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The Impact of Reflective Practices among Mathematics Teachers who enrolled in the Higher Diploma Program for Pre-Service Teacher Education at Yarmouk University in Developing their Professional Performance

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Abstract

The study aimed to demonstrate the impact of reflective practices on the development of professional performance. the study relied on the descriptive analytical approach. The research community was represented by all mathematics teachers enrolled in the higher diploma program for teacher preparation before service at Yarmouk University. a random sample was selected represented by (110) teachers, a scale of reflective practices was prepared, and the results of the study showed that the level of impact of reflective practices on the development of professional performance came to an average degree, and the areas of reflective practices came in descending order as follows): (The field of classroom management, the field of planning, the field of teaching implementation, and then the field of evaluation), and it turned out that there were no statistically significant differences at the level of significance (0.05) between the responses of study personnel depending on the gender variable. The study recommends spreading awareness and the culture of contemplative practice and its tools by holding training workshops for students and teachers. The need to increase teachers' interest in employing reflective teaching to develop their abilities in reflective practice. The study also recommends that teachers, both male and female, should pay attention to using assessment for students in order to improve their academic performance.

Keywords: *Reflective Practices, Higher Diploma Program, Professional Performance, Yarmouk University, Jordan.*

INTRODUCTION

Contemporary advancements in the educational system necessitate teachers to adapt their knowledge and views in order to enhance the educational process and apply it effectively in teaching and learning (Caena & Redecker, 2019). As educational evaluation has progressed, it has become a crucial component of teacher training programmes. The responsibility of teachers to bring the teaching and learning processes to critical scrutiny necessitates their efforts to enhance them. The process of teaching is continuous (Mathew et al., 2017). The primary objective of reflective practice is to enhance performance. This is achieved by analysing and evaluating individuals' practices, which is why the formal education setting serves as a laboratory for cultivating enhanced practice (Machost & Stains, 2023).

Reflective practice is essential for educators in educational institutions due to the intricate nature of education, which demands significant time, effort, wisdom, and insight (Binti Mappah, 2024). This is particularly important as education occurs in varied and multifaceted environments. Reflective practice is considered a substitute for conventional professional development approaches. This is because it results in heightened self-awareness and the acquisition of fresh insights pertaining to reflective practice, as well as a more comprehensive comprehension of challenges (Lin & Jain, 2018). Reflective practice can be analyzed from several perspectives and should be explored beyond mere contemplation of the event. It is a cognitive process that involves many stages of analysis and discourse to uncover ideas, emotions, and assessments that illuminate the practitioner's abilities and results. Additionally, it can be carried out either independently or in cooperation with others (Mortari, 2015).

Jordan began prioritising the professional development of teachers, with a specific focus on math teachers, in order to stay updated on advancements in math curricula that aim to enhance students' comprehension (Abdallah, 2020). This initiative was taken in response to the country's students scoring below the global average on international assessments for science and mathematics, as reported by the Trends in International

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Mathematics and Science Study in 2019. Jordan was placed 33rd out of the 39 countries that took part. Furthermore, we aim to provide enhanced professional development opportunities to further improve the teaching of mathematics (National Center for Human Resources Development, 2019). To achieve this goal, it is crucial to prioritise the pre-service mathematics teacher by assessing their attitudes and beliefs regarding the essence of mathematics, as well as evaluating the extent to which they align with his instructional approaches (Jacinto, 2020). The purpose of this curriculum is to provide pre-service teachers with a solid knowledge base and a deeper understanding of many viewpoints that are crucial for making informed decisions in the classroom (Janeš et al., 2023).

Higher education institutions have made significant efforts to provide student instructors with the required theoretical and practical skills to meet the objectives of the educational system, in response to the rapid development in the field of education and the demands of the knowledge era. The Teacher Education Professional Diploma (TEPD) was enthusiastically embraced by the faculties of education at Jordanian institutions, including Jordanian, Hashemite, Mu'tah, and Yarmouk universities, when it was first introduced in the academic year 2020-2021. The TEPD programme for PTs comprises three primary courses: The first section is an overview of general pedagogies related to teaching and learning. The second part focuses on the pedagogy of a certain subject, which refers to the instructional methods used to teach that subject. The final component consists of a school-based practicum that spans 18-20 weeks, with three separate school experiences. Student teachers will undergo training at either two or three private or public schools, while being supervised by both an academic adviser (a faculty member from the institution) and a cooperating teacher from the selected school (Altarawneh et al., 2023).

According to the above, the problem of the study is to identify the impact of reflective practices among mathematics teachers enrolled in the Higher Diploma Program for Pre-Service Teacher Preparation at Yarmouk University in developing their professional performance.

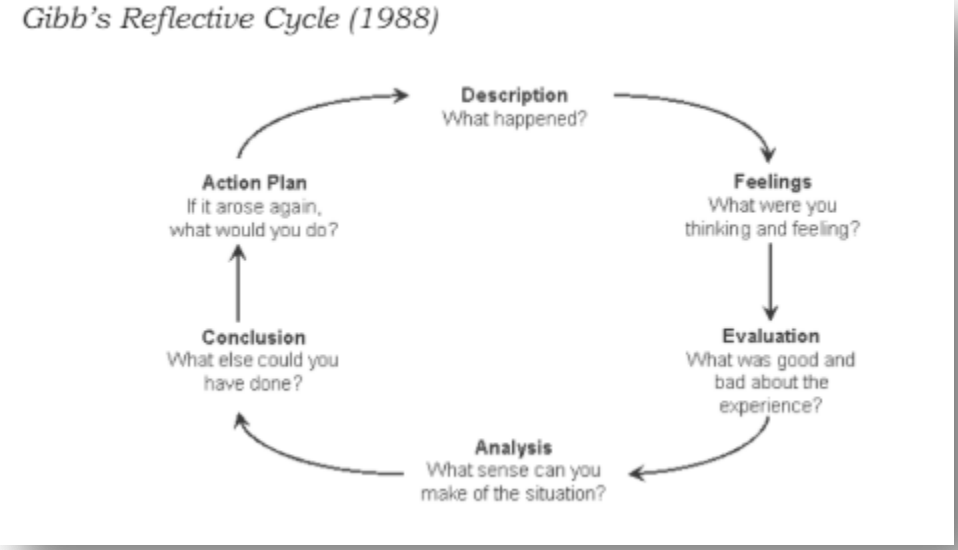
LITERATURE REVIEW

The term "Reflective Practices" refers to the process by which a teacher evaluates his or her previous teaching practices, analyses the accomplishments that have been accomplished, and makes recommendations for improved practices that can be produced in the future (Zahid & Khanam, 2019). The term " Reflective Practices" is defined by as the processes by which a faculty member generates self-awareness and reconsiders the tasks he performs (Rania et al., 2021). This allows him to mentally review, analyse, review, evaluate, and extract lessons in order to form new knowledge and skills that enhance his ability to modify and develop his professional performance (Koukpaki & Adams, 2020). It is also possible to view it as the processes and positions that a faculty member undertakes in order to generate self-awareness in order to reconsider the tasks that he performs (Ambady, 2018). This allows him to mentally review, analyse, review, perform, and extract lessons in order to form new knowledge and experiences that enhance his job performance development.

The significance of higher-order reflection is emphasised while identifying reflection practices. Critical reflection, which is the highest level of reflection, is seen as the most influential form of reflection that brings about major transformations in education. At advanced stages of reflection, teachers analyse the ethical, social, and political implications of their teaching, enabling them to engage with the fundamental objectives of education. At this stage, self-reflection entails a thorough analysis of the values and ideas that instructors hold, as well as the assumptions they make and the expectations they have for their students (Aghakhani et al., 2023).

The first framework to guide pre-service teachers in their reflective practice introduced by Gibb in 1988, is a six-stage cycle that outlines the development of reflective thinking. The stages include description, feelings, evaluation, analysis, conclusion, and action plan (Suphasri & Chinokul, 2021).

Alsina & Mulà (2019) identified five elements of the lecturer's practice: (1) presenting real action, (2)



uncovering and considering students' values and preconceptions, (3) systematizing and contrasting them with the 'ideal', (4) facilitating understanding of the perspective offered by mathematical and sustainability concepts, and (5) assisting students in developing the new perspective acquired through grounded and reasoned action plans. An important finding of the study is that when the pre-service teachers and university lecturers involved in the learning process are synchronized, it is the past knowledge, experiences, and beliefs that undergo transformation.

In Dawaghreh's (2024) study, it was found that student instructors held a significant range of viewpoints regarding the essence, acquisition, and instruction of mathematics. The study proposed implementing educational programmes for mathematics teachers to enhance their understanding of pedagogy and cognition. The findings of Kılıç's (2022) study showed a notable improvement in the results of post-classroom teaching practices compared to the pre-classroom practices of the pre-service teachers (PSTs). The results indicate that the classroom practice process, which is based on reflective practices conducted in the research, significantly contributes to the development of pre-service teachers' classroom teaching practices. Machost & Stains (2023) assert that reflective activities in education are highly recommended and have become integral aspects of professional evaluations. The advantages of reflective activities are numerous; nevertheless, the literature frequently emphasises the advantages for students rather than the advantages for educators themselves. Moreover, the existing body of literature on reflective practices in education is filled with contradictory language and intricate studies, which might hinder educators' comprehension of reflective practices and impede their implementation. This essay provides as an introductory guide for educators who are starting to engage in reflective practices. In accordance with the findings of Nasur et al. (2024), individuals who are considering a career in teaching the professional development of aspiring teachers can be expedited by using both individual and group reflecting exercises. Teachers' professional development can be significantly enhanced through several strategies, such as engaging in reflection before and after teaching, reflecting in preparation for future action, considering feedback from students and colleagues, and analysing audio-video recordings of classes and professional portfolios.

METHODOLOGY

the current study attempts to answer the following main question: What is the impact of reflective practices on the development of professional performance of mathematics teachers enrolled in the higher diploma program before serving at Yarmouk University

The Following Sub-Questions Branch Off from This Question

First question: What is the impact of contemplative planning practices on the development of professional performance of mathematics teachers enrolled in the higher diploma program for Teacher Preparation?

The second question: what impact does the reflective practices of the field of teaching implementation have on the development of the professional performance of mathematics teachers enrolled in the higher diploma program for Teacher Preparation?

The third question: what impact does the reflective practices of the field of classroom management have on the development of professional performance of mathematics teachers enrolled in the higher diploma program for Teacher Preparation?

Fourth question: What is the impact of reflective practices of the field of assessment on the development of professional performance of mathematics teachers enrolled in the higher diploma program for Teacher Preparation?

Question five: are there any significant differences at the level of significance (0.05) in the responses of the study subjects on the scale of the impact of reflective practices on the development of professional performance, depending on the gender variable?

Method and Procedure

This section presents an explanation of the actions taken by the researcher to achieve the objectives of the study and includes a description of the study community and the sample that was selected, in addition to tools and verification of their honesty and consistency, statistical methods responsible for analyzing the results and answering questions, and the methodology followed in the study. Scope of study this study was based on the descriptive analytical method; for its suitability to the objectives of this study, which aims to demonstrate the impact of reflective practices on the development of professional performance of mathematics teachers enrolled in the Higher Diploma Program at Yarmouk University. Community and sample study A random sample was selected, represented by (110) teachers from the research community, and the table below shows the distribution of the sample members.

Table (1) Frequency and Percentages by Study Variables

Gender	Frequency	percentage
Male	43	% 39.1
Female	67	% 60.9
Total	110	% 100

Study Tools

The researcher developed a measure of the impact of reflective practices in developing the professional performance of mathematics teachers enrolled in the higher diploma program before service at Yarmouk University, after referring to a number of related studies, the most prominent of which is the study of The Bachelor (2022) and the study of the laymen and judges (2017), the measure consisted of (29) paragraphs, distributed over four areas (planning, teaching implementation, classroom management, and evaluation), and also included a part of the initial data of study members (gender).

The truthfulness and consistency of the measure of the impact of reflective practices on the development of professional performance

Face Validity

The scale in its initial form was presented to a number of arbitrators to confirm the apparent honesty of the tool, numbering (10) arbitrators with competence and experience, and they were asked to judge the quality of the content of the paragraphs and express an opinion on the linguistic wording, its integrity and the suitability of the paragraph for the field under which it fell, in addition to any other remarks, whether by deletion or addition, and the arbitrators ' amendments were introduced to come up with the image of the tool in its final form, which consisted in modifying the wording of some paragraphs, and the number of the scale in its final form reached (29) paragraphs.

Internal Consistency Validity

After confirming the apparent honesty of the study tool, the constructive honesty was applied, which reflects the extent to which the paragraphs of the scale represent the concepts to be measured, and was measured by reviewing the tool on a sample of the study community in order to identify the extent of the truthfulness of the internal consistency of the tool and the extent of the contribution of its constituent paragraphs, by calculating the Pearson correlation coefficient between paragraphs and the field to which they belong, and Table (2 shows this):

Table (2) correlation coefficients of the fields of measuring the impact of reflective practices on the development of professional performance

Paragraph number	Correlation coefficient	Paragraph number	Correlation coefficient
The first area: planning		**management The third area: classroom**	
1	**839.0	16	**708.0
2	**569.0	17	**372.0
3	**.5540	18	**347.0
4	**230.0	19	**407.0
5	**476.0	20	**351.0
6	**.4510	21	**.2970
7	**854.0	22	**.7480
The second area: the implementation of teaching		**The fourth area: the calendar**	
8	**648.0	23	**0.792
9	**.4490	24	**0.603
10	*514.0	25	**0.566
11	**.3140	26	**0.377
12	**417.0	27	**0.493
13	**635.0	28	**0.468
14	**588.0	29	**.0710
15	**823.0		

It is noted through Table (2), which represented the correlation coefficients of the scale paragraphs ranged between (0.314-0.854) and these values are considered acceptable because they exceeded the value (0.2), based on (Hattie, 1985), and accordingly all paragraphs were accepted in the scale. Stability the measure of the impact of reflective practices on the development of professional performance: the method of internal consistency was implemented according to the Cronbach Alpha test, as shown in Table No. (3). these values are suitable for the study objectives.

Reliability

Table (3) cronbach's Alpha internal consistency coefficient for the areas of the reflective practice scale in the development of professional performance

Scales	Cronbach Alpha
Planning area	0.795
Area of implementation of teaching	0.811
of classroom management Field	730.0
Calendar area	0.801
All	0.904

Table (3) shows that the scale of reflective practices in the development of professional performance amounted to (0.904) and the stability of the fields of the scale ranged between (0.730 – 0.811), and these values are considered educationally acceptable, and therefore the scale is suitable for application. The criterion for correcting the scale of reflective practices in the development of professional performance The Likert five - point scale was adopted as follows (strongly agree, agree, neutral, disagree, strongly disagree) to demonstrate the impact of employing reflective practices in the development of professional performance, the following weights were adopted respectively 5, 4, 3, 2, 1 the values of mean were also estimated by the following categories for ease of interpretation of the results of the study):(from 1.00-2.33 low,) (2.34-3.67 from medium,) (3.68-5.00 from high).

The scale has been calculated by the following equation: Maximum response

$$\frac{\text{(maximum response) - (minimum response)}}{\text{Total categories (3)}}$$

(5 -1) / 3 = 1.33 thus adding (1.33) the end of the categories.

METHODOLOGY

The procedures of the study consisted in reviewing the theoretical literature related to the study in order to form a clear picture of its subject, adopting the descriptive analytical approach to its compatibility with the questions and objectives of this study, and using previous studies related to their variables; to build the current study tools, and ensure the honesty of the tools and their stability in the appropriate ways, the research community and its sample were identified, in addition to obtaining books to facilitate the task necessary to apply the study scale, and then unloading the questionnaires and analyzing them according to the SPSS system, then extracting the necessary statistical procedures, presenting and discussing the results, and recommendations derived from the results.

Statistical Methods

A set of statistical methods was applied using the statistical package of social and Pedagogical Sciences (spss 26 and are determined by the following): - Mean and standard deviations of the responses of the study personnel. - Pearson correlation coefficient to indicate the extent to which the paragraph belongs to the scale. - Cronbach's Alpha coefficient for studying the constancy of search metrics. - T-test for independent samples according to the gender variable.

Descriptive Analysis

The results of the main question, which reads: What is the impact of reflective practices on the development of professional performance of mathematics teachers enrolled in the higher diploma program before service at Yarmouk University?

To answer this question, mean and standard deviations were extracted and the table item (4 illustrates this):

Table (4) mean and standard deviations of the scale areas of reflective practices

scale	mean	Standard deviation	Rank	importance
Planning	3.64	0.84	2	Medium
Implementation of teaching	3.44	0.87	3	Medium
Classroom management	3.89	0.76	1	Medium
Calendar	3.37	0.97	4	Medium
All	3.65	0.87		Medium

Table (4) shows that the mean of the scale as a whole reached (3.65) with an average grade, and the mean of the scale areas ranged between (3.37 – with medium and high levels, and the areas were ranked in descending order as follows (3.89-the field of classroom management, the field of planning, the field of teaching implementation, and then the field of evaluation):

The results of the first question, which reads: "What is the impact of contemplative practices of the field of planning on the development of professional performance of mathematics teachers enrolled in the higher diploma program for Teacher Preparation?""

To answer the question of the study, the mean and standard deviations of the paragraphs of the scale of reflective practices were calculated,

table (5): mean and standard deviations of the paragraphs of the scale of reflective practices

Number	Paragraph 2	**mean**	**Standard deviation**	**Rank**	**The level**
1	Encourages me to take a scientific approach to thinking	3.00	1.29	6	Medium
2	From when building the line of activities I can the .possibilities and the resources available	2.51	1.39	7	Medium
3	.work with a team spirit He trains me to	3.44	1.28	5	Medium
4	Enables me to predict the actions expected to be carried out before the implementation of the plan of .activities	3.61	1.23	3	Medium
5	It makes me think about the problems that are the implementation of expected to appear during .professional tasks in order to avoid them	3.45	1.25	4	Medium
6	It works to provide a flexible plan that .accommodates emergency situations	3.94	0.96	2	high
7	Helps me to prepare a class plan that organizes the .content learning of the study	4.03	1.13	1	high
Total		3.51	0.91	**Medium**	

It can be seen from Table (5) that the mean of the role of reflective practices in the development of professional performance in the field of planning was (3.37) with an average grade, and the mean ranged between (3.28 – 4.11) with high and medium levels, paragraph (4), which stated that I could predict the actions expected to be performed before the implementation of the plan of activities, got the highest mean, and paragraph "which stated(1) encourages me to adopt a scientific approach to thinking" got the lowest mean.

The results of the second question, which reads: "What is the impact of reflective practices of the field of teaching implementation on the development of professional performance of mathematics teachers enrolled in the higher diploma program for Teacher Preparation?"

To answer the question of the study, the meanand standard deviations of the paragraphs of the scale of reflective practices for the implementation of teaching were calculated, the table Item (6 shows it):

Table (6) meanand standard deviations of the paragraphs of the scale of reflective practices for the field of teaching implementation

Number	Paragraph	mean	Standard deviation	Rank	The level
1	appropriate He urges me to invent .teaching aids	3.92	0.99	4	high
2	It helps me to analyze the educational situation that was carried out at the end of .the lesson	4.01	0.97	3	high
3	Encourages me to employ the skills of .mastery education	4.03	0.87	2	high
4	teaching methods that He guides me to take into account the individual differences .between students	4.34	0.77	1	high
5	-Motivates me to apply students ' self .learning skills	3.23	1.22	5	Medium
6	Develops the ability to use feedback in .modifying teaching methods	2.90	1.30	8	Medium
7	It pushes me to enrich and develop the .study material	3.22	1.27	6	Medium
8	Helps me implement my new knowledge and experience	2.97	1.34	7	Medium
Total		3.44	0.87	**Medium**	

It can be seen from Table (6) that the mean of the role of reflective practices in the development of professional performance in the field of teaching implementation reached (3.44) with an average grade, and the mean ranged between (2.90 – 4.34) with high and medium level, paragraph (4), which provided guidance to me on teaching methods that take into account individual differences between students" got the highest mean, and paragraph (6), which provided that I develop the ability to use feedback in modifying teaching methods" got the lowest mean.

The results of the third question, which reads: "What is the impact of reflective practices of the field of classroom management on the development of professional performance of mathematics teachers enrolled in the higher diploma program for Teacher Preparation?""

To answer the question of the study, the mean and standard deviations of the paragraphs of the scale of reflective practices of classroom management were calculated, and the table Item (7 shows it):

Table (7) meanand standard deviations of the paragraphs of the scale of reflective practices for the field of classroom management

Number	Paragraph 2	mean	Standard deviation	Rank	The level
1	It develops my skills of dealing with .students	4.04	1.02	1	high
2	It helps me balance the use of direct and .speech in class indirect	2.90	1.33	7	**Medium**
3	He attaches importance to building social relationships with students during class .interaction	3.28	1.22	6	**Medium**
4	He urges me to be aware of the level of student growth and interaction at class .events	3.58	1.14	4	Medium
5	He guides me on how to solve the problems that will face me during the .implementation of the teaching process	3.55	1.25	5	Medium
6	He directs me to the usual democratic .style of leadership and class control	3.85	1.14	2	high
7	provide the right He urges me to classroom climate for learning to take .place	3.74	1.08	3	high
Total		3.89	0.76	high	

Table (7) shows that the mean of the role of reflective practices in the development of professional performance in the field of classroom management was (3.89) with an average grade, and the meanranged between (2.90 – 4.04) with high and medium levels, paragraph (1), which stated that I develop skills of dealing with students""

got the highest mean, and Paragraph (2), which stated that I help balance between the use of direct and indirect speech in class"" got the lowest mean. The results of the fourth question, which reads: "What is the impact of reflective practices of the field of assessment on the development of professional performance of mathematics teachers enrolled in the higher diploma program for Teacher Preparation?""

To answer the question of the study, the meanand standard deviations of the paragraphs of the scale of reflective practices of the calendar area were calculated, and Table (8 illustrates this):

Table (8) meanand standard deviations of the paragraphs of the scale of reflective practices for the field of evaluation

Number	Paragraph 2	mean	Standard deviation	Rank	The level
1	It develops my skill of analyzing test results .effectively	3.28	1.13	7	**Medium**
2	It enables me to handle students ' levels according to .the results of the calendar	3.64	1.11	4	**Medium**
3	Helps me diversify the calendar tools to achieve the best results	3.54	1.12	5	**Medium**
4	of various evaluation He involves me in the process .of the elements of the curriculum	4.11	0.84	1	**high**
5	.evaluation method-It develops my self	4.00	1.06	2	**high**
6	It helps me to indicate strengths and weaknesses in .the formulation of goals	3.73	1.20	3	**high**
7	ability to use the constructive It increases my .calendar during the lesson	3.46	1.19	6	**Medium**
Total		3.37	0.97	**Medium**	

It can be seen from Table (8) that the mean of the role of reflective practices in the development of professional performance in the field of assessment reached (3.51) with an average grade, and the mean ranged between (2.51 – 4.03) with high and medium levels, paragraph (7), which stated that it increases my ability to use constructive assessment during the lesson" got the highest mean, and Paragraph (1), which stated that it develops my skill to analyze test results effectively"" got the lowest mean.

The results of the fifth question, which reads: Are there any significant differences at the level of significance " (0.05 in the responses of the study subjects to the areas of the measure of the impact of reflective practices on the development of professional performance, depending on the gender variable?)"

To answer the study question, mean and standard deviations of the study scale were calculated, depending on the (gender) variable, and Table (9): it shows that.

Table (9) mean and standard deviations of the fields of the study scale from the point of view of the study personnel depending on the gender variable

Variant	Variable levels	The statistician	Planning	Implementation of teaching	Classroom management	Calendar	All
Gender	Male	mean	3.39	3.52	3.59	3.59	3.74
		Standard deviation	0.99	0.89	0.83	0.89	0.86
	Female	mean	3.35	3.39	3.39	3.46	3.59
		Standard deviation	0.97	0.86	0.86	0.93	0.87

It is noted from Table (9) that there are apparent differences between the mean of the fields of measuring the impact of reflective practices on the development of professional performance, depending on the gender

variable, and in order to verify the essence of the apparent differences, a test was applied for independent samples, as shown in Table (10):

Table (10) t test for independent samples of scale domains depending on the gender variable

Variant	test-t	df	.Sig
Planning	0.194	108	847.
Implementation of teaching	0.747	108	0.457
Classroom management	0.461	108	0.646
Calendar	0.728	108	0.468
The scale as a whole	865.	108	0.389

It can be seen from Table (10) that there are no significant differences at the level of significance (0.05)between the mean of the impact of reflective practices (planning, implementation of teaching, class management, evaluation) in the development of professional performance attributed to the gender variant.

DISCUSSION

The results of the study showed that the level of impact of reflective practices on developing the professional performance of mathematics teachers enrolled in the Higher Diploma Program for Pre-Service Teacher Education at Yarmouk University was moderate, and the areas of reflective practices were arranged in descending order as follows: (classroom management area, planning area, Implementation of teaching, and then the field of evaluation), and it was found that there were no statistically significant differences at the significance level (0.05) between the responses of the study members according to the gender variable. This emphasizes the importance of reflective practices in improving and developing teachers' teaching performance. The field of classroom management was the most influential among the areas of reflective practices. This indicates that teachers placed great emphasis on managing and organizing the classroom learning environment, which is important for effective learning.

The field of planning came in second place, which indicates that teachers paid great attention to good planning of lessons and educational units, and this is one of the basic elements in improving teaching performance. On the other hand, the field of teaching implementation came in third place, and this indicates that teachers focused on improving the teaching methods and methods used in the classroom. In addition, the field of assessment came in last place, and this may indicate that teachers did not focus sufficiently on improving assessment and evaluation processes, and this is an important aspect that needs more attention. Overall, these results confirm the effectiveness of reflective practices in developing the professional performance of mathematics teachers, and point to some aspects that may need further focus and development.

This result agreed with a number of studies. In Dawaghreh's (2024) study, student teachers had diverse views on mathematics' essence, acquisition, and instruction. The report suggested maths teachers receive pedagogy and cognition training. The study by Kılıç (2022) found significant improvements in post-classroom teaching practices compared to pre-classroom practices among pre-service teachers. The results show that the research-based classroom practice method considerably improves pre-service teachers' classroom teaching practices. Machost & Stains (2023) advocate reflective education activities, which are now part of professional assessments. Reflective exercises have many benefits; however, the literature often focuses student benefits over educator benefits. Nasur et al. (2024) found that individual and group reflecting exercises help speed up the professional growth of prospective teachers.

CONCLUSION

Studying the impact of reflective practices among mathematics teachers who are enrolled in the Higher Diploma Programme for Pre-Service Teacher Education at Yarmouk University is of great importance in developing their professional performance for a number of reasons. Reflection is a practice that enables

teachers to engage in self-reflection on their teaching practices and to consider ways in which they can improve those practices. The teacher's professional and pedagogical competencies will develop as a result of this development. In addition, reflection assists educators in effectively planning their lessons and putting those plans into action in a manner that is both productive and takes into account the various learning styles and requirements of their students.

Additionally, reflective techniques enable educators to evaluate their own performance on a periodic basis and strive towards continuously improving it. This has a good impact on the accomplishments of students as well as the accomplishment of educational objectives. Studying the influence of reflective practices among mathematics teachers who are enrolled in the Higher Diploma Programme at Yarmouk University is of utmost importance for the development of their professional performance, the improvement of the quality of education, and the improvement of the learning outcomes for students.

From the above, it can be concluded that reflection is an important tool that the teacher must acquire and work to develop, and then his students acquire it, so that its impact is reflected positively on the entire educational process, and the teacher's reflection on his teaching practices is an important tributary to self-development. Reflective practice is an important input into the preparation of teachers and their professional development. It also has a role in changing their teaching methods and strengthening their beliefs about themselves. Finally, reflective practice has an effective role in developing critical thinking and developing teachers' self-awareness. Accordingly, the study recommends spreading awareness and the culture of contemplative practice and its tools by holding training workshops for students and teachers. The need to increase teachers' interest in employing reflective teaching to develop their abilities in reflective practice. The study also recommends that teachers, both male and female, should pay attention to using assessment for students in order to improve their academic performance. It is also necessary to increase the attention of male and female teachers in developing visions for how to direct the lesson through advance planning, and to increase the interest of male and female teachers in adhering to appointments and increasing their interest in time. How important it is to increase the keenness of teachers, both male and female, to distinguish easy work from difficult work and to focus on work that requires effort.

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