Research

Facing Forward: Obstacles and Related Implications for Kindergarten Teachers' Professional Development

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Abstract:

In line with the new trend toward reforming the education system in the 21st century, teachers are more willing to accept changes to improve performance and achieve success in the educational process. Early Childhood Education (ECE) in Saudi Arabia has recently witnessed a huge revolution. Teacher Professional Development (PD) is one of the most influential elements in achieving quality education. The present study focuses on revealing the professional development program (PDP) obstacles faced by kindergarten teachers from their perspectives, as well as their implications for overcoming these obstacles. Based on the model of PDPs developed in this research, it is divided into three main elements: administrative, personal, and digital. The current investigation adopted an exploratory approach, where a total of (n=102) kindergarten teachers in the city of Mecca, Saudi Arabia, participated in this study by filling out a self-administered questionnaire. The results showed that all kindergarten teachers admitted that they faced several obstacles in their professional practices, which hindered the quality of their practices. Most kindergarten teachers reported a lack of motivation and inadequate training opportunities, which influenced their reluctance to participate in PDPs. However, they revealed their positive attitudes and willingness to implement various strategies and practices that contribute to their own PD. It recommends that decision makers and government agencies consider the needs and capabilities of kindergarten teachers during training and involve them in the professional planning and development process to ensure that the training outputs are more effective in their professional practice.

Keywords: Administrative, digital obstacles, children, implications, kindergarten teachers, training program.

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INTRODUCTION

The Ministry of Education in Saudi Arabia has been interested in diversifying education programs not only in public and private educational sectors but also in universities, including practical and applied education. The Ministry has also paid attention to ongoing practical training to increase the efficiency of teachers and develop their expertize and skills in the field of ECE (Allehyani & Alfayez, 2022). However, implementing many educational activities requires early childhood (EC) teachers to acquire many skills that may be considered complex in the area of the use of technology and digital resources (Al Shanawani, 2023). Indeed, EC teachers are considered the basis for the success of the educational process; thus, attention must be paid to their development and professional training. This can be achieved by identifying the main aspects of teachers' professional needs by a group of specialists in the field of teacher development and training.

Professionalism requires teachers to follow through with professional development in accordance with changes in science and technology and community needs to achieve quality in human resources and work requirements locally and internationally (Utami & Latiana, 2018). Castle (2009) defined professionalism as a lifelong process that includes the promotion of knowledge and skills, moral responsibilities toward children, and social relationships with children's parents and caregivers, colleagues, and the community. Hervie and Winful (2018) define professional development as a set of processes designed for improving the professional knowledge, skill development, and positive behavior of teachers so that they can consequently lead to improved student learning. These definitions are limited to a few aspects of PD. Accordingly, this study introduces a broader understanding of PD in education. The model of PDPs developed in this research is not only related to teachers' personal and digital skills but also includes the administrative skills associated with PD in general, interwoven with ongoing successful teaching performance. Teachers may encounter several obstacles related to these skills, which this investigation explores further.

Professional Development Programs (PDPs) are part of the ongoing process toward achieving institutional excellence that aims to raise teacher competency and student achievement. PDP activities are critically associated with improving children's learning outcomes (Switbert, 2013; Sywelem & Witte, 2013; Guskey & Sparks, 2002). PDPs take many forms, including workshops, seminars, conferences, summits, and courses (Kuranchie, 2019). Kizilbash (2016) asserts that PDPs seek to change teachers ' teaching practices, attitudes, and beliefs, which is reflected positively in improving students' learning outcomes. Clarke et al. (2021) confirmed that EC teachers' learning and PD are important factors in the development of education that provides quality EC Education (ECE). This requires well-organized continuous training and preparation teaching programs. Sustainable Professional Development (SPD) is a set of processes describing learning and practices that support teachers' professional development. Meade et al. (2012) highlighted

the need for ECE centers' ongoing investment in teachers by providing more professional development opportunities to support their unqualified employees in understanding and applying appropriate. Accordingly, the roles and responsibilities of teachers have undergone a massive transformation with social, scientific, economic, and technological changes (Griffin et al., 2012), which have an enormous influence on the system of education (Dolton et al., 2018; Metzler & Woessmann, 2012). Teachers' in-service training programs may not adequately sustain their professional development. Tuncel and Çobanoğlu (2018) asserted that professional development environments must consider the needs of each trainee before planning development programs. They also noted that government-organized in-service training programs should not focus on improving teachers' existing knowledge but should be more generally concerned with how teachers are trained in what they need to know. Furthermore, giving more attention to teachers' training needs affects their positive attitudes toward improvement.

To the best of our knowledge, this research is the first to respond directly to professional development concerns by investigating the unique obstacles associated with PDPs in kindergarten teachers' practices in Saudi Arabia. This research also intends to reveal teachers' perspectives on better strategies and practices to overcome these obstacles. The research questions guiding this investigation were:

1. What are the administrative obstacles that teachers face in PD?
2. What are the digital obstacles that teachers face in PD?
3. What are the personal obstacles faced by teachers?
4. What are the PD strategies and practices to overcome the obstacles from the kindergarten teachers' perspectives?

Kindergarten Teachers in the Saudi Context

Kindergarten education is a part of ECE in Saudi Arabia. The kindergarten stage serves children aged 3–6 years. According to Allehayni (2016), attendance is compulsory for children in all three stages of learning, which are divided into KG1, KG2, and KG3 as follows:

KG 1: accepts children who are at the age of three years

KG2: accepts children who have reached the age of four years.

KG3: accepts older children between five and six years of age. The KG3 stage is designed to prepare kindergarteners with the required skills for elementary school by the following academic year. These skills include emergent literacy and numeracy. In all KG stages, a teacher's qualification must be no less than a bachelor's degree in Early Childhood Education (Allehyani, 2016). The average child– teacher ratio in each kindergarten classroom varies from 20 to 25 (Allehyani & Alfayez, 2022).

Recently, the ECE witnessed a historic transformation in educational policy, which includes the assigning stage where female kindergarten teachers are allowed to teach boys

in the first three grades in the Saudi educational system (Allehyani & Alfayez, 2022). One of the main Sustainable Development Goals (SDG) of the Ministry of Education in Saudi Arabia is to encourage continuing education and provide opportunities for all people, including educators' professional development (Ministry of Education, 2021). Saudi Vision 2030 intended to achieve a separate strategic objective in goal 5, "Gender equity" to increase women's participation in the areas of health, education, protection, and employment in line with the goals and objectives of the SDGs (General Authority for Statistics, 2018). One of the significant strategic goals is to empower women in education, and this involves preparing female teachers for their new duties. Furthermore, this influential step toward female teachers' empowerment in the educational sector has created new demands and challenges, which require enabling those teachers to fulfill further expectations (Allehyani & Alfayez, 2022).

Saudi Arabia's Vision 2030 encourages Saudi higher education institutions to provide development opportunities for learners and trainers to enrich their skills and knowledge in local and international platforms with the intention of raising the quality of education (Alshuwaikhat & Mohammed, 2017). To achieve Saudi Vision 2030 of sustainable development in education, the Ministry of Education began to make a sustained effort to develop educational policies that are more open toward achieving cultural diversity and equity in education (Allehyani, 2022a, Allehyani, 2022b). This included the development of curricula at all educational levels and the infrastructure of institutions, including modern learning resources and teachers' preparation programs (Allehyani, 2022a; Allehyani & Alfayez, 2022; Singh et al., 2022). In addition, the EC curriculum framework in Saudi Arabia ensures that all teachers have adequate training and in-depth knowledge to deliver high-quality education to support young children in achieving their appropriate development (Ministry of Education, 2018). The process of transforming the ECE system in Saudi Arabia focused on providing high-quality services, building more school buildings, providing adequate school furniture for students and teachers, strengthening partnerships with relevant private sectors, and engaging all stakeholders in teacher education and training to lead to better learning outcomes (Ministry of Education, 2022, Allehyani, 2023). Despite these efforts, some kindergarten teachers still have not received adequate training and have limited knowledge and skills in teaching young children (Allehyani & Alfayez, 2022). This significant result can be used as an impetus for further investigation in the field of professional development of kindergarten teachers.

EC Teachers' Professional Development

With the technological revolution in education, professional demands and responsibilities have increased on the shoulders of female teachers to increase their competencies and skills in education. With radical shifts in social and cultural dynamics, teachers' professional development has become crucial for them to perform better and meet

new requirements (Krecic & Grmek, 2008). A qualified teacher must identify, organize, and adapt resources in different contexts and take advantage of technological advances in providing appropriate learning opportunities for learners (Abuhmaid, 2020; Ramírez-Montoya et al., 2021; Vivas Urías, 2016). Professional development is a major factor affecting teachers' careers by improving their skills and motivating them to develop their practice and orientation (Sharma, 2018). The study by Ackah-Jnr (2020) revealed that female teachers considered lack of motivation as one of the main challenges in moving forward to active participation in professional development. PDPs require teachers to employ several active learning strategies in classrooms (Ramírez-Montoya et al., 2021). Prior studies have noted that novice teachers did not get enough opportunity to reflect on their efforts during teaching practice due to the short duration of the training program, which ranges from 12 weeks only (Noor, 2019). These significant findings reflect the fact that teachers' curriculum training is more theoretical and places little emphasis on teaching practice. The results of a previous study by Ntumi (2016) revealed that most of the preschool teachers surveyed are responsible in their school, but they do not organize frequent in-service training for teachers in new directions in the EC curriculum. In addition, those teachers indicated that additional barriers they encounter influence the successful implementation of the curriculum, including lack of teaching materials, lack of parental involvement, and insufficient knowledge of the EC curriculum (Ntumi, 2016).

Model of PDPs

Based on the developed model of PDPs in this study, teachers must explicitly achieve multiple requirements related to enhancing administrative, personal, and digital skills. According to the model of PDPs, the administrative aspect in educational institutions requires adopting positive organizational behavior to enhance and embrace teachers by creating an appropriate environment that aims to sustain and improve the organization (Cartwright & Cooper, 2014; Demir, 2015). For educational institutions, Tindowen (2019) identified teachers' organizational behavior, which consists of five main dimensions: organizational commitment, professional commitment, job engagement, organizational citizenship behavior, and supervisory support. Teachers who have a high ability to perform effectively and efficiently in schools demonstrate more significant organizational commitment and an ability to perform discretionary activities beyond formal activities, in addition to a sense of commitment and passion toward the teaching professionand a desire to participate in their work with a high tendency to establish a harmonious relationship with supervisors and department heads (Tindowen, 2019). These general administrative elements are complemented by other elements such as offering adequate opportunities for teachers to select the proper PDPs that meet their training needs, kindergarten administrators' awareness of requirements to update PDPs, and the quality of PDPs regarding content, qualified trainers, and the ratio of trainers to trainees.

Obstacles in meeting administrative requirements may cause teachers to be left behind in following up on PDPs, which this study explores further. Eroglu and Kaya (2021) revealed that teachers' negative attitudes toward professional development are due to several reasons, including inappropriate course content, ineffective instructors, course location or planning, the selection of inappropriate participants, and an insufficient number of suitable courses. Singha and Sikdar (2018) assert that the content of teacher training and PDPs should entail their knowledge of the subjects they teach, theirunderstanding of implementing appropriate pedagogies, and their application of teaching techniques. Other significant barriers to teachers' professional development are financial problems, unsatisfactory evaluation of performance, and lack of PD opportunities (David & Bwisa, 2013; Eroğlu & Kaya, 2021; İzci & Eroğlu, 2016; Kaçan, 2004).

Additionally, inconvenient training course time for in-service teachers is the most significant barrier hindering their professional development activities (Ekşi, 2010; Eroglu & Kaya, 2021). Several scholars have identified further barriers, including the inefficacy of trainers, lack of time, selection of inappropriate participants, insufficient number of courses, and high workload (David & Bwisa, 2013; İzci & Eroğlu, 2016; Kaçan, 2004; Özen, 2004; Özoğlu, 2010; Topçuoğlu, 2015). A previous study by Can (2019) reported that teachers and administrators stated that there are several difficulties associated with PDPs, which include inadequate recruitment of teachers, uncertainty in understanding educational policies, permanent change in the education system, and teachers' lack of purpose and motivation. These administrative barriers may negatively affect teachers' performance and desire for PDPs.

The second element for achieving the model of PDPs for teachers is the personal aspect. Khandaker (2021) identified that teachers' personal development consists of factors such as self-knowledge, developing professional ideas, and gaining confidence, which are reflected in their professional positivity and thoughts, beliefs, and attitudes. However, the difference in knowledge among teachers is evident in the digital divide, which is associated with the generational gap. Accordingly, teachers from older generations often need more training to meet the challenges of the digital divide (Cabrera, 2020; Köttl et al., 2021). Despite this gap in digital needs, Prensky (2010) stated that the three generations studied (the silent generation, the baby boomers, and the millennials) demonstrated the need for digital training courses, such as online safety, and the need to structure this training content to suit the circumstances of each generation. This may cause a particular barrier for the older generation of teachers to get involved in PDPs if they have low self-esteem and are less motivated to participate.

Moreover, teachers should be motivated to acquire modern competences to keep pace with continuous change in the learning environment (Omotayo & Haliru, 2020). Musonda et al. (2020) argue that when teachers are well-trained through continued participation in PDPs, they are better able to apply active teaching and appropriate learning approaches with students, enabling them to contribute effectively to higher-order thinking tasks such

as analysis, synthesis, and evaluation (Mwila et al., 2022). Such programs deepen teachers' knowledge, fostering their skills and productivity (Barreto, 2020). In addition, it supports them to perform more efficiently and effectively than they would have had they not acquired new competencies (Anane & Kuranchie, 2022). Teachers should also take PDPs seriously and participate in all available programs, even if at their own expense, as it is a sure way to enhance their professional development (Anane & Kuranchie, 2022).

The third element of the PDP model is the digital aspect. With the boom and advancement in technology in education, teachers must introduce modern learning methods that require the acquisition of digital skills. In this vein, PDPs should target the development of teachers' digital competencies, whether implemented in early education or in other forms of primary schools, which positively impact raising appropriate levels of digital literacy for teachers (Rambousek et al., 2015). Educational administrators should encourage teachers to join online training platforms that provide an integrated system of teaching and learning courses to develop multiple digital skills (Ala-Mutka et al., 2008). Contemporary empirical research by Citriadin and Hakim (2021) revealed that teachers actively seek to solve difficult situations by going beyond their current professional level in terms of improving their digital competencies through participation in digital transformation. Most importantly, schools should be equipped with a variety of technological devices in addition to establishing training teams to design and implement digital learning tools so that teachers can use these devices to develop digital learning strategies and methods (Citrthiadin & Hakim, 2021). Furthermore, adequate training programs should be organized to develop teachers regularly, considering the content that would provide them with basic competencies (Allehyani, 2022a, & Anane & Kuranchie, 2022). Hence, continuing in-service professional development for teachers is often neglected in some education systems. This affects some teachers as they still do not have attitudes and beliefs about the importance of applying technology (Vennemann, 2017). Surprisingly, there appears to be no obvious reason for the distribution of teachers with different attitudes and beliefs about the usefulness of applying technology in educational contexts (Eickelmann & Vennemann, 2017). Hence, PDPs should be arranged with consideration of the teachers' needs and expectations to ensure it will be appropriate and beneficial for them to participate in the training programs.

METHOD

Research Design

This study adopts a descriptive analytical approach to examine a specific scientific phenomenon. To reach a logical explanation, this approach was used to investigate PDP obstacles, including administrative, digital, and personal, among kindergarten teachers in the city of Mecca in Saudi Arabia. Likewise, teachers' perspectives toward better strategies and practices to overcome obstacles to PDPs were investigated. The researcher developed

the instrument to answer the research questions and is related to the study design. A self-administered questionnaire was used as the main research tool for the current study. The selection of this instrument can be justified because it effectively measures teachers' behavior, attitudes, preferences, expectations, and intentions on relatively large topics at a lower cost and time consumption than other methods. Furthermore, it allows respondents to complete the survey themselves. According to Dalati and Marx Gómez (2018), the self-administered questionnaire is highly structured and contains closed-ended questions, and its very simple design allows respondents to provide their answers easily.

Participants

The researchers received ethical approval from the Ethics Department before entering the research sites. After obtaining ethical approval, the researchers contacted the Early Childhood Department in Mecca to disseminate the questionnaire to teachers. The study sample was randomly selectedand consisted of (n=102) female teachers from public kindergarten centers. These teachers were selected from different kindergarten classes, including KG1, KG2, and KG3, where children ranged between 4 and 6 years. The researchers obtained the participants' approval to participate in the recent research after ensuring that they understood the purpose of the investigation.

Research instrument and Data Collection

The self-administered questionnaire was constructed using Microsoft Formsand distributed by the Department of Early Childhood official email and social networking sites such as WhatsApp. The self-administered questionnaire is divided into three main sections, including demographic information, obstacles, and ways to overcome them. The first section consists of two questions that highlight the demographic information of the participants, including their qualifications and teaching experience. The second section consists of three questions, including administrative, personal, and digital obstacles faced by kindergarten teachers in PD. Each element in each obstacle element consists of eight statements. The last section includes the teachers' strategies and practices to overcome these obstacles, which consists of 22 statements. The items contained questions and answer options, which involved a 5-point Likert scale (1 = strongly agree, 2 = agree, 3 = partially agree, 4 = disagree, 5 = strongly disagree). The set of statements asking teachers about agreements regarding the obstacles they face during their practice life includes five responses.

Statistical Analysis

Data were analyzed using SPSS (v. 26). A descriptive analysis technique was applied to analyze the generated data. It uses frequencies and percentages to summarize the attributes of the data set in the questionnaire.

Ethical considerations

Prior to conducting data collection, in the first stage, the questionnaire was subject to content and context examination by the experts of Ethics Committee to ensure that all elements were scientifically correct and relevant to the subject of the research. In the next stage, the final evaluation was conducted by two experts in the Higher Committee for Scientific Research Ethics. Their assessment and recommendation were taken into account in the final version of the questionnaire. After obtaining the final approval from the head of University Ethics Committee, the questionnaire was validated before the study, using an experimental group.

Ethical Review Board: [Umm Al-Qura University]

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RESULTS

Demographic Information

The demographic section of the questionnaire was divided into two questions: (i) qualificationand (ii) teaching experience. These questions were analyzed using SPSS to study sample characteristics. The frequencies and percentages from the participants' demographic information were analyzed and are shown in Table 1. As shown in Table 1, more than half of kindergarten teachers (66, 64.7%) had a bachelor's degree. Almost half of those teachers (42, 41.2%) indicated that they had long teaching experiences, between 10 years and more, in teaching kindergarten.

Table 1

Frequencies and percentages of the Demographic sample characteristic

Variable	Categories	Frequency	Percent%
Qualification	Bachelor	66	64.7
	Higher diploma	15	14.7
	Master	21	20.6
	Total	102	100.0
Years of Experience	Less than 5 years	29	28.4
	6 to less than 10 years	31	30.4
	10 years and more	42	41.2
	Total	102	100.0

Internal Consistency Validity

A correlation coefficient test was used to determine the degree of each item and the degree of the questionnaire. Note that all correlation coefficients had acceptable scores and were statistically significant (see Table 2 below).

Table 2

Correlation coefficients between the degree of each item and the survey

Administrative obstacles to PD		Digital obstacles		Personal constraints		Solutions to overcome obstacles			
N	Correlations	N	Correlations	N	Correlations	N	Correlations	N	Correlations
1	.700**	1	.816**	1	.763**	1	.730**	9	.777**
2	.728**	2	.796**	2	.788**	2	.771**	10	.710**
3	.734**	3	.748**	3	.730**	3	.768**	11	.800**
4	.757**	4	.802**	4	.689**	4	.769**	12	.746**
5	.774**	5	.815**	5	.853**	5	.755**	13	.730**
6	.801**	6	.729**	6	.753**	6	.833**	14	.750**
7	.672**	7	.799**	7	.798**	7	.735**	15	.769**
8	.642**	8	.813**	8	.807**	8	.801**		

Note. ** Statistically significant at the level of significance (0.01)

Reliability Test

Reliability refers to the degree to which measures are free from error, thus yielding consistent results (i.e., consistency of procedure). If the scale consistently shows the same score for individuals or statements of equal values, the procedure is considered reliable. The reliability analysis applied the level of Cronbach's (α) as the criterion of internal consistency in the self-administered questionnaire, that is, how closely a set of items are related as a group. Cronbach's alpha is a reliability coefficient that measures inter-item reliability or the degrees of internal consistency/homogeneity between variables measuring one construct/concept (i.e., the degree) to which different items measuring the same variable attain consistent results. This analysis is necessary to study the scale features and internal consistency between the questionnaire items and their correlation. The analysis was performed by calculating Cronbach's alpha for independent variables. The Cronbach alpha equation ranged between (α = 0.871 – 0.948), and the reliability coefficient for the tool as a whole was (α = 0.920), which are statistically significant high values.

Table 3

Person correlation coefficients of the sample's estimates of the dimension of administrative obstacles to PD

Axis	No	Cronbach Alpha	Test-Retest
Administrative obstacles to PD	8	0.871	0.864
Digital obstacles	8	0.914	0.892
Personal constraints	8	0.903	0.889
Strategies and practices for addressing PD obstacles	15	0.948	0.901
Total	39	0.920	0.917

Table 3 shows that the internal consistency coefficients according to the Cronbach alpha equation ranged between (α = 0.871 – 0.948), and the reliability coefficient for the tool

as a whole was (α = 0.920), which are statistically significant high values. The data in Table (3) indicate that the internal consistency coefficients according to the Test– Retest equation ranged between ($\geq$ 0.864 < 0.901), and the reliability coefficient for the tool as a whole was (< 0.917), which are statistically significant high values.

Instrument Validity

Means (M) and standard deviations (SD) were assessed for each construct and related items, and items were then ranked in descending order according to the following scale: (Low 0 – 2.33, Moderate 2.34 – 3.67, and High 2.52 – 4).

Table 4

Means and standard deviations of teachers' administrative obstacles

NO	Statement	M	SD	Rank	Importance level
1	The limited opportunities available for teachers to choose PDPs based on their training needs.	4.43	0.72	1	High
7	Kindergarten administration's lack of interest in curricular activities and events.	4.31	0.74	2	High
8	Lack of response of the kindergarten administration to the teacher's suggestions.	4.29	0.82	3	High
5	Lack of awareness of those in charge of PDPs in kindergartens regarding monitoring the actual training needs of trainees.	4.24	0.91	4	High
4	There is a gap between the content of the PDPs provided to the trainees and the educational reality.	4.20	0.89	5	High
2	PDPs contents are repetitive and a lack of novelty.	4.13	0.71	6	High
3	A high trainee– trainer ratio, where each trainer is responsible for many trainees.	4.02	0.93	7	High
6	The majority of trainers in PDPs are not qualified.	4.02	0.95	8	High
Overall		4.20	0.61	-	High

Table 4 presents the means and standard deviations for administrative obstacles to PD items. The analyzes showed that kindergarten teachers had limited opportunities available for them to choose in PDPs based on their training needs with a high level of the mean value of (*M*=4.43, *SD*=0.72). Meanwhile, those teachers also stated that the training courses usually have a high trainee– trainer ratio, where each trainer is responsible for many trainees with a mean value of (*M*=4.02, *SD*=0.93). These results provide more insight into the inadequate administrative planning of PDPs, which should be considered to improve the future of education. Further analysis revealed that teachers reported a lack of awareness of those in charge of PDPs in kindergartens in monitoring the actual training needs of trainees, which had the mean value of (*M*=4.02, *SD*=0.95).

The mean value of the overall assessment of this variable was (*M*=4.20, *SD*=0.61), which had a high level of agreement in the study sample.

Table 5

Means and standard deviations of teachers' digital obstacles

NO	Statement	M	SD	Rank	Importance level
1	Lack of training intensity in digital courses.	4.32	0.96	1	High
6	Kindergarten administration's lack of interest in monitoring the training needs of teachers in the field of technology.	4.27	0.80	2	High
8	The kindergarten environment is not prepared to activate educational technologies.	4.27	0.94	2	High
4	Teachers prefer to use sensory teaching methods instead of modern technology.	4.23	0.85	4	High
5	Most teachers are not proficient in English, which is the primary language used in computer programs and applications.	4.23	0.90	4	High
3	Lack of knowledge of how to fix technical defects in devices when using them.	4.22	0.86	6	High
2	Lack of digital programs to train teachers in the use of educational techniques.	4.21	0.90	7	High
7	Kindergarten teachers' lack of attitudes and beliefs about the importance of the implementation of digital technologies in the classroom.	4.15	0.95	8	High
Overall		4.24	0.71	-	High

Based on Table 5, which presents the values of M and SD for digital obstacles items, it can be noticed that statement number 1: "A lack of the training intensity in digital courses provided for teachers" recorded the high-level mean value among the statements being rated by the study sample, thus was ranked first with a mean of (*M*=4.32, *SD*=0.96). Statement number 7: "The kindergarten teacher's lack of attitudes and beliefs toward the importance of the implementation of digital technologies in the classroom" was ranked last with a mean of (*M*=4.15, *SD*=0.95). The mean value of the overall assessment of this variable was (*M*=4.24, *SD*=0.71), which recorded a high level of agreement in the study sample.

Table 6

Means and standard deviations of teachers' personal obstacles

NO	Statement	M	SD	Rank	Importance level
6	The teachers focus more on obtaining a development program certificate than on raising their professional level in the field.	4.47	0.741	1	High
4	Effect of heavy workload on the health and work quality of teachers.	4.35	0.792	2	High
5	Low motivation toward innovation and creativity in developing performance.	4.30	0.842	3	High

8	Teachers believe that the more years of experience, the fewer PDPs are needed.	4.30	0.854	4	High
1	The teacher's job satisfaction level is low, which weakens his interest in personal development.	4.28	0.750	5	High
7	The teacher's lack of interest in exchanging professional experiences with her colleagues in kindergarten.	4.27	0.858	6	High
2	Impact of poor time management on teachers' job performances.	4.22	0.863	7	High
3	The teacher's unwillingness to attend PDPs.	4.09	0.935	8	High
Overall		4.29	0.64	-	High

As shown in Table 6, kindergarten teachers indicated several personal obstacles they encountered in their practical life. Most of those teachers stated that they focused only on obtaining a certificate of development programs without caring about raising their professional level, with a high-level mean of (M=4.47, SD=0.741). In contrast, few teachers declared that they were unwilling to attend PDPs, which ranked last with a mean of (M=4.09, SD=0.935). The mean value of the overall assessment of this variable was (M=4.29, SD=0.64), which showed a high level of agreement in the study sample. Table 7 presents the values of means and standard deviations for kindergarten teachers' strategies and practices to address obstacles they face during their professional careers.

Table 7

Means and standard deviations of strategies and practices to overcome PD obstacles

NO	Statement	M	SD	Rank	Importance level
7	Teachers should be highly motivated to continuously participate in field research and identify weaknesses to overcome	4.51	0.70	1	High
13	Activating partnerships with colleges of education and local and international training institutions.	4.49	0.74	2	High
15	Kindergarten principals should ensure that all teachers are able to master the required skills and share their training performance feedback with colleagues.	4.48	0.70	3	High
1	Reducing the teaching burden on teachers to give them opportunities to benefit from PDPs.	4.46	0.73	4	High
12	Attract qualified trainers to participate in the planning and implementation of PDPs.	4.46	0.74	4	High
3	Involve teachers in the process of designing, planning, and implementing PDPs.	4.45	0.80	6	High
8	Pay sufficient attention to improving the digital skills of teachers by enrolling them in various specialized courses.	4.44	0.78	7	High
11	Improving the physical environment in the kindergarten center to meet the PDPs' requirements.	4.44	0.75	7	High
10	Activating peer visits, discussion groups, and self-evaluation among teachers to enhance their practices.	4.41	0.71	9	High

14	Establish an online training platform for kindergarten teachers and provide them with various training courses, workshops, and seminars.	4.39	0.73	10	High
4	Establishing PD committees within each kindergarten center to activate PDPs.	4.38	0.84	11	High
2	Benefit from exchanging teaching experiences with leading global education institutions in developing PDPs.	4.37	0.82	12	High
6	Encouraging teachers to learn the English language by joining appropriate training courses.	4.35	0.80	13	High
9	Stimulating self-learning for teachers to achieve professional growth by taking advantage of learning resources in digital libraries.	4.35	0.73	13	High
5	Kindergarten principals should spread the culture of PD, increase teachers' motivation, and monitor their professional level.	4.31	0.86	15	High
Overall		4.42	0.58	-	High

The results in Table 7 show that most kindergarten teachers agreed that they should be highly motivated to continuously participate in field research to identify weaknesses and overcome them with a mean value of (M=4.51, SD=0.70). Moreover, the teachers agreed that more attention should be paid to the principle of activating partnerships with colleges of education and local and international training institutions with a mean value of (M=4.49, SD=0.74). While few kindergarten teachers stated that principals should spread the culture of PD, raise teachers' motivation, and monitor their professional level with a mean of (M=4.31, SD=0.86). The mean value of the overall assessment of this variable was (M=4.42, SD=0.58), which recorded a high level of agreement in the study sample.

DISCUSSION

The present study was designed to determine the reality of integrating the developed model of PDPs for kindergarten teachers and the most relevant obstacles that they face during this stage. These obstacles incorporate personal, administrative, and digital training needs. This study also proposes several strategies and practices that contribute to the advancement of kindergarten teachers' PD. The importance of the current study reflects the fact that these results are unique and contribute significantly to enriching existing knowledge in the field of professional development for kindergartenteachers, not only in the Saudi context but also worldwide. Primarily, the current study showed that, according to kindergarten teachers, the obstacles to their professional performance could be attributed to the lack of appropriate training opportunities available to them. Several administrative obstacles occurred and faced those teachers during their PDPs in kindergarten. Most kindergarten teachers indicated that they have limited opportunities to choose appropriate courses in PDPs based on their training needs. This result reflects those of Tuncel and Çobanoğlu (2018), who found that professional development planning should pay attention

to and take into accountteachers' needs to enhance their professionally active performance. Therefore, in-service training designed to meet the needs of trainees contributes to increasing the quality of the individual and the productivity of the institution.

Second, in the domain of digital obstacles, more than half of kindergarten teachers who participated in this research declared that they experienced a lack of training intensity in digital learning courses provided for teachers who are interested in employing computers in education. This finding broadly supports the work of other studies in this area linking teachers' digital training with their active and effective participation in digital transformation (Citriadin & Hakim, 2021; Omotayo & Haliru, 2020; Rambousek et al., 2015). Moreover, our literature review could identify research gaps that still need to be addressed in the field of professional development of kindergarten teachers. Among the most important of these gaps was with regard to patterns in the attitudes of teachers and beliefs about educational technology and its applications. The most important clinically relevant finding was that some kindergarten teachers in this study lacked attitudes and beliefs about the importance of the implementation of digital technologies in the classroom. This result is consistent with those of Eickelmann and Vennemann (2017), who found that some teachers still do not have positive attitudes and beliefs regarding the importance of applying technology and technology in their practices. A possible explanation for this may be that some teachers have expressed that they prefer to apply sensory teaching methods with kindergarten children more than digital methods, which may require effort and specific skills.

Lastly, regarding teachers' personal obstacles, most kindergarten teachers stated that they focus more on obtaining a development program certificate than on raising their professional level in the field. This is due to the heavy burden on teachers in obtaining training certificates to develop their teaching skills in various professional aspects, whether personal, digital, or administrative. Many teachers reported that heavy workload impacts their health and work quality. Fewer teachers indicated they were unwilling to attend PDPs. In accordance with the present results, previous studies have demonstrated that teachers found the high workload and lack of professional development opportunities to be unsatisfactory (Eroglu & Kaya, 2021). Teachers expressed dissatisfaction with the heavy workload and lack of quality professional development opportunities that fit into their schedules. The absence of compatibility between the number of teaching hours prescribed for teachers and the vocational training schedule may lead to their reluctance to join training programs, which negatively affects their performance. More importantly, many kindergarten teachers indicated that they should be highly motivated to continuously participate in field research and identify weaknesses to overcome. Moreover, many kindergarten teachers argued that it is important to activate partnerships with colleges of education and local and international training institutions. This finding is consistent with that of Ackah-Jnr (2020) and Sharma (2018), who found that female teachers faced a lack of motivation, which is considered one of the main challenges affecting them toward active

participation in professional development. Although motivation is internal and is represented in teachers' unwillingness to learn, it must be considered when planning PDPs to inspire teachers' minds and move their desire toward ongoing development.

Not surprisingly, the greatest obstacle to teachers' professional development is the large teaching burden, which hinders them from benefiting from PDP content. Interestingly, almost half of the teachers asserted that kindergarten principals should ensure that all teachers are able to master the required skills and share their training performance feedback with colleagues after attending PDPs. Moreover, the results of the current study drew attention to the need to improve the physical environment of kindergartens. Many kindergarten teachers expressed the need for sufficient attention to improve the digital skills of teachers by enrolling them in various specialized courses. The yields in this investigation were higher than those of other studies, such as Mwila et al. (2022), Omotayo & Haliru (2020), and Tuncel & Çobanoğlu (2018), who argued that it is crucial to equip an environment with a variety of training programs and learning resources that serve all teachers, regardless of their teaching experience, to build and enhance their teaching competencies and skills. Despite these challenges, most kindergarten teachers are aware of the new trend of implementing modern and innovative teaching strategies and accept the new demands associated with the contemporary transformation in ECE. This modern trend begins, as confirmed by the teachers in the results of the current study, by improving training from higher education institutions, encouraging scientific research in the field of childhood, and strengthening cooperation from EC centers so that preservice teachers are able to further develop their professional competencies.

LIMITATIONS AND RECOMMENDATIONS

The results of the existing study contributed to clarifying the gap in the professional development of teachers in Saudi Arabia, which can be used in planning for the upgrading of preschool education. The fruitful results of this study contributed to discovering, analyzing, and addressing the challenges facing teachers by policymakers and educational leaders regarding the implementation of curricula in preschool education to overcome these challenges. This combination of findings provides some support for the conceptual premise of identifying the difficulty in determining teachers' needs, in addition to highlighting the deep gap in the lack of a collaborative culture between training agencies and teachers to know and meet their training needs. The researchers recommend that there should be a collaborative network between kindergarten centers and training agencies to develop policies within schools and determine appropriate training standards based on teachers' needs. In the same vein, there should be continuous monitoring of the professional development process in the organizations by the training agencies to identify deficiencies in meeting teachers' needs and address them by policymakers. In addition, the study recommends the necessity of evaluating the professional development opportunities

offered to teachers, which is critical in ensuring the continued achievement of teachers' goals toward growth in educational practices in EC learning. Undoubtedly, engaging teachers in high-quality PDPs is essential to maintaining and improving the quality of the profession and achieving and improving the SDGs in early education worldwide. The findings of our research have important implications for developing educational institutions, designing programs in training centers, and public and private institutions to follow up with the government and organize political initiatives with the aim of improving and developing the current reality of education. Government bodies, stakeholders, and policymakers in Saudi Arabia must work together with educators to improve the professional development sector.

Although the results of this study are conclusive, they are not without limitations. A limitation of the current study is related to the small sample size, which makes it difficult to generalize. Future research can apply increasing the sample size and collecting data from more respondents in contexts different from the Saudi context. In addition, although the analyses presented reveal some interesting results, methodological limitations and future research should be addressed and discussed. Using a mixed methodology that relies on the use of tools such as questionnaires and class observations can enhance future results.

CONCLUSION

The current study developed and embraced a model of PDPs for kindergarten teachers at the national and international levels. It also reflects the strategic educational plans outlined in Saudi Arabia's Vision 2030, which supports the SDG in achieving quality education through empowering female teachers in ECE. As discussed earlier, empowering female teachers who are dominant in the ECE field in the Saudi context requires ongoing PD training. The results yielded from this investigation encourage decision-makers in educational policies to motivate and empower teachers toward developing their higher knowledge and skills, which enriches educational practices. The results of the current study can be used to draw attention to the need to encourage teachers to develop career paths and acquire appropriate qualifications to be well prepared for competition on the road toward achieving Vision 2030, which requires deep understanding and high skills to bridge the gaps between the reality of teachers in PD and their needs. From the results of the current research, it can be concluded that there are shortcomings in providing opportunities and activities for the professional development of teachers, especially those who have spoken in the current situation, and this has an impact on teachers' self-esteem and their motivation toward improving their work performance. Ultimately, successful PDPs require mutual collaboration and a shared vision between teachers and administrators toward career enhancement and achievement of goals.

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