzing existing gaps and challenges that hinder the effective integration of technology in this critical stage. This endeavor is part of broader efforts to keep pace with the comprehensive digital transformation, which has become a priority in contemporary educational policies worldwide, especially in light of the technological shifts following the COVID-19 pandemic that have reshaped the landscape of early education.

Chapter One: The General Framework of the Study

Problem Statement:

In light of rapid technological transformations, digital education has become an educational necessity rather than a choice—especially in early childhood education, which requires flexible, interactive, and psychologically and technologically safe learning environments for children. Early childhood educators play a fundamental role in creating such environments by possessing a set of digital skills that enable them to design and implement technology-supported learning activities, utilize multimedia tools, consider individual differences, and contribute to the development of children's cognitive and social skills.

However, the current reality indicates a disparity in the extent to which teachers master these digital skills. This may be attributed to unequal training opportunities, varying levels of educational awareness, and inconsistent institutional support—particularly in under-resourced settings such as the Arab community in the Haifa District. This digital skills gap represents a major challenge to integrating digital education into kindergartens, highlighting the need to examine the actual level of digital teaching skills practiced by early childhood educators.

Moreover, several previous studies, such as the study by Khalaf (2022), Saafan (2022), Al-Shammari & Ahmed (2022), and Konca & Hakyemea-Paul (2021), have emphasized the importance of employing digital teaching skills in developing instructional strategies during early childhood education. This is due to their vital role in enhancing interaction, supporting individualized learning, and fostering the development of essential skills in young children. Accordingly, the significance of the current study lies in

its focus on examining the implementation of digital education skills among early childhood teachers.

Research Questions:

- 1- What is the degree to which early childhood teachers in the Arab community in the Haifa District practice digital education skills?
- 2- Are there statistically significant differences at the level of significance ($\alpha \leq 0.05$) between the mean responses of the study sample regarding the degree of practicing digital education skills in early childhood education in the Haifa District (in Arab society within Israel), attributed to differences in teaching experience and academic qualification?

Research Objectives:

- 1- To identify the degree to which early childhood teachers in the Arab community in the Haifa District (in Israel) practice digital education skills.
- 2- To determine the level of teachers' proficiency in digital education skills related to planning and implementing appropriate digital learning activities for kindergarten children.
- 3- To assess the extent to which teachers utilize digital tools and technologies within the learning environment in kindergartens.
- 4- To analyze the differences in the degree of practicing digital education skills among teachers based on variables such as years of experience and academic qualification.

Significance of the Study:

The significance of this research stems from several educational, scientific, professional, and societal dimensions, which can be summarized as follows:

Educational Significance:

The study sheds light on the current state of digital education skills among early childhood teachers—skills that have become essential in light of the rapid technological transformations in the education sector. It contributes to understanding the readiness of teachers to engage with modern learning environments that rely on digital media and smart technologies.

Scientific Significance:

The study fills a knowledge gap in the field of educational research related to digital teaching practices in early childhood education, particularly within the Arab context in Israel, where studies in this area are relatively limited.

Professional Significance:

The study provides empirical data that can serve as a foundation for designing professional training programs aimed at developing the digital competencies of kindergarten teachers, thereby enhancing the quality of education provided to children.

Societal Significance:

The research helps uncover the challenges faced by teachers in the Arab community in the Haifa District and enables policymakers to develop supportive strategies that promote digital equity in education and reduce the technological gap between communities.

Methodology and Procedures

The methodology and procedures of the study represent a central axis through which the applied aspect of the research was carried out. Through these procedures, the necessary data were obtained to conduct statistical analysis and reach results that were interpreted in light of the existing literature relevant to the study's subject.

Research Methodology

This research adopts the descriptive-analytical method, as it is the most appropriate approach for studying the reality as it exists. It allows for the analysis of the degree to which early childhood teachers practice digital education skills and helps to identify differences among them based on specific variables such as years of experience and academic qualifications.

Study Population and Sample

The study population consisted of all early childhood education teachers in the Northern Triangle area of the Haifa District in the Palestinian interior for the academic year 2024/2025, totaling 486 teachers. A purposive sample of 70 teachers was selected from this population, as shown in the following table:

Table (1): Distribution of study sample

Variables	Categories	Repetition	Percentage
Experience	Less than 5 years	18	26
	From 5-10 years	22	31
	10 years and more	30	43
Qualification	Bachelor	52	74
	Master and above	18	26
Total		70	100.0

Study Tools

The study questionnaire was developed to collect data by referring to the theoretical literature and previous studies relevant to the research problem, such as the studies of Khalaf (2022), Saafan (2022), Al-Shammari & Ahmed (2022), and Barghouth (2022). In addition, a pilot study was conducted to identify the most important areas that should be included in the questionnaire.

The questionnaire included items measuring the extent to which early childhood teachers in the Northern Triangle area (within the Arab community in Israel) practice digital education skills. It consisted of 24 items distributed across three domains:

First domain: Skills of integrating computers into digital education – 8 items.

Second domain: Skills of designing digital education software – 9 items.

Third domain: Difficulties faced by teachers in using digital education skills – 7 items.

A closed-ended questionnaire was adopted in preparing the survey, which defines the possible responses for each question. The responses were classified into five equally ranged categories using

the following formula to determine the criterion for judging the scores:

Category length = (Highest value on the scale – Lowest value) ÷ Number of options on the scale (5)

Category length = (5 - 1) ÷ 5 = 0.8

Category	Range of averages	Degree of approval
The first	4.21 - 5.00	Very high
The second	3.41 – 4.20	High
The third	2.61 – 3.40	Medium
The fourth	1.81 – 2.60	Low
Fifth	1.00 – 1.80	Very low

Chapter Two: Theoretical Framework:

Digital Learning

Modern educational theories emphasize that the student, especially in early childhood, is the center of the learning process through their interaction in activities according to their readiness and interests. Therefore, teachers must diversify their teaching methods, which is achieved through digital learning. Digital learning supports the principle of lifelong learning, enabling learners to access education anytime and anywhere via the global information network (Al-Shamrani, 2019).

Many studies in this field have indicated that digital learning enhances communication and integration among learners through active activities that differ from traditional teaching methods. These activities are more effective and foster creativity and innovation (Ahmed, 2019).

1- Concept of digital learning: It is education that relies on using electronic technologies to achieve communication between the teacher and the learner and to create an interactive environment based on the use of computers, the internet, and other tools to access, utilize, and benefit from information. This creates a motivating environment to build creativity skills, develop intellectual culture, and foster effective communication among the elements of the educational process (Salem, 2021).

Ahmed (2019) defines it as learning that takes place in a digital environment relying on digital technology, which includes activities, skills, and assessments aimed at achieving the intended educational goals through synchronous or asynchronous communication between the elements of the educational process.

Bountri (2021) refers to it as a type of education that depends on using modern electronic media in learning, providing electronic content for kindergarten children in a way that enables them to actively interact with that content, the teacher, and their peers, aiming to create an interactive environment rich with electronic applications such as 3D digital images and digital videos displayed on computer screens and mobile devices.

2- Importance of Digital Learning: The importance of digital learning as a new educational method is highlighted in (Noureddine & Kenza, 2020):

* It increases the possibility of communication among students themselves and between students and the school through easy multi-directional contact, such as discussion forums via email and chat rooms. Researchers believe this encourages students to interact and participate in the topics presented for discussion.

* It contributes to presenting different viewpoints of students, providing opportunities to exchange opinions on discussed topics, which increases the benefits from these perspectives and integrates them with students' own views. This helps build a solid foundation in learners, enabling them to form sound opinions based on acquired knowledge and skills.

* E-learning facilitates easy access to the teacher quickly and outside official working hours, as learners can send their inquiries via email and obtain the information they need at a time that suits them.

* E-learning provides tools to evaluate tests and results, reducing the teacher's workload at school.

3- Objectives of Digital Learning: According to Khalaf (2022), digital learning aims to achieve the following:

* Preparing an interactive learning environment through new electronic technologies and diverse sources of information and experience.

* Equipping teachers and students with the technical skills and competencies necessary to use modern educational technologies.

* Making the learning environment attractive, lively, and engaging, overcoming the limitations of time and place.

* Creating opportunities for self-learning and self-assessment through interactive programs and student-assigned activities.

* Anticipating the future in the digital age to face crises and pandemics by utilizing digital intelligence.

* Enriching the learning environment with illustrative elements that facilitate obtaining and simplifying information.

* Meeting and satisfying the scientific and cognitive needs and desires of learners.

* Enhancing interaction, flexibility, accessibility, and equal opportunities among learners.

- Enhancing interaction, flexibility, accessibility, and equal opportunities among learners.

4- Characteristics of Digital Learning: This type of learning provides communication, interaction, exchange, and a shift from the traditional knowledge-transfer model to a learner-centered educational model. It encourages dynamic and active participation from learners, offers multiple levels of interaction, promotes active learning, and helps focus on discussing and studying real-life problems faced by learners. It also fosters empowerment, motivation, and self-guidance, increasing the sense of realism and involvement. Additionally, it accelerates task and project completion and aids learners in solving assigned problems (Al-Amir, 2021).

The characteristics of digital learning that distinguish it from traditional education can be summarized as follows (Al-Shammari, 2022):

- **Universality:** The ability to access information anytime and anywhere without restriction of time or place.
- **Interactivity:** The engagement of users with different parts of the educational material and the ability to move from one section to another.
- **Mass accessibility:** Learning that is not limited to a specific number or group of people.
- **Individualization:** Catering to the needs of each learner and allowing learners to progress at their own pace.

Al-Amir (2021) also adds "interactivity", which refers to the seamless integration of all its components and elements with each other.

5- Types of Digital Learning: Digital learning consists of three types, as outlined by Saafan (2022):

A. Synchronous Learning: This is live instruction requiring learners to be present simultaneously in front of their computers to engage in discussions and conversations among themselves and with the teacher, either through chat rooms, virtual classrooms, or other tools.

Advantages: Learners receive immediate feedback from the teacher, lower costs, and no need to physically attend school.

Disadvantages: It requires modern devices and a reliable internet connection.

Synchronous e-learning is one of the most advanced and complex types of e-learning, where knowledge and learner meet online at the same time (simultaneously).

B. Asynchronous learning: This is indirect learning that does not require learners to be present at the same time. Examples include gaining experiences through websites available on the internet, CDs, or using e-learning tools such as email or mailing lists.

The advantages of this type are that learners can study at times that suit them and at their own pace. They can also review and revisit the material electronically whenever needed. However, a disadvantage is that learners cannot receive immediate feedback from the teacher.

C. Blended learning: This style combines digital learning with traditional learning and is considered the best for early childhood students, especially kindergarteners. It involves a deliberate and planned integration of face-to-face educational activities with online learning activities to create a learning environment that helps achieve various desired learning outcomes effectively and with quality (Al-Sajini, 2023).

6- Digital Learning in Early Childhood: Digital learning in early childhood institutions plays an active role in developing language and cognitive skills. It provides children with new and diverse experiences that enhance their understanding, which in turn increases motivation to learn. This contributes to the overall development of the child's personality. Additionally, it enables children to interact more with their peers and improve their problem-solving skills (Al-Shammari, 2022).

Furthermore, children's ability to efficiently use technological devices helps strengthen the culture of digital learning and develop higher-order thinking skills in more engaging and creative ways, along with searching for and sharing information (Khalaf, 2022).

Neumann (2022) emphasized the importance of integrating digital learning in kindergartens, where teachers used planned digital storytelling methods via the internet to achieve the United Nations Sustainable Development Goals through leadership and collaboration. The use of digital learning led to quality education by encouraging children to create their own interpretations, share

their ideas, reflections, and results with their local and global communities, thus increasing collective strength and addressing challenges worldwide through open practice and cooperation.

Chapter Three: Study Results and Discussion

Discussion of the results for the first question, which states: "What is the extent to which early childhood teachers in the Northern Triangle area in the Palestinian interior practice digital teaching skills?"

Arithmetic means and standard deviations were used to analyze the responses of the study sample, as shown in Table (2).

No.	Item	Arithmetic	Standard Deviation	Rank	Degree
3	Difficulties in Using Digital Teaching Skills by the Teacher	3.63	1.11	1	High
1	Skills for Integrating Computers into the Digital Learning Process	3.54	1.07	2	High
2	Skills for Designing Digital Learning Software	2.99	1.12	3	Medium

The results of Table (2) indicate that the degree to which early childhood teachers practice digital learning skills ranged from moderate to high, with means ranging between (2.99–3.63).

It is noted that the highest mean was in the domain of "Difficulties in Using Digital Learning Skills" with a mean of (3.63), followed by "Skills for Employing the Computer in the Digital Learning Process" with a mean of (3.54), while the domain of "Skills for Designing Digital Learning Software" ranked last with a mean of (2.99).

The high score for challenges (3.63) indicates that teachers face clear difficulties that may be related to technical aspects such as lack of training, administrative aspects such as limited support, or

psychological aspects such as hesitation and fear of using technology, all of which negatively affect the quality of digital practice. The second-ranked area, "Computer Utilization Skills" (3.54), shows that teachers possess a relatively good ability to use computers as an educational tool, but this ability does not reach the level required for full activation of digital learning. In contrast, the "Educational Software Design Skills" domain came last with an average of (2.99), a moderate rating that reflects a relative weakness in the creative and technical aspects of designing interactive digital content tailored to children's needs—something expected given the high level of technical and pedagogical skills required, which are often not provided in traditional training programs.

Domain One: Skills in Utilizing Computers in the Digital Learning Process

Table (3): Means and Standard Deviations of the Study Sample's Estimates for Utilizing Computers in the Digital Learning Process

No.	Item	Mean	Standard Deviation	Rank	Level
3	I use the computer to prepare electronic files for students	3.91	1.14	1	High
4	I use Word to print and format lessons and exercises	3.89	1.01	2	High
1	I use computer-based technologies for effective teaching	3.68	1.00	3	High
5	I use the computer to print daily and yearly teaching plans	3.65	1.15	4	High
8	I use the computer to produce educational software for various lessons	3.44	1.04	5	High
2	I use the computer for planning purposes in the teaching process	3.33	1.11	6	Medium
7	I effectively use multimedia in my computer-based lessons	3.23	0.98	7	Medium
6	I use the computer to prepare computerized lessons using PowerPoint	3.21	1.13	8	Medium
Total		3.54	1.07		High

It is evident from Table (3) that the arithmetic means and the level of computer utilization in the digital education process among early childhood teachers in the Northern Triangle region of the Palestinian interior ranged between (3.21) and (3.91), with a high evaluation rating for all items except for items (2), (6), and (7), which received a moderate evaluation rating. The overall domain

obtained an average mean of (3.54), corresponding to a high evaluation level.

Item number (3), stating "I use the computer to prepare electronic files for students," ranked first with a mean of (3.91) and a high rating. The lowest-ranked item was number (6), stating "I use the

computer to prepare computerized lessons using PowerPoint," with a mean of (3.21) and a moderate rating.

The researchers attribute this result to the fact that, overall, teachers have a willingness and readiness to use computers in

digital education, especially for tasks that do not require advanced technical skills. However, they need more practical training and technical support to develop their skills in preparing more interactive computerized lessons or integrating new tools into the

Domain Two: Skills in Designing Digital Education Software

Table (4): Means and Standard Deviations of the Study Sample's Estimates for Utilizing Computers in the Digital Learning Process

No.	Item	Mean	Std. Dev.	Rank	Level
12	I use the computer to present educational content in various teaching styles	3.26	1.24	1	Medium
13	I use the computer to provide activities suitable to learners' characteristics	3.19	1.11	2	Medium
11	I use the computer to give instructions and guidelines for the digital lesson	3.08	1.06	3	Medium
10	I use the computer to print daily and annual lesson plans	3.05	1.15	4	Medium
15	I follow the mastery learning model in designing the digital lesson	3.01	1.14	5	Medium
17	I use the computer to develop digital lessons according to approved educational standards	2.98	1.21	6	Medium
16	I use the computer to prepare the learning situation for students	2.83	1.02	7	Medium
9	I use the computer to develop digital lessons according to the characteristics of the target group	2.78	1.10	8	Medium
14	I use the computer to provide enrichment activities during the educational program	2.75	1.09	9	Medium
Total		3.54	1.07		High

It is evident from Table (4) that the means and levels of using digital educational software design skills among early childhood teachers in the Northern Triangle area of the Palestinian interior ranged between (2.75) and (3.26), with all items rated at a medium level. The overall domain received a mean score of (2.99), which is considered medium. The highest-ranked item was number (12), which states: "I use the computer to present educational content in various teaching styles," with a mean of (3.26) and a medium rating. The lowest-ranked item was number (14), stating: "I use the

computer to provide enrichment activities during the educational program," with a mean of (2.75) and a medium rating.

The researchers attribute this result to the following factors: a lack of pedagogical technological competencies related to designing educational software, as many teachers have not received sufficient training in this area. Additionally, some teachers may be using pre-made digital content instead of designing it themselves. The researchers also note that weak technological infrastructure in some kindergartens reduces the opportunities for practicing digital instructional design.

Domain Three: Difficulties Faced by Teachers in Using Digital Education Skills

Table (5): Means and Standard Deviations of the Study Sample's Estimates for Utilizing Computers in the Digital Learning Process

No.	Statement	Mean	Std. Dev.	Rank	Level
20	The many daily tasks do not give me enough time to design digital content	4.38	1.03	1	Very High
23	The kindergarten I work at lacks suitable technological infrastructure	3.88	1.12	2	High
21	I suffer from weak technical skills needed to use digital education	3.75	1.09	3	High
18	I do not receive support or guidance from administration in digital education	3.64	1.14	4	High
19	I find it difficult to assess the effectiveness of digital tools in enhancing children's learning	3.39	1.15	5	Medium
24	Available educational software does not suit the characteristics of early childhood children	3.26	1.08	6	Medium
22	I feel fear or hesitation in using technology inside the classroom	3.12	1.20		Medium
Total		3.63	1.11		High

Table (5) shows that the responses of the study sample regarding the difficulties in using digital education skills among early childhood teachers had mean scores ranging from (3.12) to (4.38), with levels of assessment ranging from moderate to very high. This indicates that there are real challenges facing teachers in applying digital education skills within the classroom.

Item number (20), which states, "The many daily tasks do not give me enough time to design digital content," ranked first with a mean of (4.38) and a very high level of assessment. This reflects that workload pressure is one of the most significant obstacles hindering the effective integration of digital education.

1- Academic Qualification

No.	Questionnaire Domains	Academic Qualification	Sample Size	Mean	Standard Deviation	t-value	Significance Level
1	Computer Skills in Digital Education Process	Bachelor's Master's or higher	52 18	3.45 3.60	0.50 0.48	1.580	0.119
2	Digital Educational Software Design Skills	Bachelor's Master's or higher	52 18	2.95 3.28	0.56 0.52	2.354	0.210
3	Difficulties in Using Digital Education Skills	Bachelor's Master's or higher	52 18	3.78 3.84	0.41 0.44	0.764	0.448

The study results showed no statistically significant differences at the level of ($\alpha \leq 0.05$) in the degree of practicing digital education skills among early childhood female teachers in the Haifa district within the Palestinian interior, attributed to the variable of academic qualification. This applies to the three fields addressed by the research: computer utilization skills, digital education software design skills, and the difficulties faced by the teachers. The researchers attribute this result to the fact that teachers, whether holding a bachelor's degree or a master's degree and above, share a common awareness of the importance of digital education and its requirements in the contemporary educational context, where digital integration has become an urgent educational necessity rather than an option.

The closeness of the arithmetic means between the two groups in the field of computer utilization indicates that possessing basic technical skills is no longer exclusive to holders of higher degrees but has become part of the daily practice in kindergartens due to the widespread use of technology in education. Regarding the field

Meanwhile, item number (22), "I feel fear or hesitation in using technology inside the classroom," received the lowest mean score of (3.12) and a moderate level of assessment, indicating that psychological factors and hesitation toward change still exist among some teachers, but they are not the biggest obstacle.

Second: Discussion of the Results of the Second Question which stated: **"Are there statistically significant differences at the significance level ($\alpha \leq 0.05$) between the mean responses of the study sample of teachers regarding the degree of practicing digital education skills in early childhood in the Haifa District within the Palestinian interior, attributed to the differences in the variables of academic qualification and years of experience?"**

of educational software design, the absence of statistically significant differences shows that these skills are not directly related to academic qualification but rather depend more on continuous practical training and professional support, which explains the similarity in competencies among teachers from different academic backgrounds.

As for the difficulties faced by the teachers, the equal experience or exposure to the same educational environment explains the similarity in the levels of challenges encountered by all teachers, regardless of their academic qualification. These difficulties may relate to infrastructure, technical support, or the available digital content

Accordingly, the study results confirm that academic qualification alone does not constitute a decisive factor in determining the level of teachers' practice of digital education skills, which calls for directing efforts toward empowering all teachers through specialized and comprehensive training programs in this vital field.

2- Years of experience

No.	Questionnaire Domains	Years experience of	Sample Size	Mean	Standard Deviation	f-value	Significance Level
1	Computer Skills in Digital Education Process	Less than 5 years From 5-10 years 10 years and more	18 22 30	3.75 3.48 3.36	0.42 0.50 0.51	4.219	0.019
2	Digital Educational Software Design Skills	Less than 5 years From 5-10 years 10 years and more	18 22 30	3.40 3.05 2.93	0.45 0.51 0.54	3.782	0.028
3	Difficulties in Using Digital Education Skills	Less than 5 years From 5-10 years 10 years and more	18 22 30	3.55 3.76 3.90	0.40 0.42 0.43	4.559	0.015

The study results showed statistically significant differences in the degree of practicing digital education skills among early childhood female teachers in the Haifa district within the Palestinian interior, attributed to the variable of years of experience, favoring the less experienced teachers (less than 5 years).

The researchers attribute this result to the fact that teachers who are new to the profession are often more interactive and engaged with modern technological tools, due to their academic training, which includes direct instruction on employing digital education tools, as well as their enthusiasm for experimenting with innovative teaching methods.

They have also likely received recent academic preparation aligned with rapid digital developments, which enhances their ability to use computers in education and design educational software more efficiently and flexibly compared to their more experienced colleagues. Conversely, the results show that teachers with more years of experience face greater difficulties in using digital education, possibly due to limited ongoing training or reliance on traditional methods they have grown accustomed to during their years of work, which reduces their adaptability to adopting renewed digital teaching approaches.

These results also highlight the importance of focusing on continuous training for all groups, especially the more experienced teachers, to ensure their adaptation to the demands of modern digital education and to reduce the gap in practice between different professional generations within the educational field.

Conclusion

The study found that early childhood teachers in the Arab community of the Northern Triangle region in the Palestinian interior possess digital education skills ranging from moderate to high levels. They demonstrated clear competencies in basic skills related to computer use and digital file preparation, reflecting their ability to handle the essential technological tools needed for daily educational work.

However, the study revealed gaps in advanced digital skills, particularly in areas such as educational software design and creatively integrating technology into educational activities. These gaps indicate an urgent need to develop teachers' technical and creative capacities to enable them to utilize technology more effectively and diversely in early learning environments.

Additionally, the study results showed no statistically significant differences in digital skills based on academic qualifications, suggesting that formal education level is not the determining factor for acquiring digital education skills. Conversely, teaching experience showed statistically significant differences favoring less experienced teachers, possibly reflecting the recent training they received or their greater openness to adopting new technologies.

Based on these findings, the study recommends focusing on developing specialized training programs aimed at comprehensively enhancing digital skills, especially advanced skills related to technological innovation. It also calls for strengthening digital infrastructure in kindergartens by providing up-to-date devices and software, along with continuous technical and pedagogical support to ensure sustainable professional development.

In conclusion, enhancing digital education skills among early childhood teachers is vital to keep pace with technological advances in the educational process and to build an interactive and stimulating learning environment that contributes to the development of children's cognitive and social abilities from the very beginning of their educational journey.

Recommendations

1. **Develop specialized training programs** in the field of digital education for early childhood teachers, focusing on practical skills in designing and producing interactive educational software tailored to the characteristics and developmental needs of children in this stage.
2. **Enhance the technological infrastructure** in kindergartens by providing appropriate devices, educational software, and ensuring reliable internet connectivity that supports the implementation of interactive digital activities.
3. **Provide ongoing administrative and technical support** for teachers through the establishment of digital educational support teams that assist in integrating technology into classrooms and resolving technical issues when necessary.
4. **Raise educational awareness of the importance of digital education** in early childhood by organizing workshops and local conferences that highlight the impact of digital learning on developing children's thinking and creativity skills.
5. **Encourage the adoption of a "blended learning" model**, which combines traditional and digital education in a manner appropriate to children's learning nature, offering them a more balanced and interactive educational experience.
6. **Conduct further studies on larger samples** in other Arab regions to compare the realities of digital education and explore the different challenges and opportunities across the Arab community in the Palestinian interior.

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