

Investigating the Performance Skills Of Mathematics Student-Teachers

Asst. Prof. Meeaad Jasim Salman Al-Sarry (PhD)
College of Education
Al-Mustansiriyah University

Abstrac

The current research aims to evaluate the performance skills of the student applied in the fourth stage Mathematics Department morning study, in light of the criteria established in the student evaluation form according to the joint opinion by the academic supervisor and the director and the cooperating teacher in the application school. The aim of the research is to propose strategic steps for the practical education program (the course of observation and application) in the mathematics department for the purpose of developing the practical skills of teaching mathematics.

In order to achieve the objectives of the research, the researcher chose the descriptive analytical method, where a questionnaire was prepared by the researcher to evaluate the performance skills of the students applied in the mathematics department.

The sample of the study was 60 individuals randomly selected as follows: (20) supervisors in mathematics department, faculty of education / Mustansiriyah University, (20) school principals and (20) cooperative mathematics teachers in middle and middle schools, Where students of the fourth stage / Department of Mathematics / Faculty of Education.

In the light of the statistical processes, the study found that the third field (the personal attributes of the applied student) was distinguished by obtaining the highest weighted average and the second field (implementation and evaluation) and the first field (planning and preparation in the plan book).

Keywords: performance skills.

Investigando las Habilidades de Desempeño de Matemáticos Estudiantes-Maestros

Resumen

La investigación actual tiene como objetivo evaluar las habilidades de rendimiento del estudiante aplicadas en el estudio matinal del Departamento de Matemáticas de la cuarta etapa, a la luz de los criterios establecidos en el formulario de evaluación del estudiante de acuerdo con la opinión conjunta del supervisor académico y el director y el maestro colaborador en La aplicación de la escuela. El objetivo de la investigación es proponer pasos estratégicos para el programa de educación práctica (el curso de observación y aplicación) en el departamento de matemáticas con el fin de desarrollar las habilidades prácticas de la enseñanza de las matemáticas.

Para lograr los objetivos de la investigación, el investigador eligió el método analítico descriptivo, donde el investigador preparó un cuestionario para evaluar las habilidades de desempeño de los estudiantes aplicados en el departamento de matemáticas.

La muestra del estudio fue de 60 individuos seleccionados al azar de la siguiente manera: (20) supervisores en el departamento de matemáticas, facultad de educación / Universidad de Mustansiriya, (20) directores de escuela y (20) maestros cooperativos de matemáticas en escuelas intermedias y medias, donde los estudiantes de la cuarta etapa / Departamento de Matemáticas / Facultad de Educación.

A la luz de los procesos estadísticos, el estudio encontró que el tercer campo (los atributos personales del estudiante aplicado) se distinguía al obtener el promedio ponderado más alto y el segundo campo (implementación y evaluación) y el primer campo (planificación y preparación en El libro del plan).

Palabras clave: habilidades de desempeño.

Research problem :

The need for teachers to practice the teaching profession has become urgent and the issue of teacher preparation has become a global issue whose outputs are constantly evaluated to ensure the efficiency of the information received by the teacher in the preparation period, the adequacy of the training period and the safety of the methods and methods that linked the scientific knowledge with the applied knowledge and the availability of material and human

resources. Helped to bring about the appropriate teaching skills.

Improvement of teacher education is an improvement in education and schools. Educators have agreed that most of the educational problems are based on the lack of qualified teachers. There are many factors that depend on the success of the teacher in his work, but his educational preparation is the most important factor in this success. Teacher and good adoption with the utmost care in our educational systems. (Saeed, Saeed Mohammed and Abu Saud Muhammad, 2015, 25)

It has been noted that teacher training programs in the Arab world are concerned with all aspects of academic, professional, cultural and personal, while many of these aspects are absent in practice. For example, coordination between specialists and those with vocational or cultural education may be weak, (Rashid, Ali, 2011, 85)

There is often a shortage of teaching skills practiced by beginners in this profession and often due to the shortcomings of the theoretical and practical aspects of those skills, despite the existence of educational programs that address this deficiency through training in preparation, providing the learners with information and training to suit them to the required performance. (Qasem, Bushra and Mayad Jassim, 2019, 85)

Through the experience of the researcher in the field of training and supervision of students applied in the mathematics department for many years believes, as other educators believe that there is a problem that hinders the performance of students in the period of application in cooperating schools and that the student applied in spite of the theoretical and practical hours of the scientific and educational disciplines in their colleges are still skills Performance in the teaching of mathematics is not the required level, and there is continued criticism of the low performance of teaching by the administrations of schools visited in the period of application, but it came to the extent to reject some of these departments to cooperate with the implementers.

• This is what was pointed out by the results of many studies such as: (Salman, Maayad Jassim and Alham Fares, 2016), (Jawad, Muslim and Mahmoud Hamza, 2012), (Saadi, Aswan Fadel, 2012)

This raises the question: What is the reality of the performance skills of students applied from the perspective of academic supervisors, school administrations and cooperating teachers?

research importance :

The development of the teacher depends on the provision of different activities and processes that are designed to enhance the use and development of teachers'

knowledge and skills in a way that changes their ideas and behaviors in academic work. In other words, development is now one of the most important systems that must be available in schools. Dealing with and implementing them within schools (Abdel Aziz, Safaa and Salama Abdel Azim, 2007, 336)

As the teacher is the key to the educational process and the pioneer of the society on which he relies on the upbringing of his sons, the strong and correct birth, the question of preparation and qualification has occupied the minds of educators and specialists. The teacher is not only a communicator of knowledge, but also educates the generations in terms of mental, moral and physical education. To reality by way of correct behavior (Zair et al., 2011: 57)

Practical education is a pivotal center in teacher education programs. It is regarded as the correct practical method and the proper method that enhances the student's ability to apply knowledge, concepts and theoretical principles. Among the important objectives that practical education seeks to achieve, which positively influence the preparation and training of students - The apprentice is provided with good professional skills and the teaching skills that qualify him to be an effective teacher with his students in the classroom.

And the responsibility of preparing the students applied in the faculties of education requires follow-up not only in theoretical and practical lectures, but beyond to follow them during the period of application and supervision by the supervisors supervisors and school administrations and teachers cooperating in the schools of application. This calendar and follow-up by the previous three categories Is an essential element of the educational and training process received by the student applied in the period of preparation within the college to verify the extent of practice and employment of the principles and theoretical concepts of the scientific and educational decisions that he received during his years of study.

The importance of research is thus determined by the importance of:

1. Applicant in the Faculty of Education as a teacher of future generations.
2. Evaluation of the program of practical education in general and the importance of evaluating the student's performance applied in the teaching of mathematics in particular.
3. The views and opinions of the academic supervisor, the collaborating teacher and the school principal in evaluating the performance skills as they are the most individuals in contact with the students applied during the application period.
4. Performance skills (teaching skills) as the operational framework for each theoretical study received by the student applied in the preparation period.
5. Encourage school administrations and cooperating teachers to participate effectively in evaluating the practical education program in general and the performan

ce of the student in particular as they are an important part of this program.

6. Taking advantage of the proposed strategic steps in this research which may contribute to the development of the practical education program in the Faculty of Education Mathematics Department and may contribute to the development of the skills of teaching mathematics for students applied.

Research Objectives: The current research aims to:

1 - Evaluation of the performance skills (teaching skills) for students applied in the Faculty of Education (Department of Mathematics) University Mustansiriya in light of the criteria established in the form of evaluation of the performance of students according to the opinion shared by (academic supervisor at the university and the director and the teacher collaborator in the schools of application)

2 - Suggest strategic steps to develop the skills of performance (teaching skills) for students applied in the Department of Mathematics.

Search limits: Search limits were:

1- The views of the academic supervisor, the director and the cooperating teacher in the schools of applying the students of mathematics department in the Faculty of Education - Mustansiriya University according to the performance form prepared for this purpose.

2- Conducting the research during the second semester of the year (2018/2019)

3 - Performance skills of the student applied in areas (planning and preparation in the plan book _ Implementation of the lesson and evaluation - personal qualities of self)

Terminology:

The meaning of the term is "the behavior of the individual when doing something that others may not measure this thing, but can be measured by measuring the performance of the individual at the Done, teaching may occur and result in learning measured by measuring the performance or behavior of the student. " (Khaza'leh, Muhammad et al., 2011, 349)

Skills: are the perfection of the performance of the behavior of the movement automatically and without a complex effort. (Slaves, Toukan and Suhaila Abu Samaid, 2007, 15)

Performance Skills: Some educators have defined it as goal-oriented actions by a person in performing the task. (<https://www.innovativeotsolutions.com>)

Or goal-oriented actions that can be observed as small units of participation in day-to-day careers such as motor skills, operational skills and social interaction skills. (<https://www.icelearningcenter.com>)

Teaching Performance Skills is a type of teaching behavior that is effective in achieving specific goals in the form of mental, verbal or motor responses that are done accurately and quickly and adapt to the teaching position. It is one of the

most important basic components that must be trained before service. And the calendar. (Afafim, Nadia Hussein and Fatima Abdel Amir, 2011, 97)

(Qasim, Boshra and Mayad Jassim, 2019) as the teaching and mental teaching behavior of the teacher during teaching with accuracy, speed and continuity. (Qasem, Bushra and Mayad Jassim, 2019, 87)

Performance Skills: The teaching procedures followed by the student in the educational situation to achieve the objectives of his lesson, including the three areas: planning, implementation, evaluation according to the performance card prepared for this purpose.

The procedural definition of the applied student: is the student of the Faculty of Education in the fourth stage - the Department of Mathematics and enrolled in the program of practical education, which exercises its teaching role in a middle school or secondary in the period of field application under the supervision of the College.

The procedural definition of the academic supervisor is a member of the teaching staff in the faculty assigned to the scientific or educational supervision of the students applied in the cooperating schools in accordance with a program prepared for this purpose to follow up and solve their problems and provide the necessary scientific and educational assistance for them in the period of application and evaluate them according to the performance card prepared for this purpose.

The practical definition of the cooperating teacher is the teacher of mathematics who is in secondary schools to the owners of the Ministry of Education, which helps the student applied to give him quotas of his special schedule and cooperates with him to meet his scientific, administrative and administrative problems in the period of application and training, and evaluate them according to the performance card prepared for this purpose.

Definition of the head of the school: The person assigned to the school administration (applied by the students applied) by the Ministry of Education, which manages the affairs of the school and employs the rules of management in directing the work towards achieving the objectives of the educational process as a whole, which directs the work of the student applied administratively in terms of adherence to schedules And to adjust the classroom and other educational activities that are in line with the school system, and is based on the performance card prepared for this purpose.

Strategy: Defined by:

(Obaid, William and Afanah Ezzo 1986) as: "a set of plans and movements led by the teacher and lead to reach certain intended results, and prevent the occurrence of what is contrary or contradictory." (Obaid, William and Afaneh Ezzo, 1986, 41)

constructs. In the overall view, these two theories, which have made the learner the focus of the learning process, draw some principles And the learning process at Piaget and the investment of previous knowledge and its activation and acquisition of new knowledge in the framework of an integrated structure of cognitive knowledge adapted to the requirements of the position Lemme (Attia 0.2016: 337).

(2-2): The stages of teaching according to the Karen model

1) The stage of hierarchical organization of the content of learning: The unit is organized in a hierarchical way that includes all the main concepts and subsections that are included within the unit. To ascertain this stage, students are asked about any concept, whether president or branch. To strengthen them.

2) The stage of activating the previous knowledge: Through the introduction of real-life examples and then discussed with the students are stimulated information stored in the structure of knowledge, and to ensure the achievement of this stage are asked to give other examples.

3) Definition stage of the concept: After providing a definition of the concept Continuing education in a question and answer method for examples and examples and to ensure the achievement of this stage raises several questions related to the concept and ask students to explain and explain.

4) Advanced Organizer: After activating the previous knowledge and preparing the knowledge structures of the students to receive the new learning and define the concept and know the characteristics that distinguish it from the other comes the stage of presenting the advanced organizer prepared by the teacher in advance and this on the board or graphic and then the teacher the following procedures:

- Draw the attention of learners to the content of the advanced organizer and incorporate the concepts from year to year.

- Introducing the relationships between the components of the advanced regulator.

- To highlight the characteristics that characterize each concept contained in the organizer, including the general concept and concepts for adopting a criterion in separating examples and examples from the concept.

- Provide examples that support the explanation of each concept in the advanced organizer, with all these examples of all the characteristics of the concept so that the property is evident in the example provided by the teacher.

The teacher must maintain the momentum of the attention of learners and their attraction to the lesson and interact with the teacher in all steps of learning by various means, including questions and analysis and highlight the distinctive characteristics and the introduction of problems and others (Attia, 2016: 338).

process should be the basic framework in the development of teaching skills and training programs that prepare for the development of these skills.

The success of the education process depends on many different and varied factors, but the presence of an efficient teacher is the cornerstone of this success. The best books, curricula, teaching aids, activities and school buildings, despite their importance, do not achieve the desired educational goals unless there is a teacher with educational qualifications, , Which enables him to enrich his personality, expand their concepts, understand them, develop their thinking and mental abilities, and supplement the potential shortage of books and decisions of the school, its activities and its potential.

Despite the efforts and expenditures made in the preparation and training of the teacher, but these efforts and expenditures are substandard in our society, and need more, especially after changing the perception of the function of the teacher and his responsibilities to change the requirements of modern life, while the function of the teacher to transfer information to the learners, The development of human personality in all its aspects, and the exercise of leadership and research and investigation, and the practice of guidance and guidance and all requires the preparation of this teacher scientifically and professionally, culturally and personally.

Teacher Preparation Goals:

In view of the needs of our society and the nature of the stage it is going through in anticipation of a new era, the objectives of the teacher can be determined by the teacher in the educational science faculties as follows:

- 1 - Acquire basic concepts in the field of academic and educational specialization and employ them in the service of the growth of students so that they can understand the educational material and see their relationship to their lives and their impact on the possibility of developing the society in which they live.
2. Acquiring and developing a general culture that qualifies him to understand the nature of his society, philosophy, objectives, and the various transformations that the world is witnessing in our time. It also recognizes the nature of the age in which we live and its global changes, contemporary educational thought and the acquisition and development of some specialized culture and scientific enlightenment.
3. Understand the nature of the education process, and acquire the appropriate professional skills to create comprehensive growth opportunities for students to achieve comprehensive educational goals.
4. Acquiring and developing the competencies of scientific thinking in all its forms, problem solving, creative thinking, extrapolation, devising and thus acquiring behaviors of scientific trends.

5. Recognize the importance of educational research and invest its results in the development of the educational process and face the problems of the field.
6. Acquire self-teaching skills so that he can pursue new in his field of specialization and achieve growth through continuous learning.
7. To acquire and develop the values and ethics of professional ethics, to serve as a good role model for his students, and a model to be followed in his work, creation and behavior, to gain the esteem, trust and respect of society.
8. Acquiring information, skills, attitudes, tendencies and values that enable him to participate positively in meeting the needs of students and the community of educational services and other areas of social activity of an educational nature.
9. Cooperate with the academic supervisors who supervise him and with the school administration to which he applies, with respect, appreciation and implementation of the directives.
- 10 - Training in the practice of all educational positions inside and outside the school from the use of educational means and save the system and evaluation and participation in educational trips and many other things. (Khaza'leh, Muhammad et al., 2011,492)

Practical Education Program:

Practical education means the practical application of the total facts, concepts and information acquired by the student - applied during the academic preparation in the faculties of education or teacher training institutes. This concept is the real test that requires influence and impact. The trainee faces the educational situation in all its details and offers his expertise to receive responses. He is trying to leave his fingerprints in the school of application, and he will provide his students with new experiences, attitudes and professional skills. (Abu Dabbat, Zakaria Ismail, 2009, 279)

The roles of participants in the practical education program:

First roles of academic supervisor:

The mission of the supervisor of practical education is based on the basic basis of academic specialization in the curriculum and teaching methods, which is the academic theoretical reference on which the student - the teacher in his field of specialization - is based.

1. It is the link between the Faculty of Education on the one hand and the Director of the Implementation School and the cooperating teacher on the other. Therefore, its cooperation with the training staff in the host schools contributes greatly to the success of the practical education program.
2. Hold a meeting with his students from the beginning of practical education to identify them and then clarify some of the matters related to the system and

procedures of application and answer the questions of student teachers.

3. The supervisor of practical education works to provide his student with the correct theoretical scientific knowledge and methods of teaching in order to qualify them to teach in real educational situations.

4. Help the student - the teacher to avoid deficiencies or weakness and weakness in the performance of teaching positions, which earns the student confidence in himself.

5. Help the student - the teacher to strengthen the relationship between him and his colleagues, and between him and the management of the school, which makes the student feel full belonging to the school community.

6. Identify the student-teacher with the characteristics of the students who interact with them and interact with them, and try to connect the academic and educational aspects in each teaching position, so that the student-teacher will recognize all dimensions of the teaching position, not surprised by things and things that have not been calculated.

7. Follow-up training work for students - teachers in the application schools directly and regularly through field visits and continuous communication with the schools of application, especially training days.

8. Follow-up the books of preparation of the student - the teacher on a continuous basis and attend a number of shares implemented by them to visit the shares of colleagues and to express opinion and discuss them (individually or with his group) in the quota procedures after implementation.

9. Evaluation of students' lessons after training and completion of field visits and making observations and guidance.

10. Meeting periodically with school principals and cooperating teachers in schools to receive any observation that can contribute to facilitating the training of teacher students.

11. Identify the issues of practical education and its problems in the schools of application to try to address them as much as possible or inform the Office of practical education in the college.

12. Coordinate with the rest of the training team members to unify their attitudes within a single harmonious framework.

(Rashid, Ali, 2011, 126)

School Manager roles Application:

The principal of the school is an important and active player in the practical education program for his roles, where he receives the student - the teacher and welcome him from the first visit and introduce him to the school and its systems, and encourage him to carry out his duties and duties as well as his interest in choosing the teacher - an expert collaborator able to meet the needs

and interests of the student - Teacher., Its functions are thus:

1. Receive students - teachers and assist them during the period of application, and identify the academic supervisor and his knowledge of the school and its teachers and activities.
2. Identify the classes in which the student-teachers will first observe, then the classes in which they will be taught secondly, and assist them in obtaining the textbooks.
3. Follow up the daily planning of the students teachers and ensure attendance at the specified time and keep a record of their own and perseverance, and conduct the educational process in the required manner.
4. Participation of the supervisor and the cooperating teacher in the meetings to consult on the extent to achieve the objectives of education planned process, and how to overcome some of the difficulties and problems in the way.
5. Students visit teachers in their classes and, if necessary, provide them with a model in some teaching skills, record their observations to discuss them, and participate in critical and evaluation sessions.
6. Work as much as possible to help students with what they need and encourage them to develop their personal traits and technical skills.
7. Keeping the student file - the teacher containing the follow-up and evaluation reports written by the supervisor and the cooperating teacher in addition to the principal of the school itself and sent to the office of practical education at the end of the training period. (Rashid, Ali, 2011, 127)

The roles of the cooperating teacher:

The teacher is the teacher who is a resident of the school. The teacher is assigned to help them on a daily basis to acquire teaching skills and to adapt to the entire educational process. The cooperating teacher is chosen to do this task through coordination between the school principal and the supervisor of practical education. The functions of the collaborator can be summarized as follows:

1. Instructing the student-teacher through his / her introduction to the school, its systems and its community of administrators, teachers and students, and providing some ideas and ideas about teaching.
2. Training the student - the teacher on how to implement the teaching, the use of various teaching methods in the process of teaching and learning and follow it in preparation for the implementation of daily lessons and participation in its assessment.
3. Defining the student - the teacher with learners in terms of their interests, needs, general characteristics, number and socio-economic backgrounds, and the definition of learners to prepare them to adapt to it.
4. Defining the student - the teacher with the content of the curriculum, the

subjects that have been learned, the educational means available in the school and help him in planning his lessons and how to implement them.

5. Attend the lessons with the student - the teacher and write the most important observations, and to seek non-criticism and non-interference during the course of study in front of learners.

6. Hold a meeting at the beginning of each week with the student = teacher to evaluate the teaching plans and discuss the problems of specialization and the problems of tuning the row that may appear. (Shahrani, Amer, 1994, 75)

Performance Skills for Teaching Mathematics:

The educators agree that the preparation of the teacher includes the four main aspects: scientific, professional, cultural and personal, so requires the preparation programs to create a special quality of the outputs able to develop the educational process - learning in line with the evolution and change in these aspects, which makes the responsibility to prepare programs for learners Opportunities for education and training in teaching skills and mastery, and can be those skills as inputs to the preparation program, and its descriptions:

1. Recognizes and distinguishes parts of his educational material from concepts, principles, skills and mathematical issues.
2. Understand the nature of the characteristics of his student in the stage of the school he is teaching.
3. Set his educational goals accurately and clearly.
4. Master the different movements to offer and display his material.
5. Can measure the responses you have asked and how they compare to educational goals.
6. He can modify his presentation methods to meet individual differences.
7. He mastered the methods of reinforcement of the desired behavior and defined his request to the results of their responses.

The activities of the learning process include the skills of teaching mathematics in different fields. In the process of defining and formulating goals, the activities that are not common to students - teachers are defined, such as determining the general objectives of teaching mathematics in the stage in which they study, The definition of non-common activities: the teacher's understanding of the mathematical content and its cognitive structure, the selection of appropriate strategies for that structure, the activities related to the presentation of examples and examples, activities related to the post-evaluation process, Sports as well as many other activities.

(Qasem, Bushra and Mayad Jassim, 2019, 88)

The second axis: Previous studies:

The study aimed to identify the role of both the Faculty of Education and the

Educational Supervisor, the cooperating teacher and the school principals in improving the field training of the teachers' students, in addition to identifying the most important problems facing the teacher students. The study concluded that: There are significant differences for the role of the college, the educational supervisor, the cooperating teacher and the school director, as well as the average of the students, while there were significant differences in the specialization variable. Science.

Study (Mahmoud, 2014): The objective of the research to evaluate the performance of some of the teaching skills of the students applied in the Department of Mathematics and Computer Sciences in the Faculty of Basic Education, and prepared a closed questionnaire consisted of (44) paragraph to measure (10) skills according to the nature of each skill. The results showed that (41) items obtained higher weighted values of the medium, ie, skills were achieved. The weighted average value of (3) items was not higher than the median. All skills are achieved in general. Did not materialize.

Shaker (2016): The aim of the research is to identify and measure the teaching skills of the applied students by using a form of observation that included eight main skills and 29 minor. After statistical analysis, four out of eight skills were not achieved by the applied students. The researcher found explanations for these findings and recommendations for using these skills in the preparation of teachers in the future and suggests conducting future studies that complement the research.

The study aims to identify the role of the Department of Educational Sciences and the educational supervisor and the initiative of the school and the teacher collaborator in the preparation of students trainees and develop their performance in addition to identify the most important problems, The study has reached several results, including: The first of its role in the preparation and the cooperating teacher in the last place, the problems have emerged a number of problems, the most important: the inability of the teacher collaborator to solve the problems of the classroom facing the trainees.

Elizabeth And James Raths, 2017: The study aimed to develop a list of the problems experienced by students in the preparation period, which prevent their effective performance in schools. The researcher focuses on the problems of academic supervision by professors at the university and Problems of cooperating teachers in schools where teachers are trained. The study suggested a number of proposals, including increasing the period of training of teacher students in schools and increasing the role of supervisors and cooperating teachers in their evaluation.

Methodology of the research and its procedures: First: Research Methodology:

The research adopted descriptive analytical method.

Second: Research Community: The current research community consists of the supervising professors in the Mathematics Department / Faculty of Education / Mustansiriyah University, the school principals and the mathematics teachers who cooperate in the implementation schools for the academic year (2018-2019) and for the second semester.

Third: The sample of the study: The sample of the study was randomly selected and numbered (60) as follows: (20) supervisors in the Faculty of Education / Mustansiriyah University, (20) principals and (20) In which students (stage IV) were applied in the mathematics department.

Fourth: The research tool: A closed questionnaire was constructed by the researcher representing the performance skills of teaching the mathematics of the applied students. The construction process went through many stages:

1. Review literature, research and previous studies on student-applied skills related to mathematics and teaching.

2) Classification of the performance skills according to the following three areas: planning and preparation in the plan book, implementation of the lesson and evaluation, personal characteristics of the student - applied) and included the first and thirteenth paragraphs in the second area included twenty paragraphs so that the total of the final paragraphs (40) 5-gauge according to the alternatives (excellent, good, good, average, weak) and distribution of grades 5-4-3-2-1 and in order.

Fifth: Validation of the tool: The virtual honesty was calculated where the questionnaire was distributed to the teachers of the curriculum and teaching methods for arbitration. The agreement was taken by 80% and all experts agreed that most of the paragraphs remained.

Sixth: Stability of the tool: Using the statistical program (SPSS) and using the Alpha Cronbach formula was found to be stable (0.978), applied to a random sample of (15) represented by (5) supervisors supervisors and (5) 5) of the cooperating teachers, which is a high stability ratio.

Final Application: The questionnaire was applied in its final form to the research sample of (20) university professors, (20) school principals and (20) cooperative mathematics teachers.

Seventh: Statistical Means: The researcher used the following statistical means:

1 Percentage 2 - Alpha Cronbach equation 3 - Law of the weighted average 4 - Law of percentage weight.

View and interpret results:

For the purpose of achieving the first objective of the research: the weighted

mean and percentage weight of each paragraph of the student skills applied to mathematics and teaching was calculated as shown in the following table:

Table (1)

For the assessment of the performance skills

	Items	Academic supervisor		School director		Teacher collaborator	
		Weighted average	Percentage weight	Weighted average	Percentage weight	Weighted average	Percentage weight
	First: Planning and preparation in the plan book						
1	Goals are shaped by clear behavioral learning outcomes	3.1	%62	3.5	%70	4.05	%81
2	Goals are suitable for students	3	%60	3.3	%66	3.95	%79
3	Goals are diverse and comprehensive to the subject	3	%60	3.5	%70	4	%80
4	The basic requirements are specific and related	2.8	%56	3.45	%69	3.5	%70
5	Educational activities and actions are effective	2.6	%52	3.35	%67	3.6	%72
6	Teaching aids are specific and relevant	2.6	%52	2.85	%57	3.35	%67
7	Closing the lesson and summarizing it is specific and effective	2.65	%53	3.4	%68	3.6	%72
8	Evaluation method adequate, and varied	2.75	%55	3.45	%69	3.4	%68
9	Home activities are planned and linked to goals	2.75	%55	3.9	%70	3.3	%66

	The distribution of lesson time is divided by activities	2.7	%54	3.65	%73	3.75	%75
	Second: Implementation and evaluation of the lesson						
1	Creates an appropriate classroom environment that interests his student	3.2	%64	3.7	%74	4.2	%84
2	The pre-test is applied to previous information	2.7	%54	3.65	%73	3.65	%73
3	Explain to students the educational objectives and their importance	2.35	%47	3.45	%69	3.85	%77
4	His methods and activities are varied to suit students	2.6	%52	3.5	%70	3.35	%67
5	Observe the individual differences between his student in the activities	3.1	%52	4	%80	3.8	%76
6	Connect ideas and organize them logically sequentially	3.2	%64	3.2	%64	3.7	%74
7	Encourages correct answers to his students	3.21	%64.2	3.9	%78	3.65	%73
8	Feedback is used by correcting errors and notes	2.95	%59	4.05	%81	3.1	%72
9	Employ educational	2.75	%55	3.1	%62	2.9	%58

	a homework						
	Third: self-characteristics of student-teacher						
1	Pay attention to the general appearance and elegance without exaggeration	3.9	%78	4.35	%87	4.25	%85
2	Clarity of his voice and change his tone	3.85	%77	4.2	%84	4.25	%85
3	Balance and the ability to control his emotions	3.3	%66	3.85	%77	4.1	%82
4	Ability to adjust and manage the class	3.35	%67	3.85	%77	3.75	%75
5	Commitment to management instructions and guidance	3.85	%77	4.05	%81	4.25	%82
6	Commitment to the schedule and timing of lessons	3.85	%77	4.35	%87	4.65	%93
7	Participation in school activities outside the framework of teaching	3.1	%62	3.4	%68	3.6	%72
8	Ability to solve problems and problems of learners	3.2	%64	3.4	%68	3.8	%76
9	Accept it for advice and guidance	3.75	%75	4.1	%82	4.3	%86
10	Positive and enthusiastic in the performance of teaching activities	3.6	%72	3.95	%79	4.3	%86

Conclusions:

The first area (planning and preparation in the plan book) and the second field (the implementation of the lesson and its evaluation) were characterized by obtaining the lowest weighted circles and relative weights.

2 - There are common views between the supervisors teachers and teachers in the field (planning and preparation in the plan book), including confirmation that the students have the skill to formulate goals in the form of educational behavioral behavioral clear but in the area (personal qualities of the student applied) In the participation of students in school activities outside the framework of teaching.

To achieve the second objective of the research: The researcher developed strategic steps for the program of practical education in the Department of Mathematics to develop the skills of the performance of students applied as follows:

The first step is to formulate the vision and the mission: - The future vision of what should be the program of practical education (observation and application) in the Department of Mathematics Faculty of Education - Mustansiriya University.

Mission: Contribute to the preparation of mathematics teacher in the Iraqi society and develop his performance skills to keep up with the latest trends in the world.

The second step is to analyze the reality and determine the current circumstances. It is intended to study the reality of the practical education program (the course of observation and application) and the reality of the student's performance skills applied in the mathematics department. This step is applied through the use of the results of academic research, which deals with the reality of practical education in Iraq. During the current research results, the strengths of performance performance are represented in the field of personal qualities, while weaknesses were in the area of (implementation and evaluation of the lesson).

Step 3: Determine the desired objectives: It is intended to develop a set of desired goals for the success of the program of practical education (the course of observation and application) in the Department of Mathematics - Faculty of Education - University Mustansiriya, in the development of skills in the teaching of mathematics to the student -

1 - to plan and implement mathematics lessons. 2 - to watch and evaluate it. 3 - to contribute to the classroom and extracurricular activities 4 - to share experiences with colleagues 5 - to participate in the administrative tasks 6 - to train in the formulation of questions.

Step 4: Develop plans of action: It is intended to start from the vision, mission

and planning to bridge the gap between them and the current reality, and here must determine the performance standards required of the student - applied and the standards are usually global, such as the standards of NCTM (National Council of Teachers of Mathematics in the United States) Or CAEP standards. Step 5: Implementation of the strategic plan: It is intended to implement the plans and identify the participants in the work and their tasks and timetables for the start and end of the program of practical education (observation and application) in the Department of Mathematics - Faculty of Education - University of Mustansiriyah. The participants in the program are (academic supervisor in the college - And the program of practical education in the fourth stage is divided into three stages in the first semester and one stage in the second semester and as follows:

Education process 1: Applied in the first semester and include three stages and as follows:

A preparatory stage is to be determined (10 degrees according to a theoretical exam conducted by the professor of practical education) and lasts three weeks as theoretical lectures within the university where the academic professor works to prepare the trainees and acquaint them with the stages they will pass and their roles in each stage and the roles of their supervisors To be followed in these stages as will restore with them their previous information on teaching skills and how to plan the lesson.

B - the stage of observation: it is determined (20 degrees to the professor of practical education) and continue for four weeks in which the distribution of students trainees in groups on a number of cooperating schools under the supervision of the professor of practical education at the university to be watched students - Applicable to a specific number of mathematics lessons at least on (5) weekly classes in a meaningful and planned manner and evaluate them according to the academic record or achievement file for each student includes a set of forms that determine the number of lessons and history and the school stage and the title of the lesson and its objectives and other data that confirm the continuation of the trainee with the school and recognizes the end of each record a Bua to the school principal after the sign is a teacher of mathematics on lessons seen by the trainee to take over later to the professor of practical education supervisor students - applied to (trainees).

The stage of participation is 20 degrees divided into 10 (for the professor of practical education, 10 for the teacher of the subject in the school) and lasts eight weeks and participation in it is partial to a specific type of roles performed by the trainee inside and outside the classroom under the supervision of the university professor and the school director and the cooperating teacher Evaluation of this stage will be used in special forms to be added to the

student's record or achievement file. The same mechanism will be used to follow up the trainees by the supervisor.

The course is divided into two phases: one for the teacher, 20 for the headmaster and the second for the second semester. The first stage involves the actual application of mathematics teaching. Each student chooses a specific school, Supervision of academic supervisors to be identified by the unit of practical education in the section and this stage is the outcome of the previous three stages.

Step 6: Evaluation of the strategic plan: It is intended to evaluate the previous steps and identify the problems and difficulties facing the participants in the practical education program (observation and application) in the Department of Mathematics - Faculty of Education - Mustansiriyah University and the obstacles that prevent the development of performance skills to teach mathematics to the student applied.

Step 7: Change and Development: It is intended to make the necessary changes in the previous steps based on the results obtained from the evaluation step, and to benefit from the international experiences in this field for the purpose of development and creativity.

Recommendations: - In the light of the results of the research can recommend the researcher to:

- Pay attention to the implementation of the strategic steps proposed by the current research.
- Preparing training programs in various professional and educational aspects for teaching universities, school principals and mathematics teachers in schools and holding group workshops for the participating groups in the practical education program.
- Continuous evaluation of the practical education program and emphasis on the practical aspect of training for university students in the faculties of education, especially in teaching methods, measurement and evaluation.

Proposals: - In light of the results of the research, the researcher may suggest the following research

- Evaluation of the program of practical education and the categories involved from the point of view of students applying in the Department of Mathematics and the study of difficulties and problems of the training period.
- Building a remedial program to develop the skills of teaching mathematics to students.

Sources :

1. Abu Dabat, Zakaria Ismail, 2009, preparation and rehabilitation of teachers (educational and psychological foundations), 1, Dar Al Fikr, Amman, Jordan.
2. Jawad, Musallam and Mahmoud Hamza (2012), Problems Facing Students

of the Institute of Teacher Education in Karbala during the Period of Application, Journal of Ahl al-Bayt University, Issue 14.

3. Hassani, Ghazi Khamis (2011), Curriculum and Methods of Teaching Mathematics, University of Baghdad.

4. Khaza'leh, Muhammad et al. (2011), Effective Teaching Methods, I 1, Dar Safa for Publishing and Distribution, Amman, Jordan.

5. Zayer, Saad Ali, Zia Abdel Wahid Ahmed, Rahim Ali Saleh (2011). Classroom observation and scientific application for students of Arabic language departments. Mortada Book Association, Baghdad.

6. Rashid, Ali (2011), the successful teacher and his basic skills, Dar Al-Fikr Al-Arabi, Cairo.

7. Al-Saadi, Aswan Fadel (2012), Mathematical strength and its relation to the teaching performance of students applied in faculties of basic education, unpublished master thesis, Faculty of Basic Education, Mustansiriya University.

8. Saeed, Saeed Mohammed and Abu Saud Mohammed (2015), general teaching methods planning and educational applications, 2, Dar Al Fikr, Amman, Jordan.

9. Shaker, Shaima (2016), Evaluation of the teaching skills of the applied students in the mathematics and physics sections from the point of view of the teachers of the article, Journal of the University of Babylon for Humanities, Volume 24, No. 4, pp.

10. Shahrani, Amer (1994), the guide of the student teacher in field education, Dar Al-Balad Press, Jeddah.

11. Taima, Roshdy Ahmed (2000), Teacher Advisor, Practical Education, National Center for Human Resource Development, Amman, Jordan.

12. The Missing, Fouad and Daoud Darwish (2011), The Reality of Field Education at the Faculty of Education, Islamic University of Gaza And Ways to Improve it, Journal of the Islamic University for Human Research, vol. 19, no. 2, pp. 1-46.

13. Abdul Aziz, Safaa and Salama Abdel Azim (2007), Department of Education and the development of teachers, New University House Publishing, Alexandria.

14. Obaidat, Toukan and Suhaila Abu Al-Semaid, (2007), Teaching Strategies in the 21st Century, Dar Al-Fikr, Amman, Jordan.

15. Obaid, William and Afaneh, Ezzo (2003), Thinking and Curriculum, I 1, Al Falah Library, Beirut.

16. Medics, Nadia and Fatima Al-Fatlawi (2011), Curriculum and Methods of Teaching Science, Basic Education Library, Baghdad, 2011.

17. Fuad, Sulaiman Necklace (2004), Fundamentals of Science Teaching, II, Dar Al-Maarifa Al-Jami'a, Tanta.

18. Qasim, Bushra and Mayad Jassim (2019), Skills of Teaching Mathematics according to Systems Method, Scientific Cyclone House, Amman, Jordan.
19. Maori, Abdullah (2017), The reality of practical education in the Faculty of Education at the University of Al-Bayda and how to develop it, Al-Andalus Journal of Humanities and Social Sciences, Volume 17, October 16, pp. 45-79.
20. Mahmoud, Muayed (2014), Evaluation of the performance of some teaching skills of students applied in mathematics and computers department, Al-Fath magazine, Diyala University, vol. 10, no. 58, pp. 287-312.
21. Elizabeth Soslau And James Raths, (2017), Problems in Student Teaching, Journal of Teaching and Learning, Vol (11), No (1), pp: 20-28.
22. <https://www.innovativeotsolutions.com>. Seeded on 20/6/2019
23. <https://www.icelearningcenter.com>). Seeded on 20/6/2019