

THE ROLE OF DARSAK""DARSAK"" PLATFORM IN PROFESSIONAL DEVELOPMENT FROM THE POINT OF VIEW OF BIOLOGY TEACHERS IN THE SOUTH REGION

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ABSTRACT

The study aimed at knowing the role of 'Darsak' platform in professional development from the point of view of biology teachers in the south region. The study used the descriptive analytical approach. The study sample consisted of all the biology teachers in the schools of the South region (Karak, Tafila, Maan, Aqaba) during the second semester of the 2021/2022 school year, whose number was (161) teachers, based on the statistics and planning departments. As for the study sample, the study community was completely and exclusively taken. As for the study tool, it consisted of three items, with a questionnaire of (20) items. The results of the study showed that there were no statistically significant differences in the role of 'Darsak' platform in professional development that can be ascribed to the variables of gender, academic qualification, and experience. The results of the study concluded that all dimensions of 'Darsak' platform had an average role. In light of the results of the study, many recommendations emerged, like the need to provide appropriate training for teachers on how to manage educational technologies in online education.

Key Words: Professional Development, Darsak Platform, Mutah University.

1. INTRODUCTION

In 2019, interest increased in the use of electronic platforms in online education due to the wide spread of the COVID-19 virus that swept the whole world. Jordan, like other countries of the world, found itself in front of a pandemic and a real crisis due to the difficulty of pursuing the educational process by traditional methods to preserve the lives of students. Therefore, the government resorted to the use of online learning as the only optimal and most secure solution that preserves and secures the lives of students and teachers, which was the same procedure that has been adopted by other countries. Consequently, the use of 'Darsak' platform was the most useful solution (Al-Hawari, 2021). Electronic teaching platforms have become one of the most important pillars of the educational process in the twenty-first century (Owaish, 2019).

Digital information technology has contributed to the change of a teacher's role from a mere conveyor of information to a teacher capable of playing the role of a facilitator, clarifier, evaluator, guide, coach, challenger, and constructive leader. This confirms that the digital information age has led to a change in educational practices and beliefs that were Prevalent in the near past. Development has revealed new methods in teachers' performance, especially in the use of digital technologies in a practical way. Therefore, it is necessary to continuously provide a scientific reference that contributes to enhancing the professional development of teachers (Abdul Aziz, 2013).

Professional development is no longer an option that can be bypassed, as the teacher is supposed to become a designer of his educational experiences that he needs as a researcher, investor, technology master, user of all electronic technologies, planner and expert in educational methods (Al-Yousuf, 2013).

In view of the needs of educational institutions to teach through electronic platforms (Darsak platform) to avoid the closure of schools in light of the spread of the virus, and the shift from face-to-face education to online education, many challenges and questions have emerged on the surface concerning the effect of 'Darsak' platform, (which is currently used to teach students), its efficiency in achieving results similar to face-to-face education, and its impact on the teacher, who is the pillar of face-to-face education. Thereupon this research came to talk about the role of 'Darsak' platform in developing teachers' professionalism from the point of view of biology teachers in the South region.

The study Problem:

The challenges experienced by the educational sector showed the need to constantly improve the performance level of teachers to enable them to possess the technical, and educational competency that contribute to their abilities to achieve educational goals. This was made clear by many studies, especially Haddad's study of (2019) , and Al-Amoush study of (2020). Al-Jabul (2014) also showed that professional development is a prerequisite in light of the global trends to develop educational methods. Many teachers complain of poor qualification in the technical field, and lack of sufficient time needed for training due to the great tasks and responsibilities (Abu Zalta, 2021).

Through my work as a school principal, a supervisor, and a follower of the work of teachers on the platform to see how biology teachers deal specifically with 'Darsak' platform, which the Ministry uses as an option for the continuity of the educational process in Jordan during the Corona pandemic, many challenges and questions have been raised by biology teachers while dealing with this platform. Some of them were unfamiliar with electronic matters, and many others were confused in solving the technical problems that their students inquired about, which also raised other questions about the impact and effectiveness of this platform and the changes it has had on the performance of teachers and their professional development. Hence, the study problem stems from the following question: What is the role of 'Darsak' platform in professional development from the point of view of biology teachers in the south region?

Study Questions

The study attempts to answer the following questions:

1. What is the role of 'Darsak' platform in professional development within the domains of : scientific professional mastery, teacher relationship with others, and evaluation and feedback from the point of view of biology teachers in the south region?
2. Are there statistically significant differences at the significance level (α 0.05) between the score means of the study sample about the role of 'Darsak' platform in professional development due to the variables: gender, educational qualification, and experience?
- 3.

The study Objectives:

1. Identifying the role of your educational platform in professional development from the point of view of biology teachers in the south region.

2. Finding out differences at the significance level (α 0.05) between the scores mean of the study sample about the role of 'Darsak' platform in professional development due to the variables: gender, educational qualification, and experience.

The study Importance:

This study derives its importance from the importance of the effective role of the electronic platforms in improving the level of professional development of biology teachers. Accordingly, the importance of the study is represented in two aspects:

1) Theoretical importance: It is represented in the following aspects:

- Authenticity: as far as the researchers know, this study is one of the recent studies that dealt with the topic of educational platforms ('Darsak' platform) in light of the Corona pandemic. It contributes to improving the teachers' levels in the use of electronic technologies. The researchers seek to provide a theoretical framework for applying 'Darsak' platform as an entrance to improve the level of professional development of biology teachers, which may contribute to paving the way for the researchers to conduct more studies within new variables and environments.

2) Practical importance: It is represented in the following aspects:

- It is expected that the results of this study will be used in diagnosing the use of 'Darsak' platform in order to direct the efforts of the Ministry of Education towards providing many programs that contribute to improving the performance of teachers.

- Providing educational leaders with the practical results of the study.

- Providing the Arabic library with more studies in the field of using electronic platforms ('Darsak' platform) and its impact on developing the level of teachers' performance.

Study limits:

The current study limits are:

1. **Objective limit:** the effectiveness of 'Darsak' platform on professional development from the point of view of biology teachers in the south region.
2. **Time limit:** the second semester of the academic year 2021/2022.
3. **Human limit:** biology teachers in the directorates of education in the south region.
4. **Spatial boundary:** the Directorate of Education in the South region (Districts of Karak, Tafila, Ma'an, and Aqaba).

Study terminology:

Procedural and conceptual definitions of the study terms:

First: Professional Development:

Muhammad (2011) defined it as: "Those ongoing activities, means and programs that are pre-planned and implemented for the purpose of developing the different abilities, skills and experiences of teachers and preparing them for changing requirements in a more efficient and effective manner." The researcher defined it as the procedures that are planned by the concerned institutions with the aim of providing teachers with expertise and skills in the light of all that is new to improve the level of performance.

Second: 'Darsak' platform

The Ministry of Education (2020) defined 'Darsak' platform as: a free distance learning platform that provides school students with computerized educational lessons through organized and scheduled video clips based on the Jordanian educational curriculum, provided by a

distinguished elite of teachers to make it easy for the students to continue their learning and follow up their study materials. The researchers define it as an electronic educational platform that enables teachers to manage distance learning process within audio-visual elements to deliver the course material to students through delivering and receiving assignments. It is procedurally defined as the response of the study sample to the tool used in this study.

Third: Biology teachers:

They are male and female teachers who teach biology for grades from the ninth to the second secondary grade of the scientific branch in schools of the directorates of the south region in the Ministry of Education in the Hashemite Kingdom of Jordan. The researchers define biology teachers as teachers appointed to the post of teacher, specialized in teaching biology courses in educational institutions of the Ministry of Education.

Method and procedures:

It includes a description of the study population and its sample, the procedures followed for the purpose of achieving the objectives of the study, procedures of developing the study tool, methods of verifying its validity and reliability, and how to apply them to the study population.

Study Methodology:

The researchers used the descriptive approach due to its suitability to the nature of this study.

Study community:

The study population consisted of all the biology teachers in the schools of the governorates of the south region during the second semester of the academic year 2021/2022, whose number was (161) according to the data of the statistics and planning Departments of the Ministry of Education, distributed over the governorates of Karak Tafila, Maan and Aqaba. As for the study sample, the community sample was completely and exclusively taken.

Study Variables:

The study approached the following variables:

First: Personal characteristics:

- Gender: male, female
- educational qualification: Bachelor's degree, Master's degree or above
- Years of experience: less than 5 years, 5 to less than 10 years, 10 years and more).

Second: The Independent Variables: 'Darsak' Platform

Third: The Dependent Variables: Professional Development.

Study tool:

The researchers developed the study tool based on theoretical literature and previous related studies, like Haddad's study (2019); Al-Shammari's study (2019); Hamdan's study (2018), and Kenyatta's study (2015), where the professional development dimension was identified in three areas: the field of professional empowerment. which includes (10) paragraphs; the field of the teacher's relationship with others, which includes (11) paragraphs; and the field of evaluation and feedback, which includes (10) paragraphs, and the total number of paragraphs for the entire dimensions was (31) paragraphs.

Validity and reliability of the questionnaire:

To ensure the validity of the study tool, some steps were taken as follows:

First: virtual validity:

The researchers tested the virtual validity of the questionnaire by consulting a number of experienced and specialized professors in official Jordanian universities to judge its validity as a tool for data collection, and see if it measures the variables that it was meant to measure. The professors were provided with the study model and its hypotheses. All their observations were considered. The questionnaire final form was as follows. First: Professional development dimension with (6) paragraphs; Second: the teacher's relationship with others, which includes (7) paragraphs; and third: evaluation and feedback dimension, which includes (7) paragraphs. As for the study tool as a whole, the number of paragraphs within the three areas is (20) paragraphs.

Second: stability of the study tool:

The researchers confirmed the stability of the study tool using the Cronbach Alpha Coefficient, (Sekeran & Bongic, 2010). Table (1) shows results of the study stability.

Table (1) Results of the internal consistency coefficient Cronbach's alpha for the domains of all dimensions of the study

Number of paragraphs	Cronbach's coefficient Alpha	Domain
Professional empowerment	0.84	6
Teacher's relationship with others	0.88	7
Evaluation and feedback	0.90	7
Total level	0.86	20

Third: Indicators of construction validity:

First: The validity of the internal structure of the paragraphs of the study tool

The construction validity of the study tool items was verified by calculating the Pearson correlation coefficient by distributing the tool to the exploratory sample, which consisted of (20) teachers from outside the study community, where the correlation coefficient between each phrase and the total score of the sub-field to which the phrase of the dimension of professional development belongs was calculated. This is shown in Table (2).

Table (2) Correlation coefficient of paragraphs of the domains (professional empowerment, the teacher's relationship with others, and evaluation and feedback) with the total domain of the professional development dimension

Evaluation and feedback Coefficient		teacher's relationship with others Coefficient		Professional Empowerment Coefficient	
**0.685	1	**0.821	1	**0.807	1
**0.862	2	**0.783	2	**0.802	2
**0.833	3	**0.730	3	**0.721	3
**0.861	4	**0.814	4	**0.798	4
**0.690	5	**0.742	5	**0.635	5
**0.892	6	**0.704	7	**0.756	6
**0.752	7	**0.773	7	**0.713	7

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

Table (2) shows that the values of the correlation coefficients between the paragraphs and the total score of the domains to which all the paragraphs belong are statistically significant at the significance level (0.01), and that all the values of the domains of the dimension ranged between 0.635-0.892, which indicates a high correlation level between all the paragraphs domains with the total dimension. This result indicates that the paragraphs of the dimension are statistically significant for the domain to which they belong.

Correction Scale and Judgment Standard:

For the purposes of interpreting the results emanating from this study, the standard criterion was adopted, which shows that the length of the category = the upper limit – the lower limit / 5 = 5-1/5 = 8/5 = 0.8:

Degree	period length
very high	4.20-5.00
High	From 3.40- Less than 4.20
Average	2.60 - less than 3.40
Low	From 1.80- Less than 2.60
Very low	From 1- Less than 1.80

Statistical processing:

The following statistical methods were used to answer the study questions: The researchers used a set of statistical methods according to the nature of the questions and in line with the appropriate statistical method through the statistical program (SPSS). Cronbach's alpha was used to show the reliability and validity of the study tool through the Pearson correlation coefficient between the paragraph and the total domain. As for the study questions, the arithmetic mean and the standard deviation were used to answer the study question to find out the most important items represented by each domain of study. The T-test was also used to identify the differences in the variables of gender and academic qualification. Besides, one way ANOVA was used to detect differences in the variable of years of experience.

2. THEORETICAL FRAMEWORK AND PREVIOUS STUDIES

Theoretical framework:

Education profession is one of the main professions on which the state relies in providing trained human resources, as education has been managed by electronic platforms since the beginning of the Corona pandemic. This study focused on studying online 'Darsak' platform to develop teachers through the professional development dimension.

Professional development:

Institutions of all forms seek to develop the performance of teachers to obtain the best results, and to take advantage of all developments that occur in the administrative or educational environment in order to work on developing the performance of functional tasks. The professional development of a teacher is part of a continuous cycle due to changes and developments in modern methods and educational patterns, which contribute to the development of the teacher in the educational process, with the aim of facilitating the students' learning processes and raising their professional and performance efficiency (Hamdan, 2018). Here are some of the main headings:

Professional development concept:

The concept of development in its general sense is concerned with the improvement of conditions that contribute to raising the level of teachers' performance. The main objective of professional development is to prepare teachers in the light of changes and developments to improve their processes of performance and the best use of human elements and modern technologies, which will result in best benefits to the school (Torrington et al., 2017). Many researchers have addressed the concept of professional development. Below are some of these researchers:

Haddad (2019) defined professional development as: an organized and planned process to build new educational, administrative and personal skills, which contribute to teachers' bearing of responsibilities to achieve a higher purpose, which will improve their effectiveness, thus increase the quantitative and qualitative achievement of students.

Shirley (2020) defines it as: a developmental process concerned with the diversity of experiences that enable teachers to improve their efficiency in the educational process.

Wahba (2011) defined professional development as: the planned activities that are provided to teachers of different groups and specializations to raise the level of knowledge and skills to achieve professional growth, and increase their abilities for creativity and innovation through various means, including training programs.

It is noticed from the above that professional development is concerned with the development and upgrading of scientific and practical skills and knowledge that help teachers keep up with all the rapid developments in the field of technology used in the educational process, and use them with ease inside and outside the classroom as required by exceptional circumstances.

Importance of Professional Development:

Professional development is one of the important strategies that must be considered to achieve the teacher's educational goals in light of scientific and technical progress (Aboudahr, 2018). Moreover, teachers' motivation and conviction of the need to improve their professional practice should be enhanced as this will clearly contribute to improving their educational outcomes (Al-Humaidan, 2013). It is also noted that the importance of teachers' professional development stems from changes and developments in the educational environment, which give better results when teachers are prepared for these developments to acquire knowledge and specialized training.

Professional development methods:

There are many methods that have been used for the purpose of operations improvement and development that contribute to improving the level of professional development, which includes:

First: Training: Training is one of the basic foundations in providing specialized information in the professional field, and a device of learning about the experiences of others in many topics.

Therefore, training is the process of developing positive behavioral aspects of trainees to provide them with new knowledge and experiences in light of the rapid development in learning and teaching patterns (Al-Shara'a, 2014).

Second: Practical methods: The practical aspect would increase the level of performance, avoid many theoretical aspects, and give a clear picture of the current reality (Saada and Ibrahim, 2020, and Al-Khatibeh, 2002). Therefore, the school is a fertile field for the increase of knowledge and educational sciences of teachers, which provide them with experiences that enhance and develop the level of solving educational problems and increase the level of educational skills (Al-Khatibeh, 2002).

Third: Classroom visits: field visit of teachers is an appropriate opportunity to see the experiences of former teachers to learn how to manage the classroom, whether in terms of educational material or in terms of how students participate in the discussion process during class interaction (Al-Khataibeh & Al-Jaafrah, 2012)

Fourth: discussion seminars: these seminars help those with little experience to identify how to address job issues and interact with the educational material. They also provide a rich field of new information that contributes to enhancing the development of teachers' skills in developing the career path.

It is noted from the above that there are many ways that institutions resort to in professional development, but each method has its appropriate use according to the environment in which professional development takes place. Practical methods aim to gain new experiences and knowledge, especially for new teachers who need qualifications and experiences in the process of managing the educational environment.

Eelectronic platforms

Concept of electronic platforms:

Many researchers have referred to the concept of electronic platforms. Below are some of them:

Al-Falahi (2021) defined it as: an electronic system that enables students to continue the educational process through many observations, whether visual or audio.

Shen and others (Chen et al., 2020) define it as: a virtual electronic program that allows the creation of virtual spaces to share information between the teacher and students which can be used in many educational institutions at their various levels and stages.

It is clear from the above that the concept of electronic platforms are virtual environments based on achieving educational goals in the process of communication between the teacher and students with the aim of delivering the material and maintaining the permanence of the educational process in light of the challenges.

Features of electronic platforms:

The Institute of Informatics for Graduate Studies (2016) pointed out the advantages of educational platforms as follows:

1. Ease of access to educational materials of all kinds.
2. Accessible by the largest possible number of learners in a way that increases love of learning and motivation.
3. Educational platforms have succeeded to a large extent in developing scientific and logical thinking through scientific and cognitive methods of thinking and achievement, with a desire towards self-development.

Disadvantages and challenges of electronic platforms

There are many disadvantages of educational platforms. These platforms neglect the development of the emotional aspects of the learner and focus only on the cognitive and educational aspects. Besides, they are unable to develop psychomotor skills, which negatively affect the student's personality (Al-Rashidi, 2019). Also, students from marginalized groups, or who lack technological skills are subject to drop out of education (Al-Ruwaili and Al-Anzi, 2021). Among the challenges facing educational platforms is what was indicated by (Abdel Moneim, 2016) about the difficulty of practical application of lessons, where teachers face a challenge in using assessment tools and identifying weaknesses among students.

'Darsak' electronic platform:

It is a free Jordanian platform for distance learning, which provides school students, from the first grade to the second secondary grade, with lessons through video clips organized and scheduled according to the Jordanian education curriculum, provided by a distinguished elite of teachers to make it easy for students to pursue their learning and follow up their study materials, where students enter the Darsak.gov.jo website, and a simple screen will appear containing an introduction to the platform. The student must choose to log in using the national number (or identification number) and date of birth, then he/she can watch what he/ she wants from the educational videos that deal with his/ her course, and follows-up assignments and exams.

A student can re-enter the materials at any time, keeping in mind that browsing the electronic content will not be deducted from the balance of the Internet packages when browsing the platform between six in the morning and four in the afternoon, where lessons are uploaded on a daily basis and the content will be available on the platform. Teachers also log in through their own accounts and can send assignments to their students and prepare short tests using the platform. Teachers can also send text messages to their students via the platform and follow up students' completion of their assignments ('Darsak', 2021).

Previous studies:

In Egypt, a study conducted by Al-Dahshan and Muhammad (2021) aimed at suggesting a proposed vision for the development of teachers' professional programs in light of the requirements of the Fourth Industrial Revolution. The conceptual framework of the teachers' professional development and the fourth industrial revolution were exposed. The study made use of the descriptive method using questionnaire as a device to collect data, which were Prepared, codified and applied to a sample of (710) teachers in Assiut Governorate to get to know their views concerning the degree of importance of the requirements necessary for the development of teachers' professional programs to keep pace with the fourth industrial revolution. The research

found that the requirements needed to develop teachers' professional development programs to keep pace with the fourth Industrial Revolution -which the sample members indicated that they were very important- were represented in three aspects: the requirements for the objectives of teachers' professional development; the requirements for the content of professional development programs for teachers; and the requirements for the methods of teachers' professional development in the light of the fourth industrial revolution. The study also indicated that there were no statistically significant differences between the average opinions of the sample members according to the gender variable, except for the dimension of the requirements for understanding multiple cultures, where the differences were in favor of males. The study also indicated that there were statistically significant differences between the averages of teachers' responses about the degree of importance of the requirements necessary for the development of professional programs for teachers in favor of secondary school teachers according to the variable of study stage, and in favor of holders of higher degrees according to the variable of educational qualification. At the end of the research, a proposed vision was offered for the development of professional development programs for teachers in light of the requirements of the Fourth Industrial Revolution, including its premises; components; stages; mechanisms of implementation; implementation obstacles, and how to overcome them with its indicators of success.

Al-Saeedi and Al-Azab (2021) conducted a study aimed at identifying the effectiveness of a proposed program to develop the professional and academic performance of science and mathematics teachers in light of the integration approach between science, technology, engineering and mathematics (STEM) by preparing a list of requirements for building a proposed program for science and mathematics teachers in the light of teaching (STEM) and then build the proposed program based on these requirements. The researchers used the descriptive analytical approach to describe and analyze research and studies related to the study problem and prepare the proposed scenario for the training program. The study found a list of requirements for professional and academic development for science and mathematics teachers, divided into four main axes. In light of these requirements, a proposed conceptualization of the program was built, and the program was applied through an observation card to determine its effectiveness. The study concluded that there were statistically significant differences between the average grades of teachers of science and mathematics in the post and pre applications of the professional and academic performance observation card for the study sample group in favor of the post application.

Al-Maliki (2020) conducted a study that aimed at identifying the role of electronic educational platforms in the professional growth of kindergarten female teachers, and the obstacles to use these platforms in the educational process. A study sample of (205) kindergarten female teachers in government kindergartens of Al-Badi'ah Education Office in Riyadh was used. The study used the descriptive survey method. It concluded that kindergarten female teachers' practice of electronic platforms in an educational environment was described as flexible; where they could use more than one way to display information. The study also showed that there were obstacles in the teachers' use of electronic platforms, including lack of financial resources, weakness of the school Internet, large number of tasks and roles of the supervising female teacher, and weakness in special training programs. The study also showed female teachers' agreement on ways of developing professional growth of kindergarten female teachers when using electronic platforms. Among these ways were the development of the transfer of scientific and practical expertise and experiences between them, activating the discussion and the exchange of professional experiences,

and providing good devices and equipment. One of the most important recommendations of this study was enhancing the female teachers' motivation for continuous learning during the service.

Bautista & Ortega-Ruiz (2015) conducted a study aimed at knowing the world's trends in development processes. It showed that all countries in the world then had undertaken deep reforms to their educational systems. There is widespread agreement among policy makers, scholars, and educators that one of the keys to success and reforms is to enhance the professional development of in-service teachers. Every year, governments invest massive amounts of money on teachers' continuous learning. However, the literature shows that much of the professional development provided to teachers is ineffective, and has little or no impact on teaching practices. This study describes the perspectives and approaches of teachers in five countries that are strongly committed to research or practice in this field. Understanding how professional development is structured in these countries may guide others in designing learning opportunities that are more appropriate for their teachers. The article presents the US as a framework for high-quality features, and provides examples of recent effective initiatives. The article describes four models in Australia, Hong Kong, Finland and Singapore as the highest achievers in education today. Since continuous teacher learning is a high priority in these countries, strong infrastructures have been put in place to develop high quality professional development to meet the needs and interests of teachers.

Har (2015) conducted a study to find out the professional development of teachers in Hong Kong, where researchers sought to understand the process of teacher professional development, whereas practitioners were interested in deriving policies to facilitate teacher professional development. A body of studies had agreed that teacher professional development should be 'individualized' with much focus on promoting educators' personal growth rather than imposing 'standard practices'. The English language had been a pioneer in the teacher's field, causing many areas to imitate it, using documentary analysis. This paper reviewed teacher professional development policies in Hong Kong over the past 40 years and compared them with practices typically used in the Anglosphere. The paper referred that Hong Kong's professional development policies had evolved from 'teachers training only to focusing on general skill, and then lifelong learning'. The concept of 'Confucian heritage culture was used to explain the differences in terms of practices, and the consequences of adapting teachers' professional development practices across cultures were discussed.

Commenting on previous studies:

Al-Dahshan and Muhammad study (2021) aimed at developing a proposed vision for the development of teachers' professional programs in light of the requirements of the fourth industrial revolution. The study of Al-Saeedi and Al-Azab (2021) attempted to identify the effectiveness of a proposed program to develop the professional and academic performance of science and mathematics teachers in light of the integration approach between science, technology, engineering and mathematics. Al-Maliki (2020), tried to identify the role of electronic educational platforms in the professional growth of kindergarten female teachers. (Bautista & Ortega-Ruiz, 2015) aimed at knowing the world's trends in the development processes of teachers in the field of professional development. Har (2015) aimed at knowing the professional development of teachers in Hong Kong.

3. STUDY RESULTS DISCUSSION

The first question: What is the role of 'Darsak' platform in professional development within the domains: professional empowerment; teacher relationship with others; and evaluation and feedback from the point of view of biology teachers in the south region?

To answer this question, the arithmetic mean and standard deviations of the responses of the study sample were calculated. Table (3) shows the three areas arranged in descending order according to the arithmetic mean:

Table (3)

Arithmetic averages and standard deviations of the role of 'Darsak' platform in the professional development dimension within the domains (professional empowerment, teacher-relationship with others, and evaluation and feedback)

No	Domain	Arithmetic mean	Standard deviation	Role
.1	professional empowerment	3,38	0.70	Average
.2	teacher-relationship with others,	3,27	0.68	Average
.3	evaluation and feedback	3,12	0.79	Average
Total average		3,25	0.66	Average

Table (3) shows the role of 'Darsak' platform in professional development within the domains: professional empowerment; the teacher's relationship with others; and evaluation and feedback from the point of view of biology teachers in the south region, with an arithmetic mean of (3.25) and a standard deviation of (0.66) and an average role. The researchers attribute the intermediate result to the fact that the time during which 'Darsak' platform was implemented by teachers was without prior planning. However, the circumstances forced teachers, in light of the challenges facing the educational sector, to work on sustaining the educational process. Teachers had no other available solution except to use electronic platforms. The result of this study match with Al-Maliki's study (2020) which stated that kindergarten female teachers' practice of electronic platforms in professional development was possible when provided with an educational environment only. The results also go with the result of Har's study (2015), which indicated the need to pay more attention to professional development. It differs with Al-Dahshan and Muhammad (2021), which indicated that the requirements for developing teachers' professional programs to keep pace with the Fourth Industrial Revolution were of a high degree; and the result of Bautista & Ortega-Ruiz's study (2015), which indicated that training is ineffective.

The following are the results of the statistical analysis of the second question and the sub-questions of the study for each field of the professional development dimension:

The field of professional empowerment):

To answer this question, the arithmetic mean and standard deviations of the responses of the study sample were calculated for the role of 'Darsak' platform in professional development from the point of view of biology teachers in the south region in the field of (professional empowerment). Table (4) shows that:

Table(4) Arithmetic averages and standard deviations of the role of your educational platform in professional development from the point of view of biology teachers in the south region in the field of (professional empowerment)

No.	No in the questionnaire	Domain	Mean	S.D	Role
1.	2	I helped to increase my ability to identify the basic elements in Lesson	3.42	0.94	High
2.	3	I developed my skills in dealing with educational technologies effectively	3.41	0.95	High
3.	4	I Developed the level of scientific knowledge of the importance of employing educational technology in the learning process	3.41	0.91	High
4.	1	I contributed to raising my abilities to adapt to the developments of the Corona pandemic stage with high efficiency	3.37	0.86	Average
5.	5	. I Changed 5 of the educational patterns that he used to follow up on students' education	3.37	0.85	Average
6.	6	I enhanced my efficiency in improving the quality of educational duties for students	3.29	0.92	Average
		Total level	3,38	0.70	Average

Table (4) shows that the role of 'Darsak' platform in professional development from the point of view of biology teachers in the south region in the field of (professional empowerment) was with a mean of (3.38) and a standard deviation of (0.70), with an average role. The researchers attribute this result to the fact that the Ministry of Education did not pay enough attention to training teachers to use platforms in the educational process, and their empowerment still needs more follow-up, training, knowledge and experiences, especially that most of the old teachers did not have sufficient knowledge and skills in how to use educational technology in the educational process, since they were accustomed to traditional methods and were not ready for this type of learning.

In general, teachers' unreadiness and unawareness to apply 'Darsak' platform in the educational process has a negative impact on their professional development. Although 'Darsak' platform provided them with much knowledge and lots of skills, it requires specialists in the educational institutions to train teachers and provide them with sufficient knowledge to employ electronic platforms in the learning process.

The level of the arithmetic mean in this field was between (3.42-3.29), with a high and average role. Paragraph No. (2) in the questionnaire, which states, "I contributed to increasing my ability to identify the basic elements in the lesson," has an arithmetic mean of (3.42) and a standard

deviation of (0.94) with a high role. The researchers attribute this result to the fact that 'Darsak' platform contributed to professional development by contributing to empowering teachers professionally. This was shown in its contribution to increasing teachers' ability to identify the basic elements in the lesson by following the lessons presented on the platform, which presents the basic objectives of the lesson in a short time. This increased teachers' focus and skills. Therefore, with time and follow-up, the teacher will be capable of defining the goals and basic information that the platform focuses on without expanding and deepening the presentation of this information, so that students can also focus on the basic goals that must be achieved, which are considered the basic pillars of the learning process at this stage of study. This made the teacher determine the appropriate evaluation for his/her goals and prepare assignments based on the basic elements that the teacher wants the students to learn based on the nature of the exceptional situation of education in light of the Corona pandemic, through which students lost the natural environment for education. However, 'Darsak' platform in this aspect contributed to the development of teachers' progress.

While paragraph No. (6) in the questionnaire, which states, "I have enhanced my efficiency in improving the quality of students educational duties ," has an arithmetic mean of (3.29) and a standard deviation of (0.92), with an average role. The researchers attribute this result to the fact that 'Darsak' platform did not increase the teachers' efficiency in improving the quality of students' learning duties due to the nature of the presentation of the material, which is limited to identifying the basic elements in a direct way. This made the students' evaluation within the first levels of the Bloom pyramid, as the platform did not provide teaching methods that use mental skills. Therefore, there was no development or improvement in the preparation of duties, which were limited to duties within the level of memorization and remembering. Moreover, lack of time and lack of previous experiences of teachers in how to prepare educational duties on 'Darsak' platform did not provide the actual aspect through which we can judge the educational duties prepared by the teacher. Therefore, the role of the platform in the aspect of teachers' professional development which is related to improving the quality level of assignments was average.

Domain of teacher's relationship with others

To answer the second question within this field, the arithmetic mean and standard deviations of the responses of the study sample were calculated for the role of 'Darsak' platform in professional development from the point of view of biology teachers in the south region in the field of (teacher's relationship with others). Table (5) shows the paragraphs arranged in descending order according to the arithmetic mean :

Table(5) Arithmetic averages and standard deviations of the role of 'Darsak' platform in professional development from the point of view of biology teachers in the southern region in the field of (teacher's relationship with others)

No.	No in the questionna ire	Domain	mean	S.D	Role
.1	4	It provided me with educational experiences by discussing the difficulties and challenges in employing	3.32	0.84	Avera ge

No.	No in the questionnaire	Domain	mean	S.D	Role
		electronic platforms in the educational process			
.2	2	It Increased my level of communication with parents to discuss educational issues	3.32	1.10	Average
.3	3	It Contributed to the follow-up of educational issues with different teachers of the same specialization	3.31	0.86	Average
.4	5	It Contributed to increasing communication with experts in the field of e-learning to exchange information	3.29	0.92	Average
.5	1	I increased my positive relationship with students through social media communication	3.25	0.99	Average
.6	7	It Contributed to providing a basis for discussing developments with others regarding the teaching of biology through 'Darsak' platform	3.22	1.94	Average
.7	6	It opened the way to join some electronic forums to exchange experiences	3.19	0.81	Average
		Total leel	3,27	0.68	Average

Table (5) shows that the role of 'Darsak' platform in professional development from the point of view of biology teachers in the south region in the field of (teacher's relationship with others) has a mean of (3.27) and a standard deviation of (0.68), with an average role. The researchers attribute this result to the fact that the use of 'Darsak' platform depends mainly on the individual's effort and that the communication process was only between the teacher and the student, because the student is a recipient and the teacher is a tutor, and that the interaction process was weak. Besides, the process of discussions between colleagues on the platform was non-existent, due to the absence of communication between teachers or students on the platform, and because of lack of teachers' knowledge on how to use the platform in the process of communicating with teachers, parents or students themselves. Moreover, many teachers do not have sufficient experience in communicating via electronic platforms.

The level of the arithmetic mean in this area was between (3,32-3.19), with an average role. Paragraph No. (4) in the questionnaire, which states, "It provided me with educational experiences by discussing the difficulties and challenges in employing electronic platforms in the educational process," was with a mean of (3.32) and a standard deviation of (0.84) and an average role. The researchers attribute this result to the fact that 'Darsak' platform played a role in improving the level of teachers' professional development, as the platform provided learning experiences by discussing the difficulties and challenges in employing electronic platforms in the educational process. 'Darsak' platform increased communication between teachers themselves, and between

teachers and supervisors and support team to exchange experiences on how to use 'Darsak' platform, where the teacher was communicating with everyone to learn and interact within the platform. There were many limitations and difficulties at the beginning of using the platform, especially when the teacher was not trained in advance, and was behaving from the top off his head. Consequently, the teacher's relationship with others increased through communication to obtain experiences in how to employ 'Darsak' platform in the learning process and was cooperative to solve all the difficulties they faced, knowing that there were many teachers who did not have experience in using computers for this type of education, and found themselves facing a challenge in using 'Darsak' platform, which is the only option to continue education in light of the Corona pandemic, where the Ministry of Education forced teachers to perform Educational tasks via 'Darsak' platform only.

Paragraph No. (6) in the questionnaire, which states, "It opened the way to join some electronic forums for the exchange of experiences," had a mean of (3.19) and a standard deviation of (0.81) with an average role and was below average. The researchers attribute this result to the fact that electronic forums need technical skills and knowledge of electronic applications, and this was what many teachers lacked. Therefore, there is a big difference between interaction through 'Darsak' platform and registration in these forums, as dealing with 'Darsak' platform is mandatory for teachers to interact with the students. As for the electronic forums, they are open forums on a global level. 'Darsak' platform may have provided technical skills for many teachers to start searching for everything that contributes to increasing their knowledge in using 'Darsak' platform. Teachers lack of knowledge concerning the use of 'Darsak' platform might be because teachers do not practice or attend regularly because they could be busy most of the time following up students' duties, or busy with their families. Besides, there is lack of forums that can provide real benefit at times, where some people consider them a waste of time and effort. Moreover, the financial cost that the teacher needs for internet packages to participate in the forums cause many teachers to refrain from participating.

Domain of calendar and feedback:

To answer the second question in this field, the arithmetic mean and standard deviations were calculated. Table (6) paragraphs are arranged in descending order according to the arithmetic mean:

Table (6) Arithmetic averages and standard deviations of the role of your educational platform in professional development from the point of view of biology teachers in the southern region in the field of (evaluation and feedback)

No.	No in the questionnaire	Domain	mean	S.D	Role
.1	7	It increased the level of my abilities to employ electronic student records	3.26	0.88	Average
.2	2	It Contributed to increasing my skills in using feedback on an ongoing basis	3.21	1.04	Average

No.	No in the questionnaire	Domain	mean	S.D	Role
.3	6	It enhanced my self-abilities in knowing the methods of assessment to evaluate students' performance	3.19	0.96	Average
.4	1	It enabled me to know the students' strengths and weaknesses	3.08	1.03	Average
.5	4	It Contributed to identifying the educational difficulties that students face	3.07	1.03	Average
.6	3	It contributed to raising my efficiency in recognizing students' achievement during a specific period	3.06	1.01	Average
.7	5	It Contributed to providing basic information to know the extent of students' scientific progress	3.01	0.94	Average
Total level			3,12	0.79	Average

Table (6) shows that the role of 'Darsak' platform in professional development from the point of view of biology teachers in the south region in the field of (evaluation and feedback) was with a mean of (3.12) and a standard deviation of (0.79) and an average role. The researchers attribute this result to the fact that the evaluation process is often through tests or the teacher's direct interaction with the students. Therefore, the evaluation process through 'Darsak' platform requires skills, knowledge and experience in how to deal with students to know the level of improvement. Moreover, the evaluation process is not easy and not every teacher can deal with it. In addition, students' achievement through 'Darsak' platform is dubious and ambiguous because students use others to do their assignments or answer exams.

The level of the arithmetic mean in this field was between (3.26-3.01) with an average role. Paragraph No. (7) in the questionnaire, which states, "I increased my abilities to employ electronic student records," had an arithmetic mean of (3.26) and a standard deviation of (0.88) and an average role, which is the highest arithmetic mean. The researchers attribute this result to the fact that 'Darsak' platform has increased the level of the learner's capabilities in employing electronic student records. The student's submission of duties and his being subject to assessment through 'Darsak' platform makes the teacher concentrate more on electronic records that show the extent to which the student entered the platform and be evaluated through electronic exams that are prepared by the ministry or those exams and duties prepared by the teacher. Therefore, all the teacher's electronic records contain all activities and interaction with the students on the platform, which contributed to professional development regarding how to prepare records through digital applications.

While paragraph no. (5) in the questionnaire, which states, "I contributed to providing basic information to know the extent of the students' scientific progress," had an arithmetic mean of (3.01) and a standard deviation of (0.94) with an average role, which is the lowest arithmetic average. The researchers attribute this result to lack of unified and consistent ways in which the teacher can know the level of students' improvement in the educational process; and that 'Darsak' platform depends on giving students lessons, assignments and tests on the platform; and that these

experiences that teachers possess do not qualify them sufficiently to know the level of progress that his students have reached. The platform may contain options through which the teacher can know the level of progress reached by the students, but the teachers' electronic experiences in dealing with 'Darsak' platform still need more time, effort, and follow-up by the specialists so that teachers can know all the contents and functions of the platform.

The second question: Are there statistically significant differences at the significance level (α 0.05) between the mean scores of the study sample about the role of 'Darsak' platform in professional development due to the variables (gender, educational qualification, academic experience)?

1- Gender:

To answer this question, the researchers used the T-test (Independent Sample T-Test). Table (7) illustrates this.

Table (7) T-test to determine the differences between the average responses of the study sample The role of 'Darsak' platform in professional development due to the gender variable

Domain	Sex	No	Mean	S.D	Degree of freedom	T-value	Level
Total scale	male	48	3,29	0,78	154	0,024	0,981
	Female	108	3,29	0,58			

*Differences are significant at the significance level $\alpha \leq 0.05$

Table (7) shows that there are no statistically significant differences at the level of statistical significance ($\alpha \leq 0.05$) between the average responses of the study sample regarding the role of 'Darsak' platform in professional development due to the gender variable on the overall scale, where the value of (T) was (0.024), which is not statistically significant at the level (0.981). The researchers attribute this result to the fact that teachers were placed under the same conditions as they were supposed to interact and use 'Darsak' platform in teaching biology in response to the ministry's vision of continuing the learning process in light of the Corona pandemic that kept teachers and their students away from their schools. Therefore, teachers of both sexes attempted to increase their efficiency in using 'Darsak' platform and develop their technical skills in using the learning platforms which they were forced to use for the first time, and they started searching for any instructions and videos, or exchanging experiences to know how to overcome the obstacles they faced during use, which motivated them to work hard to accomplish their tasks through the platform and answer students' inquiries about the mechanism of interaction and communication via the platform. The study agreed with the results of the study of Al-Dahshan and Muhammad (2021), which indicated that there were no statistically significant differences between the average opinions of the sample members according to the gender variable about the degree of importance of the requirements necessary for the development of professional development programs for teachers. The researchers did not find any study that included the gender variable in professional development processes, but the theoretical literature indicated the need to train all teachers on the processes of development and modernization. The study differs with the results of the study of Al-Dahshan and Muhammad (2021), which indicated that there were differences in favor of males.

2. Qualification:

To answer this question, the researchers used the T-test (Independent Sample T-Test). Table (8) illustrates this.

Table (8) T-test to determine the differences between the average responses of the study sample The role of 'Darsak' platform in professional development due to the educational qualification variable

Domain	qualification	No.	mean	S.D	Degree of freedom	T-value	Significance level
Total scale	B.A Higher studies	99 55	3,31 3,24	0,64 0,68	154	0,653	0,515

*Differences are significant at the significance level $\alpha \leq 0.05$

It appears from Table (8) that there are no statistically significant differences at the level of statistical significance ($\alpha \leq 0.05$) between the average responses of the study sample to the role of 'Darsak' platform in developing self-efficacy, professionalism, and achievement motivation due to the academic qualification variable on the overall scale. The T-value is (0.653), which is statistically insignificant at the level (0.515). The results of the analysis also showed that there were no statistically significant differences in all areas of the role of 'Darsak' platform in developing self-efficacy, professionalism, and achievement motivation due to the educational qualification variable. The researchers attribute this result to the fact that teachers of different scientific qualifications between a bachelor's degree or postgraduate studies should prepare themselves well on the use of, 'Darsak' platform. This made all teachers employ all their experiences and qualifications to raise their efficiency and develop themselves professionally. There were no statistical differences in terms of academic qualifications for the role of 'Darsak' platform in professional development. The researchers did not find a study in the field of professional development attributed to the educational qualification variable. The study differs with the result of the study of Al-Dahshan and Muhammad (2021), which indicated that there were statistically significant differences between the averages of the teachers' responses about the degree of importance of the requirements necessary to develop teachers' professional development programs in favor of secondary school teachers according to the variable of the study stage, and in favor of holders of higher qualifications.

3.Academic experience:

With the aim of revealing an indication of the role of 'Darsak' platform in developing self-efficacy, professionalism, and achievement motivation due to the experience variable (1- less than 5 years, 5- less than 10 years, 11- and more), one way ANOVA was used, as shown in Table (9).

Table (9) The results of the One Way ANOVA for the role of your educational platform in professional development due to the variable of experience

Requirement	Source of variance	Sum of squares	Degree of freedom	Mean of squares	(P) Value	Level of significance
	Between groups	0,555	2	0,278	0,552	0,577

Professional Empowerment	Within groups	76,989	153			
	total	77,544	155	0,503		
teacher's relationship with others	Between groups	0,934	2	0,467		
	Within groups	71,441	153		1,000	0,370
	total	72,375	155	0,467		
Feedback and evaluation	Between groups	0,273	2	0,136		
	Within groups	96,629	153		0,216	0,804
	total	96,901	155	0,932		
Total scale	Between groups	0,368	2	0,184		
	Within groups	69,040	153		0,408	0,666
	total	69,409	155	0,451		

• Statistically significant at the level ($\alpha \leq 0.05$).

Table (9) shows that there are no statistically significant differences at the significance level ($\alpha \leq 0.05$) for the role of 'Darsak' platform in developing self-efficacy, professionalism, and achievement motivation due to the variable of experience (less than 5 years, 5- less than 10 years, 10- or more) on the overall scale, where the value of (P) was (0.408), which is not statistically significant at the level (0.6666). The results of the study also showed that there were no statistically significant differences in all fields. In the field of empowerment, the value of (P) reached (0.552), which is not statistically significant at the level (0.577); and in the field of the teacher's relationship with others, the value of (P) reached (1,000), which is not statistically significant at the significance level (0,370). . In the evaluation and feedback domain, the value of (P) reached (0.216), which is a statistically insignificant value at the significance level (0.806). The researchers attribute this result to the fact that teaching experiences experienced by the teacher, whether large or small, did not lead to statistically significant differences due to 'Darsak' platform in professional development, since the teachers' experience in this type of education is new to them and had not been used throughout their experiences before, and they did not need to use digital technologies in teaching, especially distance education, but the exceptional situation of the Corona pandemic obligated everyone to deal with 'Darsak' platform, and the experience did not have an impact on the role of 'Darsak' platform in raising the level of professional development. All teachers, especially those who did not have experience in using computers and technology of all types, sought to take the initiative to learn using the platform 'teach yourself'. The researchers did not find a study in the field of professional development related to the variable years of experience. None of the previous studies dealt with the variable of experience and its impact on professional development, but the theoretical literature pointed out the importance of continuous development in providing all experiences and knowledge to all teachers, regardless of years of experience, which indicates that experiences had a significant impact on the skills and knowledge acquired by individuals.

4. RECOMMENDATIONS

Based on the results of the study, the study reached several recommendations as follows:

1. Providing teachers with appropriate training on how to manage educational technologies in distance education.

2. Providing training centers on a continuous basis to raise the skills of teachers in the technical field.
3. Training new teachers on how to manage distance learning.
4. Integrating distance education with face-to-face education in normal circumstances, to be a real alternative to face-to-face education in exceptional circumstances.

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