Effective classroom teaching skills for secondary school physics teachers

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Research Article

Effective classroom teaching skills for secondary school physics teachers

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Abstract

The aim of the current research is to identify: Teaching classroom skills effectively with physics teachers in the secondary stage and the research identifies the 'class of physics of the secondary stage in the sacred education of Karbala Directorate for the academic year (2020/2021) AD, it was adopted. As for the descriptive approach in the research, the total size of the research sample (150) secondary school physics teachers was chosen, with (75) teachers and (75) female teachers in a simple random way. The researcher prepared a tool to achieve the goal of the research, which is a measure of teaching skills for the classroom effectively, which in its final form consisted of (75) paragraphs distributed into three areas (planning, implementation, evaluation), with no dependence on a study (Mazban, 2018: p. 60). Which identified the skills in three areas (planning, implementation and evaluation) and each domain of a number of sub-skills was verified, from the apparent honesty in building the scale, such as calculating the strength of the discriminatory paragraphs Measurement and correlation coefficients between the degree of the paragraph of the total degree of the scale as well as for the relationship degree of the field in the total degree For the scale and the relationship of the degree of the paragraph to the degree. From the scale field, the value of the scale stability coefficient was also calculated using Cronbach's alpha coefficient, whose value was (0.986). It was applied in the second semester of the year (2020/2021), and the statistical analysis and processing of the data was carried out using Microsoft Excel 2010 and the Social Statistical Science (SPSS) portfolio, where the t-test (single-sample t-test, t-test) was used. Test) t-test for two independent samples, and the Pearson correlation coefficient was reached, and the following results were reached: Secondary school physics teachers possess effective classroom teaching skills in the field. (Planning, Implementation and Evaluation) but not to a large extent and based on the findings the researcher makes a number of recommendations including the need for teachers of Physics training courses to provide them with experience, knowledge and information for effective classroom teaching skills that define the current research. In addition to presenting a set of proposals, including a study on building a classroom training program for physics teachers at the level, according to effective teaching skills.

Introduction

Research Problem

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The teacher is one of the basic pillars of the educational process, and for various reasons the teacher is exposed to some circumstances that he cannot control and that prevent him from performing his role effectively, which contributes to his sense of weakness while performing the tasks. What is required of him, in addition to the negative effects that he leaves when teaching him. For his students, these circumstances may cause a feeling of helplessness in the teacher and thus a feeling of dissatisfaction with life and his job, as providing students with a good quality of education depends on positive teachers and the way they feel about their lives and this study came to try to identify effective teaching skills in classrooms among secondary school physics teachers, as well as providing an in-depth theoretical framework on the need for effective classroom teaching skills so that they can keep pace with the acceleration in the volume and quality of information in our contemporary lives, and increase the effectiveness of the teacher so that he can follow the technological progress and wealth of knowledge that is increasing day by day day. Because of the developments in human life in this world, and because of the difficult circumstances it is going through with regard to the DNA of Iraq Boss subject to the year of teachers in particular, and through the experience of the humble researcher in the field. From teaching for a period of (9 years) and through training seminars organized by the training researcher and the figures that the researcher noticed during the discussions, there is a weakness of physics teachers in the secondary stage in the use of effective classroom teaching skills by physics teachers, with the aim of showing this weakness among physics teachers in the secondary stage, The researcher presented a questionnaire for physics teachers at the secondary stage in the schools of the Holy Karbala Governorate, to identify the teaching skills in the effective class, and in light of the foregoing. The idea of the current research was launched, which the researcher identified his problem to research in the following question:

Does the high school physics teacher have effective classroom teaching skills?

Research importance

The teacher is the mainstay in the educational system and he must adopt all future hopes that aim to improve the educational process and the amount of attention and development that attaches to the level of the teacher as much as it leads to his growth. And student development. The teacher as a leader has a great influence on his students because he is the main effective element in the process of bringing up students, doctors and engineers. The behavior of their teachers, and the efforts these teachers put in throughout their years of education. Therefore, we find that scholars and experienced people in various fields of life have lived educational experiences presented by distinguished teachers throughout their education stages, which affected the building of their personalities and refined their thinking, which enabled them to excel. They excel in their community. The teacher is an important component of the educational process. (Al-Mufarrej et al., 2007: pp. 11-12) In light of scientific and technological development, education in general and scientific education in particular bear an important responsibility, which is the number of human cadres capable of keeping pace with scientific and technological development. Which accelerates scientific and technological progress in various areas of life. This is achieved by working on developing and modifying individuals' experiences, refining their talents, stimulating motivation, exploding their energies and enriching their ideas. It aims to prepare individuals with comprehensive, integrated and balanced numbers in the spiritual aspects of work. College and table echo and social all so as not to overwhelm their side on the other hand, they are useful members of their community. (Saleh, 2016: p. 4) The physics teacher is accompanied by

multiple complex roles and functions, perhaps the most important of which is related to the education of the mother of the various activities and interactions accompanying verbal and nonverbal, and he is not considered a case teacher in the modern school, as was the case in the traditional school where my time was devoted to this subject Bethlehem Shaw Oz that the information of the Extrana lab, repeats, restores, asks for staggering, and tries to refine the skills of striking and punishing students' minds, but now the concept of education has changed to become education and education, and dealing with all aspects of the student's personality, and even making it a focus of the educational process, has become a job The teacher is an organized function of many dimensions, presiding over many, many responsibilities: such as planning, organizing, coordinating, training, evaluating, managing the class, and guiding students. (Al-Khafaji, 2018: p. 265) One of the criteria for an effective teacher's competence is his possession of classroom teaching skills, which is an urgent need if a teacher wants to be effective with his students who have different backgrounds and abilities (Khuza'a et al., 2011: pg. 491) and that teaching skills The effective classroom is based on several areas, namely the field of planning for teaching, the field of lesson implementation, and the field of lesson evaluation. . (Kandil, 1993: p. 85) Based on the above, the importance of the current research can be indicated by the following points: (1) the current research provides a measure of effective teaching skills in the classroom which may benefit researchers, graduate students, supervisors and physics teachers. The current study as a theoretical framework for adding effective classroom teaching skills to Arabic and local literature.

Research Objectives

Effective classroom teaching skills with physics teachers at the secondary stage. Research limits Research limits the current research was limited to the following limits: (1) spatial limits: government schools affiliated to the Holy Karbala Education Directorate. (2) Human Limits: Physics Teachers in the General Directorate of Education in the Holy Karbala. (3) Time limits: the academic year 2020-2021 AD.

Defining terms

Classroom and effective teaching skills are both known

(Zaytoon 2006): The ability to perform a specific work or activity related to teaching, planning, implementation and evaluation, and this work can be analyzed for a range of cognitive, motor and social behaviors, and then it can be evaluated. In light of the standards of accuracy in implementation and speed of completion. And the ability to adapt to changing educational situations, using the method of structured observation, which can then be improved through training programmes. (Zaytoun 2006: p. 12)The researcher adopted a definition (Zaytoun 2006) from the previous definitions, where she practices a theoretical definition that the researcher knows procedurally, namely: patterns of behavior, and methods of performance of physics teachers in secondary school activities, during preparation and planning. lesson, or while teaching physics in the classroom and associated with effective classroom teaching skills (planning, implementation and evaluation), which can be measured by secondary school teachers (research sample) by the sum of the scores they obtained from their answers effectively. classroom. The skill scale prepared by the researcher for this purpose.

Theoretical background

Teaching classroom Effective:

It is a style of teaching that depends on self-activity and positive participation of the learner through which he does research using a set of activities and scientific processes such as observation, clarity of hypotheses, measurement, reading data and conclusion that help him to reach the required information by himself and under the supervision, guidance and evaluation of the teacher, and it is he who educates the student. To exercise the self-conscious ability that does not touch the scientific degree as the end, nor a personal ambition that stands below it all other ambitions, it is teaching that raises the level of the individual's will for himself and his surroundings and awareness of his ambitions and the problems of his society and this requires him to be able to analyze and understand not Through educational stages only, but also in his practical life.

(Abdul Qadir and Fouad, 2013: p. 36)

The foundations for effective classroom teaching

There are principles and foundations talked about by Al-Deeb (2007, pg. 32) and Attia (2008, pg. 65-67) on which effective classroom teaching is based, which are:

- 1. The learner's positivity and participation in learning. The more the learner is positive and involved in the learning process, the more effective the teaching will be..
- 2. The new learning is based on the learner's previous experiences, meaning that the learner recalls his previous experiences related to the new learning, and the teacher must prepare for that..
- 3. Notifying learners of their needs to learn, as this increases their motivation towards learning.
- 4. Involve more than one sense of the learner in the learning process because the effectiveness of teaching increases with the increase in learning windows.
- 5. The suitability of the learning material to the capabilities of the learners, and its connection to their needs.
- 6. That the learner be the center of the educational process and that his role is not limited to receiving.
- 7. Rehabilitation of the learner to face the present and the future.
- 8. Benefit from the results of research and studies in the field of learning and teaching.

(Al-Deeb, 2007 :pg. 32), (Atiya, 2008: pg. 65-67)

Classroom teaching skills Effective:

Effective classroom teaching skills are divided into three domains, and each domain has a number of sub-skills ,study (Mazban: 2018, pg. 60) as shown in the table below:

Table 2 Effective classroom teaching skills (prepared by the researcher)

Sub skills	No	First
The skill of setting educational goals	1	

Effective classroom teaching skills for secondary school physics teachers

Content analysis skill	2	
The ability to identify teaching methods and strategies	3	field
The skill of creating and defining teaching aids and educational	4	planning
techniques	4	
The skill of choosing teaching aids	5	
The skill of allocating time to the elements of the lesson plan	6	
The skill of determining the means of correcting	7	
Sub skills	No	Second
Lesson preparation skill	1	
The skill of diversifying stimuli	2	
Lesson presentation skill	3	
locking skill	4	
Questioning skill	5	
The skill of using teaching methods and strategies	6	field
Skill in using teaching aids and educational techniques	7	Execution
The skill of carrying out educational activities	8	Execution
Boost skill	9	
Motivational skill	10	
Class management skill	11	
Sub skills	T	Third
The skill of using and diversifying calendar methods	1	
Feedback skill	2	calendar
Homework skill and handling	3	field

Research Methodology and Procedures

This chapter includes the research methodology and procedures in terms of its society, its sample and method of selection, the two research tools and how to extract their psychometric properties, and the procedures for their application, as well as identifying the statistical methods used in data analysis, as follows:

Research method:

Research community and sample

The researcher's identification of his research community is considered one of the most important steps of the educational approach, as it depends on the step of identifying the community, research, selection of appropriate tools and accuracy of results. A teacher and a school at the governorate level with (244) teachers and (209) schools. And the researcher's success in choosing the right sample in terms of type, size and method of withdrawal is the right key to reaching the results and the possibility of generalizing them to the concerned community. (Al-Najjar et al., 2009: p. 85)

(A) Study sample: study sample

- A sample of (150) secondary school physics teachers was identified, of whom (75) teachers are represented by (75) schools that are finally implemented.
- Rely on a simple random sampling method to select the study sample.

(B) Statistical Analysis Form: Statistical Analysis Sample

In order to achieve the statistical analysis procedures for the research tools, a sample of (100) secondary school physics teachers was selected for the statistical analysis of the effective classroom teaching skills scale.

Duck brittleness adjustment procedure

- 1. Associated accidents As a result of the procedures x crisis mechanism to deal with the Covid-19 pandemic virus, and the application of partial curfews and stopping attendance in schools and universities, the researcher faced difficulty in submitting arbitrators' opinion questionnaires about effective classroom teaching. Skills scale, and this difficulty was overcome through telephone coordination with arbitrators, sending surveys via email and social media and receiving feedback in written form or by direct contact. The application of the tests on the exploratory application sample and the research sample was affected by the previous circumstances that affected the sending of questionnaires to the arbitrators, and the researcher got rid of these difficulties by converting the scale to the Google Forms formula and then coordinating with the supervisors. Majoring in physics, questionnaires were sent by groups to secondary school physics teachers.
- 2. Sample selection Sample selection: The main objective of selecting the sample is to obtain information about the original research community through which the results are generalized (Abdul Hafeez Mustafa Hussein, 2000, p. 129), enabling the researcher to control individual differences. Among the individuals of the research sample, the selection of the sample was adopted by the simple random sampling method.
- 3. measuring instrument: measuring instrument The effect of the two measurement tools was deliberately controlled by building a positive thinking scale to measure the positive thinking variable, and an effective classroom teaching skills scale to measure the effective classroom teaching skills variable, then the two tests were applied to the research sample simultaneously after calculating its psychometric properties, taking into account that no test Of the members of the statistical analysis sample within the research sample.

Ada of search Research Instruments

Including the current research seeks to learn classroom teaching skills for effective physics teachers at the secondary level, it requires the preparation of a scale for effective classroom teaching skills, and comes with numbers verbs Ada research:

Effective classroom teaching skills scale

Determine the purpose of the scale: The scale is designed to measure the effective teaching skills of physics teachers in secondary school classes (sample) See the standards for effective classroom teaching skills The researcher reviewed a number of previous studies related to the effective classroom teaching skills variable (Al-Jumaili, 2010), (Al-Khuzaie, 2001), but he did not find a measure of effective classroom teaching skills that matches the sample and the sample.

Of the current research objectives, so the researcher built a measure of effective teaching skills in the classroom by himself. Based on a study (Mizban, 2018)

Defining the concept of teaching effective classroom skills

After reviewing previous studies that dealt with effective classroom teaching skills, it was found that there are several definitions of this concept, so the researcher relied on the definition (Al-Zaitoun 2006) for its relevance to the objectives of his research, which he identified as follows: The ability to perform a specific work or activity related to planning, implementation and evaluation For teaching and this work is subject to the analysis of a range of cognitive, motor and social behaviors, and then it can be evaluated in light of the criteria of accuracy in doing so, speed of completion and ability to adapt to changing educational situations, using the method of structured observation, and then it can be improved through training programs. (Olive 2006: p. 12)

Determining the areas of the scale: The researcher reviewed the literature and previous studies related to the topic, but did not find a measure of effective classroom teaching skills that fit with the sample and objectives of the current research, so the researcher built a scale. Effective classroom teaching skills for secondary school teachers in order to achieve the objective of his research. And based on a study (Mizban, 2018), which identified skills in three areas (planning, implementation, and evaluation), and each area has a number of sub-skills. (Mizban, 2018: pg. 60) Formulation of the scale items in its initial form: The researcher formulated (75) items, including (7) revealed items for the purpose of ensuring the seriousness of physics teachers in answering the items of the scale, and the items were not distributed. Equally in number in the effective teaching skill areas in the classroom, due to the difference in the number of sub-skills for each area

Preparation of answer alternatives and method of correction

The answer alternatives for the Effective Classroom Teaching Skills Scale items are rated with five scores in front of each item, and they apply to me with a score (very high, great, medium, few, very little) corresponding to a scale ranging from (5, 4, 3, 2, 1) Respectively and in this way, the total score for each examinee is calculated by algebraic summing of the scores of his answers to all the items. Therefore, the lowest score for the effective classroom teaching skills scale and its highest score ranged between (5-1) for each item.

Ratified the scale

The scale was validated in two ways

Default Validity: Face Validity

The validity of the scale can be confirmed by presenting it to a number of arbitrators and experts in the field it measures. If they say it is able to measure the behavior for which it was developed, then the researcher can rely on their judgment (Obaidat et al., 2000: pg. 160) Apparent honesty depends on making sure of the general appearance in terms of the arrangement of paragraphs, how they are formulated, clarity, instructions, accuracy, degree of clarity and objectivity. (Al-Ajili et al. 1990: p. 130)To make sure of this, he presented the scale in its initial form to a group of experts and arbitrators in the field of educational psychology and teaching methods to prove

the validity of the scale's paragraphs and the accuracy of its distribution over the areas in which it is done. And based on the observations and suggestions made by the experts and arbitrators on the items of the scale, the researcher modified and reformulated some of the paragraphs, then the value of (Chi-square) for each paragraph and compared it with the tabular value. (3.84) with a degree of freedom (1) and a significant level (0.05). The results showed that all paragraphs of the scale appear to be honest, as shown in Table No. (8)

Table (8) the apparent validity of the effective classroom teaching skills scale

	percentag e	Ka ²		Arbitrator s' opinions		numbe		
indicatio n		tabula r	calculate d	we do not agree	ok	r of expert s	paragraphs	
function	%100	3.84	19	0	19	19	1,2,7,9,11,19,23,24,28,32,35,3 8 ,41,45,47,49,50, ,52,53,54,59,64 65,67,68	
function	%95	3.84	15.12	1	18	19	4,18,21,22,26,27,30,37,42,53, ,55 56,57,60,61,66	
function	%89	3.84	11.84	2	17	19	,5,8,10,13,15,16 ,25,29,31,34,36 ,39,44,48	
function	%84	3.84	8.89	3	16	19	,3,6,12,14,17,20 ,33,40,43,51,58 ,62,63	

And that the highest score that can be obtained for the scale is (340) degrees, and the lowest score is (68) with a hypothetical average of (240) degrees, and the instructions have been prepared to answer the scale clearly for physics teachers. at the secondary level, and thus becomes a measure of effective classroom teaching skills. Ready for statistical analysis (constructive validity)

Construction validity (statistical analysis)

Construction validity is intended to determine the number of features and characteristics that characterize a scale, and to test its nature that forms the basis of a set of relationships or signs for a given scale. (Melhem, 2002, p. 269)The relationship of the paragraph's degree to the total degree of the scale is one of the means used in calculating the internal consistency of the scale, as it is concerned with knowing whether each of the scale's paragraphs runs in the path that the scale goes (Adas, 1997, p. 207).

The first exploratory application of the scale

In order to ensure the clarity of the scale's paragraphs and the answer instructions, and to calculate the time required to answer the paragraphs, to measure the classroom teaching skills effectively and completely, the researcher applied the scale on Tuesday (1/6/). 2021).) from the exploratory sample of the original research community and I assigned it (20) secondary school physics teachers, and through the researcher's supervision on the application, note the scale paragraphs and the instructions for the answer. It became clear to secondary school physics teachers that the average response time to the scale items was (35) minutes.

The second exploratory application of the scale (statistical analysis sample)

Statistical analysis of items is a procedure that aims to keep the good items in the scale(.Ebel, 1972: p. 392)Therefore, the researcher applied the scale electronically using the (Google Forms) formula on a random sample of the original and unspecified research community. Physics in the secondary stage reached the number of (100) school subjects on (Wednesday) corresponding to (2/6/2021 AD) and based on the results of the application of the second approved exploratory researcher to calculate the validity of construction:

- (a) Element discriminative power: Discriminative power is the extent to which an element is able to distinguish between individuals with higher and lower levels with respect to the trait measured by the scale. (Al-Imam et al., 1990: p. 114), and accordingly, (27%) of the answers representing the higher scores and (27%) of the answers representing the lower scores, and higher scores were identified. The group's scores ranged between (300-334) degrees, and the lower group's scores ranged between (99-176), and the researcher also adopted a t-test (t-test) for two independent samples of equal numbers at the significance level (05). and a freedom score (52) to test the differences between the average scores of the highest and lowest groups for each item. When compared, the calculated t-value was found to be higher than the tabulated t-value (98). (1), which means that there is a difference between the grades of physics teachers for the upper and lower groups, and therefore all items are considered distinct.
- (B) The relationship of the paragraph score with the total score of the scale The correlation of the item's score with the total score of the scale is an indicator of the validity and homogeneity of the items in measuring the attribute to be measured. (Allen & Yen, 1979: p 124) Therefore, the correlation coefficient for each item in the university degree ladder using Pearson's varied correlation coefficient, as a correlation between (471, 0-820, 0) which is greater than the tabular value. From (205, 0) at the significance level (05, 0) and the degree of freedom (98), so no item was deleted from the scale, and the number of items remained (75)
- (C) The relationship of the degree of the paragraph with the degree of the domain to which it belongs: The researcher used the Pearson correlation coefficient to calculate the values of the correlation coefficients between the degree of the paragraph and the degree of the domain to which it belongs. The results of the statistical analysis showed that the values of the correlation coefficient ranged between (436), 0-841.0) and they were all statistically significant at the significance level (05, 0) and the degree of freedom (98.)
- (D) The relationship of the degree of the field to the total degree of the scale: The researcher used the Pearson correlation coefficient to calculate the values of the correlation coefficients

between the degree of the field and the total score of the scale. The results of the statistical analysis showed that the values of the correlation coefficient ranged between (0.935 - 995.0), all of which are statistically significant at the significance level (05, 0) and the degree of freedom (98)

Scale of Scale Stability Reliability the stability of any scale means that it gives the same results or something close to it, when reapplied to the same individuals and under the same conditions. Stability is one of the indicators of checking the accuracy of the scale, and the consistency of its clauses in measuring what is to be measured. (Back, 1998: p. 345)Stability refers to the accuracy of the measurement and the reliability of the results, so it is one of the important factors that the researcher seeks in educational and psychological studies, as the researcher aspires to obtain a high stability coefficient to reduce the standard error in the measurement. (Al-Omari 2011 p. 115)Accordingly, the researcher used Cronbach's alpha coefficient in calculating the stability of the scale, and the stability coefficient was (986), the scale whose stability coefficient (60, 0) or more is good. (Back, 1999:367)Thus, the number of items of the classroom teaching skills scale in its final form reached (75) items as in Appendix (16). And Table (9) below shows the poverty distribution, T measure effective teaching skills in the final semester in its three domains:

Table (9) Distributi	on of items o	of the classroom	teaching skills s	cale in its fin	al form
					(

paragraphs Detector	Scale paragraphs	number of paragraphs	the field	No
3,10	1,2,4,5,6,7,8,9,11,12,13,14,15 ,16,17,18,19,20	20	planning	1
24,37 ,44,66	21,22,23,25,26,27,28,29,30,31,32 33,34,35,36,38,39,40,41,42,43,45,46, 58,57,56,55,54,53,52,51,50,49,48,47, ,59,60,61,62,63,64,65	46	Execution	2
72	67,68,69,70,71,73,74,75	9	Calendar	3

Fifth: Application of the search tools

After that, a research standard was built and the psychometric characteristic was confirmed. In order to achieve the goals of the current researcher, the researcher applied the last two scales together, formulating them electronically using Google Forms formula. The final application of the sample (150) of physics teachers at the secondary level by 75 teachers and 75 schools in the Directorate of Education Holy Karbala during the period between (6/6/2021 12/6/2021)

Presentation and interpretation of results

Classroom teaching skills for effective secondary school physics teachers.

To achieve this goal, the researcher applied the effective classroom teaching skills scale consisting of (68) items on the research sample consisting of (150) teachers and schools, with (75) teachers (75) schools, then the researcher extracted the calculation. Mean and standard deviation for each skill separately. To find out the significance of the difference between the

arithmetic averages and the hypothetical mean for each skill, the researcher used the t-test (t-test) for one sample and the results were as shown in Table (11) and Figure (4)

Table (11) Arithmetic means, standard deviations, and T-values for the effective classroom teaching skills scale

_	indication	T value *	*	hypothetical	standard deviation	SMA	the sample	Effective classroom teaching skills
	(0.05)	tabular	calculated	mean				
	function	1,96	4.927	57	10.93	61.40	150	Planning field
	function	1,96	2.247	123	16.09	125.95	150	Implementation field
	function	1,96	4.418	24	6.43	26.32	150	calendar field

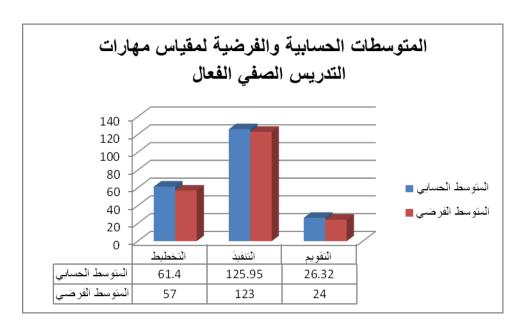


Figure (4) Arithmetic averages and hypothesis of the effective classroom teaching skills scale

It is evident from the above table that

1. In the field of planning, the arithmetic mean of the sample (61.40), the standard deviation (10.93), the hypothetical mean (57) and the calculated T-value (4927) were greater than the tabular value (1.96) at the significance level (0.05) and the degree of freedom (149), This indicates that the research sample possesses skills in this field, but not to a large extent, and this result can be explained by the lack of interest in the field. Physics teachers in the field of planning and the skills it contains and their lack of knowledge of its steps that make it a flexible enough method for planning educational situations, the number of topics, activities and facilities needed to implement them, as well as the feeling from some physics teachers who have difficulty in applying the planning field due to the lack of in-service qualification

- courses, And they were less trained in the field of planning and the skills it includes in the preparation stage, which requires d- reliance on physics teachers on one method of teaching as the best method, which is the wrong thinking that is rejected by the modern trend in teaching, and that lesson planning enables the teacher to use all available capabilities and means. In the best way to achieve educational goals. With minimal effort, time and great efficiency.
- 2. The field of application was the sample mean (125.95), standard deviation (16.09), and the default mean (123). The calculated T value (2.247) was greater than the tabular value (1.96) at the significance level (0.05) and the degree of freedom (149), and this indicates that the research sample possesses the skills in this field, but not to a large extent. The explanation for this result may be that physics teachers have little awareness and understanding of the importance of this field and the promise of skills, and their lack of training and awareness of the stage numbers they obtained in in-service qualification courses. The great importance of this field for the availability of an effective educational climate and the availability of factors of safety and reassurance for students and creating opportunities for positive interaction between the teacher and students and between the students themselves and in directing student activities towards achieving the desired. Educational goals by organizing and employing efforts that lead to the development of independence, freedom of opinion and self-confidence among students and achieving the goal of education in the comprehensive and integrated growth of all aspects of knowledge, skill and affection among students.
- 3. For the assessment domain, the sample mean (26.32), standard deviation (6.43), the default mean (24) and the calculated T-value (4.418) were greater than the tabular value (1.96) at the significance level. (0.05) and the degree of freedom (149). This indicates that the research sample possesses skills in this area, but not to a large extent. This result can be explained by the neglect of most teachers of the reality of assessment and their belief that assessment consists in conducting daily and monthly exams, and the continuous use of teachers has decreased due to the lack of sufficient knowledge of it and its importance. This fact contradicts what is stated in the literature that evaluation is part of the educational process that determines the extent to which goals are achieved and identifies weaknesses and strengths in various aspects of educational situations in order to improve and develop the educational process and to be useful. In identifying problems, diagnosing situations, and knowing the obstacles and obstacles facing the educational process in order to address them in order to raise the level of the educational process and help achieve the desired educational goals.

* To the knowledge of the researcher, the results of the current study did not agree with any previous studies.

References

- 1. Sadr and Badria et al. (2007): Contemporary trends in preparing the teacher professionally, the Ministry of Education, the research and education sector, the management of educational research curricula, its development for the educational unit, and the renewal of educational research.
- 2. Saleh, Hussam Youssef (2016): Methods and Strategies for Teaching Science, First Edition, Central Press University of Diyala, Iraq.

- 3. Al-Khafaji, Raed Idris Mahmoud, Abdullah Majid Hamed Al-Atabi (201 8): Statistical Means in Educational and Psychological Research, first edition, Dijla House for Publishing and Distribution, Amman, Jordan.
- 4. Al-Khuza'a, Muhammad Salman Fayyad and others (2011): Effective Teaching Methods, Dar Al-Safa for Publishing and Distribution, Amman, Jordan.
- 5. Kandil, Yassin Abdel Rahman (1993): Teaching and Teacher Preparation, International Publishing House, Riyadh.
- 6. Zeitoun, Hassan Hussein (2006): Teaching Skills: A Vision in Teaching Application, World of Books, Cairo.
- 7. Abdel-Qader, Mohamed Abdel-Kader, Fouad Shadeed (2013): Models and strategies for effective teaching between theory and practice, University Book House, Al-Ain, United Arab Emirates.
- 8. Majed El-Deeb (2007): Principles and Skills of Effective Teaching, Dar Afaq for Publishing and Distribution, Gaza, Palestine.
- 9. Attia, Mohsen Ali (2008). Modern Strategies in Effective Teaching, Dar Al-Safa for Publishing and Distribution, Amman, Jordan.
- 10. Mizban, Kassem Kazem (2018): The effectiveness of a training program based on effective classroom teaching skills in the performance of Arabic language teachers, unpublished Ph.D. Thesis, College of Basic Education, Al-Mustansiriya University.
- 11. Najjar, Fayez Juma et al. (2009): Research Methods and Applied Scientific Perspective, First Edition, Dar Al-Hamid, Amman, Jordan.
- 12. Abdel Hafeez Walaa Mohamed, Mustafa Hussein (2000): Research Methods and Scientific Statistical Analysis in the Educational, Psychological and Sports Fields, Dar Al-Kitab for Publishing, Minia University.
- 13. Al-Jumaili, Ismail Ali Hussein (2010): The effectiveness of a proposed educational program for developing classroom teaching skills among students of the Department of History, College of Education, unpublished Ph.D. College of Education Ibn Rushd University of Baghdad.
- 14. Al-Khuza'i, Ahmed Muhammad (2001): Effectively Mastering the Standard of Teachers' Rooms, Sources of Teaching Skills, an unpublished MA thesis in Special Education, a graduate of the College of Studies, University of Jordan.
- 15. Al-Obaid and others (2000): Searching for the scientific concept, its tools and methods, sixth edition, Dar Al-Fikr, Jordan.
- 16. Al-Ajili, Sabah Hussain et al. (1990). Measurement and calendar: Dar Al-Hikma for printing and publishing, Baghdad.
- 17. Adas, Abdul Rahman, (1997), Psychometrics, Second Edition, Al-Mazara' Library for Publishing and Distribution, Amman.
- 18. Melhem, Sami Muhammad (2002): Measurement and Evaluation in Education and Psychology, Dar Al Masirah for Publishing, Distribution and Printing, Amman, Jordan.
- 19. Al-Omari, Hassan, The Effect of Item Order in Psychological Standards on the Internal Homogeneity of the Scale and Characteristics of its Items, Damascus University Journal, Volume 27, Issue 3, (2011).
- 20. Al-Awda, Ahmed Suleiman (1998): Measurement and evaluation in the educational process, first edition, second edition, Dar Al-Amal, Irbid.
- 21. Odeh, Ahmed Suleiman (1999): Measurement and evaluation in the educational process, third edition, Dar Al-Amal for Publishing and Distribution, Irbid, Jordan.

- 22. Al-Imam, Mustafa Mahmoud and others (1990): Calendar and Measurement, House of Wisdom, Baghdad.
- 23. Ebel, R (1972): Fundamentals of Educational Measurement, New Jersey, Prentice-Hall.
- 24. Allen, M.; J. & yen, W.N. (1979): Introduction to Measurement
- 25. American Psychologist, 55.5-14.