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The Effect of Using The Alternative Evaluation on Improving The Educational Outcomes of University Courses on Students (The Scientific Research Methodology Course as a Model)

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ABSTRACT

This study sought to identify the effect of using alternative evaluation in improving educational outcomes. (Cognitive, psychological, skill) for university courses for students (the scientific research methodology course as a model). To achieve the objectives of the study, the researchers used the quasi-experimental method. The sample of the study consisted of (40) students enrolled in the course of scientific research methods at Al- Istiqlal University. They were distributed randomly into two groups: the experimental group used the alternative evaluation. However, the control group used traditional evaluation. The results of the study showed that there is an effect of using the alternative evaluation in improving the educational outcomes (cognitive, psychological, and skills) of the experimental group students. In light of these results, the researchers recommended a review of current evaluation practices that use traditional tests. In addition, there is a need to amend the regulations and instructions regulating the evaluation policy in accordance with the university's modernization and developing in line with modern strategies for evaluation, and the use of alternative evaluation tools in evaluating students' work in university courses.

1. Introduction

It should be noted that evaluation has received a large share of development in a way that is in line with these educational developments and transformations, which included the various components of the educational system. In a manner consistent with the constructivist theory, in which the orthodox and unorthodox methods are complementary and teaching methods, as Zaitoon and Zaitoon (2003) point out that “constructivist thought touches with its edges all the pillars of the educational process, and does not neglect the orthodoxy of the educational

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process. Likewise, sequencing and objectivity." There are several definitions of evaluation, because of its importance in educational programs, interactive, they define it as passing judgment on things in the light of the use of criteria or certain criteria, or the process is given in which the value of something, as defined as the collection of data or information process (quantitative and qualitative) about a phenomenon, attitude, or behavior, its classification, analysis and interpretation; intending to use it in issuing a judgment or decision, and in this context it should be mentioned that evaluation has long assumed a great position in the educational system with all its dimensions and aspects. Given its importance in determining the amount of achievement of the desired educational goals, which are expected to positively affect the student and the educational process alike (Afaneh, 2011; and Abdel-Hamid, 2013).

The concept of measuring and evaluation tools - for the majority of those who are engaged in teaching and learning - has been associated with tests as a successful method in measuring and issuing a judgment. The most common method among the methods of evaluation, because it has many advantages, such as its ease of preparation, low costs, and objectivity, but it was not without many criticisms that it was supported by it as a practical tool. On preserving and remembering information without understanding it, and neglecting the true purposes of evaluation, which showed an urgent need for new, unconventional methods; To evaluate students' performance to reach the desired goals (Diab, 2011). Therefore, the efforts exerted - globally - seeking to reform education have emphasized the necessity of shifting from the use of achievement tests, to the use of real or actual evaluation methods, which present complete and multifaceted forms of knowledge and its complexity in terms of its many dimensions. With specific competencies, he has an urgent need for them in practical life. In contrast, the behavioral-oriented achievement tests focus on the knowledge acquired by students, without attempting - in most cases - to determine what they possess in terms of the various functional competencies they need (Allam, 2004).

And As mentioned earlier, the concept of modern evaluation goes beyond the traditional understanding of the process of assessing students' learning, The process is based on the show individual differences or individual skills some students than others, this process is measured in degrees arbitrarily do not reflect - mostly - the truth of what is owned by Students have abilities related to higher-order thinking processes, and their ability to formulate judgments and make the right decision, as skills that enable students to deal with the changes and changes in information technology. So, the educational assessment - modern approach - includes modern assessment strategies curriculum and educational tools, based on the reality of what the student has learned and reality, focused ensures that the educational process quality, and outcomes in terms of the achievement of the learner for the purposes of learning, and enable them, and his mastery of her. (Napoli & Raymond, 2004; Tomlinson, 2001; Marzano, 2002).

It is worth saying that there are recent trends which have emerged over the past few years in the field of educational assessment, They call for the need to work on the development of traditional evaluation methods and tools (As essay and

objective tests), and adopting non-traditional forms, such as projects, research, realistic tasks, which lead the learner to deep understanding, research and investigation, then critical thinking and creative criticism, and rely on applying what the learner has in terms of previous knowledge and experiences in life situations that allow him to acquire new experiences and develop new and developing experiences in the twenty-first century. It appears what has become known - educational - realistic evaluation, or alternative evaluation, to coincide with the emergence of realistic learning, associated with the reality, which is based on the experiences associated directly by the learner, and his daily life, and encounter problems and issues of the urgent need for appropriate solutions., For this type of learning is not sufficient for the learner to store information, without a deep understanding of it, assimilating knowledge, searching for it, employing it, and training in the investigation process, which gives him an accurate method of building a system that provides him with an accurate system of learning.

Perhaps what distinguishes the alternative evaluation from others is its modern approaches in dealing with the current evaluation problems in the educational process, a deal based on making the evaluation an essential part of the teaching process. Because it requires the learner to perform tasks that stimulate his thinking, and refer him to his previous knowledge, to build - through this - constructive learning experiences that make the student use advanced thinking. In order to achieve the highest levels of quality in performance, it also provides them with feedback, which enables them - and their teachers - to define the necessary steps for improving education (Wikstrom, 2007). It is worth noting that the alternative evaluation has many strategies and various teaching methods that include effective performance and higher-order thinking skills, such as analysis and criticism, using many tools, such as observation, interview and other methods of evaluation. (Majeed, 2011). And apply it practically to the surrounding environment, both socially and geographically. To measure the learner's performance as a general measure of the knowledge and skills he possesses that help him on the actual performance and effective practical application, and give him realistic practical experiences and problem-solving skills (Al-Harbi, 2014).

In addition to the alternative evaluation strategies - in addition to what was mentioned above - the following educational evaluation activities: presentation, demonstration, simulation, debate, and the evaluation strategy by observation, in which the teacher's behavior is observed. The goal is to get to know their interests and preferences and their attitudes, and their interaction with each other, in order to obtain information that in the sentencing of the performance, as well as, evaluation communication strategy through conferences, interviews, questions and answers, and record description of the course of the learning process, and then, self-review strategy, which is based on converting previous learning into new learning, by evaluating what the student has learned through meditating on previous experience, identifying strengths, and others in which they need to be improved, and then, determining what the actual learning tools will be learned, and in which these strategies are learned (Al Zoubi, 2013; Suskie, 2004; Fook & Sidhu, 2010; Boud, 2000) That is, monitoring, assessment scales, verbal appraisal scales, learning history description, and story record (Odeh, 2010).

The problem of the present study can be summarized in the question what is the effect of using the alternative evaluation in improving the outcomes of educational university courses on students?

1. Is there an effect on the level of the outcomes of the university's educational cognitive courses on the students, which is attributed to the evaluation method used (traditional, alternative)?
2. Is there an effect on the level of the outcomes of the university's educational psychological courses on the students which are due to the evaluation method used (the traditional, the alternative)?
3. Is there an impact on the level of university skill courses outputs attributable to the evaluation method used (traditional, alternative)?

The current study has certain limits. In order to control the handling of its topic and address its problems, it can be explained in the following ways:

The current study seeks to identify the effect of using the alternative evaluation in improving the cognitive level of university course outcomes on students; the effect of using the alternative evaluation on improving the level of university course outcomes in psychological education on students. Moreover, the study examines the effect of using the alternative evaluation on improving the level of university course outcomes in educational skills on students.

2. Methodology

Given the nature of the study, and the achievement of its objectives in this aspect, the researcher followed the quasi-experimental approach, according to the design of the groups, which is based on two groups, one is a control and the other is experimental. It has two tests (Before - After), as the tools of the tribal research are applied to the two groups before the experiment. Then the experimental group is exposed only to the independent variable (the alternative evaluation). While the control group remains by the traditional method (traditional evaluation), Then the dimensional search tools are applied to the two groups. To find out the effect of the independent variable on the dependent variable, and Table number 1 explains that.

Table 1. The quasi-experimental design of the study.

The group	Study tools before me	Evaluation method	Study tools after me
Control	-Cognitive test	Traditional evaluation	-cognitive test
Experimental	-Measuring students' attitudes towards a scientific research course	Alternative evaluation	- measuring students' attitudes towards a scientific research course -a research plan evaluation form

The study sample

The study sample was chosen in a cluster manner for students enrolled in the scientific research curriculum, as it is one of the university courses at Al-Istiqlal University as a model for university courses. The study sample consisted of (40) students in the scientific research course from the same specialization and academic level to apply the study and its procedures to them. A division of students was chosen randomly to be an experimental group that uses alternative assessment methods, another division of students was chosen to be a control group that uses traditional evaluation methods, and table 2 shows the distribution of the study sample:

Table 2. Distribution of the individuals of the study sample according to the group, and the number of individuals in each group.

Group Type	Total Students
Control	20
Experimental	20
Total	40

Instrumentations

To achieve the objectives of the study, the following study instruments were built:

The cognitive test

In order to achieve the objective of the current study, which is to identify the effect of using the alternative evaluation on improving the educational cognitive outcomes of the course of scientific research methods at Al-Istiqlal University on students, the researchers prepared a cognitive test as a measuring tool for this goal. The test consisted of (10) questions distributed according to the levels of the Bloom Cognitive Pyramid, and the questions consisted of two objective questions and eight essay questions. It aims is to measure the cognitive level of students in the scientific research methods course to be taught in the first semester of the academic year (2019/2020).

- *Cognitive test validation:* To ensure the validity of the cognitive test, it was presented - in its initial form - to a group of qualified and experienced referees. and the study objectives and questions were clarified. This is to make sure of the degree of suitability of the questions, their clarity, and their belonging to what they are measured, the integrity of the phrasing, as well as, looking at the degrees of correction and their suitability, and the comprehensiveness of the questions to cover the course decided in accordance with the study plan. Based on the judges' opinions about the suitability of the cognitive test for the study's objectives, and according to their directives and suggestions, the formulation of some questions was modified linguistically, so that the number of the main questions in the cognitive test remained (10) questions.

- *The stability of the cognitive test:* To ensure the stability of the cognitive test, the test was applied to a pilot sample from outside the study sample consisting of (30) male and female students who studied the scientific research curriculum at Al-Istiqlal University during the summer semester of the academic year (2018/2019). and the application period took two hours, No questions were received from the students on the test questions in terms of ambiguous questions or linguistic errors, or the time period is insufficient, and after retrieving the students' answers, the stability coefficient was computed by the method of applying and re-applying the test with a time difference of two weeks between the two applications. The Pearson correlation coefficient was calculated which reached (0.808), This indicates that the test has a high degree of stability and it fulfills the purposes of the study.

Measuring students' attitudes about the scientific research course

A questionnaire has been prepared to reveal the students' attitudes towards the scientific research methodology course for students in the experimental and control groups, and to know the degree of the effect of the independent variable (alternative evaluation) on the student's attitudes in the experimental group. In order to prepare an appropriate questionnaire to measure the students' attitudes towards the scientific research methodology course, the researcher was guided by the literature on the topic of trends towards various school curricula, such as Hilton et al. (2004); And the study of Slim and Ryan, 2009; And Radi Study, 2017; Shawabkeh, 2012, The questionnaire, in its initial form, would consist of (30) items, the degree of response of the vertebrae was determined according to the Likert pentagonal scale.

- The validity of the questionnaire of students' attitudes towards the scientific research curriculum course: To measure the validity of the students' attitudes' questionnaire, the researchers followed the following:
 - a. Content honesty:
The questionnaire was presented to a group of specialized and experienced referees to express their views on the items of the tool in terms of clarity of meaning, relevance to the nature of the study and the tool, the soundness of the linguistic formulation, and the extent of the comprehensiveness and coverage of items that have not been prepared. The referees showed a response, and provided valuable notes and adjustments, which helped to produce the tool in a good way, and to achieve the validity of the tool. Based on these observations and modifications, the questionnaire has become composed of (32) items.
 - b. Internal consistency validity:
The questionnaire was applied to a pilot sample from outside the study sample consisting of (30) students, in order to ascertain the validity of the study tool and use it to calculate the validity and reliability and verify its suitability for application on the original sample.
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To calculate the validity of the internal consistency of the study tool, and the extent to which these component items relate to each other, the correlation coefficient was found between the scores of the sample individuals on each item and the overall score of the questionnaire. The indicated correlation coefficients were found to be statistically significant at the significance level ($\alpha = 0.05$), The items ranged between (.465 _ .940), and thus the questionnaire is considered true for what it has been measured for.

- The reliability of the questionnaire of students' attitudes towards the scientific research curriculum course: To measure the stability of the students' attitude questionnaire tool, the reliability coefficient of the questionnaire was extracted, using Cronbach's Alpha, by applying it to the pilot sample consisting of (30) students, The reliability coefficients came to an appropriate questionnaire that fulfills the purposes of scientific research, reaching (0.971), This is a coefficient of stability indicating that the study tool has a high and appropriate degree, and hence, the results can be relied upon and trusted.

The evaluation form of the research plan

A questionnaire was designed to evaluate the research plan for students in the experimental and control groups, and to know the degree of the effect of the independent variable (alternative evaluation) on the level of designing the research plan in the experimental group. To build this tool, the researchers reviewed the educational literature and the evaluation tools used to evaluate the research plan, in addition to some of the evidence available in Palestinian and Arab universities, and refer to the study plan for the course of scientific research, Accordingly, the tool in its initial form consisted of (25) items covering the elements of the research plan distributed into four areas of : the general framework of the research plan is made up of (5) paragraphs, The study's background and its importance are made of (10) items, The method and procedures consist of (7) items, Scientific documentation consists of (3) items.

To ensure the validity of the evaluation form of the research plan, the form was presented in its initial form to a number of specialized and experienced referees .The purpose of the questionnaire, and the purposes of benefiting from its results, have been clarified. The referees were asked to express their views on the items of the tool in terms of the clarity of the meaning and the relevance of the nature of the study, the tool and the field to which it is affiliated, the soundness of the linguistic formulation, and the extent of the comprehensiveness and coverage of the items that have been prepared. The referees have responded and provided valuable comments and adjustments, in the light of which the two researchers made the required adjustments to produce the tool in a good way that achieves the level of validity. Based on these observations and modifications, the final form of the evaluation of the research plan has become composed of (25) items covering the elements of the research plan distributed into four areas, Table No. (3) shows the distribution of the items into the four areas:

Table 3. The distribution of the items of the evaluation plan for the research plan according to their fields.

Areas of	Number of items
The general framework of the research plan	4
Study background and importance	12
Method and procedures	6
Scientific documentation	3

The quadruple scale was used to assess the level of each paragraph (1-4); Thus, the degrees of the study sample are limited to (25, 100) degree.

The alternative evaluation tools used

After the researchers reviewed the educational literature related to alternative evaluation methods and tools, and to achieve the objectives of this study and evaluate students' performance in the scientific research curriculum course, the two researchers relied on the following methods and alternative evaluation tools:

- Professor's evaluation: The two researchers have determined the required educational outcomes according to the study plan for the Curriculum for Scientific Research course at Al-Istiqlal University, which was represented in analyzing the skills for each lecture, then analyzing each skill into a set of criteria and the distribution of grades on each criterion, to show the extent of students' ownership of the required task or educational skill, using the Rating Scale, according to a five-point scale.
- Self-evaluation: The two researchers have determined the required educational outcomes according to the study plan for the Scientific Research Curricula course at Al-Istiqlal University, which was represented in analyzing the skills for each lecture, then analyzing each skill into a set of criteria, and distributing the grades on each standard, To show the extent to which students possess the required educational task or skill by using the Rating Scale tool, according to a five-point scale, So that each student uses it to evaluate the extent of his own possession of the task or educational skill required by himself.
- Colleague evaluation: The two researchers determined the educational outcomes required according to the study plan for the scientific research curriculum course at Al-Istiqlal University, which consisted in analyzing the skills for each lecture, then analyzing each skill into a set of criteria, and the grading distribution for each standard. Using the Rating Scale Tool, according to a five-point scale, so that each student uses it to assess the extent of his colleague's possession of the task or the required educational skill.

Study variables

- The independent variable: which is the evaluation method, they are:

1. Alternative evaluation.
2. Traditional evaluation.
 - The dependent variable: The educational outcomes of the students represented in:
 1. Cognitive outputs: Its measurement tool: the cognitive test.
 2. Psychological outputs: Measurement tool: a measure of students' attitudes towards the scientific research curriculum course.
 3. Skill Outputs: Measurement tool: a research plan evaluation form.
 - Controlled variables: The two researchers sought to exclude any external influences that might affect the dependent variable. In order to control the study, the two researchers checked the equivalence of the experimental and control groups in the following variables:
 1. The study environment: where the study environment for the two groups is similar with all the physical factors from (Lighting, ventilation, facilities and tools, teaching method, number of students).
 2. The academic course: represented by the adoption of the study course of the experimental and control groups.
 3. Student characteristics: Where the researcher takes into account, as much as possible, the characteristics of students between the experimental and control groups in terms of (gender, place of residence, high school average, and university GPA).
 4. Academic specialization for all students, which is a specialization in security sciences.
 5. The third academic year for all students.

Statistical methods

The Statistical Package for the Social Sciences (SPSS) program was used to extract the arithmetic means and standard deviations to calculate the average performance in the cognitive test, the level of student attitudes, and the students' skill level and the use of the ANCOVA test and the (t) test for comparison between the arithmetic means of the control and experimental groups.

3. Results and Discussion

The researcher deals in this section with a presentation of the results of the study effect of alternative evaluation on improving the outcomes of educational university courses on students, and after applying the study tools, and entering the data according to the responses of the study sample members for each of the experimental group and the control group, to answer the main question:

What is the effect of using the alternative evaluation in improving the outcomes of educational university courses on students?

And the answer to his own sub-questions, the data were analyzed statistically, the following results were shown:

1. The results related to the first sub-question, which reads: Is there an effect on the level of the outcomes of the university's educational cognitive courses on the students attributed to the evaluation method used (traditional, alternative)?

To answer the first sub-question, the arithmetic averages and standard deviations of the students' scores on the pre and post cognitive test of the Curriculum for Scientific Research course at Al-Istiqlal University were calculated for both groups as shown in the following table (4):

Table 4. The arithmetic means and the standard deviations for each of the control and experimental groups on the pre and post cognitive test.

Group	Pretest		Post Test		Number Of Groups
	Arithmetic mean	standard deviation	Arithmetic mean	standard deviation	
Control group	61.70	10.834	83.25	4.552	20
Experimental group	58.70	10.795	85.45	4.925	20

It is clear from the above table that the mean of the experimental group in the pretest is (58.70) and the average of the control group in the pretest is (61.70). It is clear from the table that the mean of the experimental group in the post test is (85.45) and the average of the control group in the post test is (83.45), And to verify that the differences between the control and experimental group averages are statistically significant with the effect of prior application being fixed, the accompanying analysis of variance (ANCOVA) was used. Table No. (5) Indicates the results of using the associated analysis of variance.

Table 5. Results of the accompanying variance analysis (ANCOVA) to examine the significance of the differences between the means of the control and experimental groups in the cognitive test.

The source of the contrast	Sum of squares	Degrees of freedom	Average of squares	Statistical value (F)	P-value (Sig)	Effect Size (Eta squared)
The pretest evaluation method (groups)	480.404	1	480.404	47.489	.000	.562
The error total summation	99.511	1	99.511	9.837	.003	.210
	374.296	37	10.116			
	285500	40				

It appears from the above table that the statistical value of the (F) test computed for the group variable in the cognitive test is equal to (9.837), and that the level of significance is equal to (.003), This value is less than the significance level ($\alpha = 0.05$), which is statistically significant, Therefore, there are statistically significant differences between the mean of the experimental group and the mean of the control group in the cognitive test of the scientific research curriculum course. It is attributed to the evaluation method (traditional, alternative).

To find out if the differences were in favor of the experimental group or the control group, the modified arithmetic averages were calculated for the experimental and control group. Table No. (6) Shows the modified arithmetic means of the student's performance in the cognitive test by group.

Table 6. The modified arithmetic means of the experimental and control study groups, and the standard error of students' performance in the cognitive test.

The Group	The Modified Arithmetic Means	Standard Error
Control	82.757	.715
Experimental	85.943	.715

It is evident from the above table that the modified mean of the experimental group equals (85.943), it is greater than the adjusted arithmetic means of the control group, which reached (82.757), thus, the differences between the two groups are in favor of the experimental group that used the alternative evaluation method in evaluating the performance of her students.

It is also evident from Table No. (5) That the Effect Size (Eta squared) for the group reached its value (0.21). This shows the size of the effect of using the alternative evaluation method on the average score of the students in the cognitive test of the experimental group. This indicates the importance of using the alternative orthosis, and the effectiveness of its tools in improving cognitive educational outcomes compared to the traditional method of evaluation.

2. The results related to the second sub-question, the text of which is as follows

Is there an effect on the level of the outcomes of the university's educational psychological courses on the students, which is due to the evaluation method used (the traditional, the alternative)?

In order to answer the second sub-question, the arithmetic means and standard deviations of the students were calculated on the scale of the students' attitudes towards the course of scientific research curricula, pre and post, for both groups. As shown in the following table (7):

Table 7. The arithmetic means and standard deviations for each of the control and experimental groups of students' attitudes towards the course of scientific research curricula before and after

The Group	The Pretest		The Post Test		The Number Of Groups
	Arithmetic Mean	Standard Deviation	Arithmetic Mean	Standard Deviation	
Control Group	3.10	0.37	3.77	0.31	20
Experimental Group	2.82	0.46	4.24	0.49	20

It is clear from the above table that there is a convergence between the arithmetic averages of the control and experimental group in the directions of students on the pretest, while there are clear differences between the arithmetic averages of the

control and experimental group in the attitudes of students on the post-test To verify that the differences between the control and experimental group averages are statistically significant, with the pre-test effect Installation, and the use of the associated analysis of variance (ANCOVA). Table number (8) indicates the results of using the accompanying variance analysis.

Table 8. The results of the accompanying variance analysis (ANCOVA) to examine the significance of the differences between the averages of the control and experimental groups in the attitudes of students towards the course of scientific research methods

The source of the contrast	Sum of squares	Degrees of freedom	Average of squares	Statistical value (F)	P-value (Sig)	Effect Size (Eta squared)
The pretest evaluation method (groups)	.010	1	.010	.059	.809	.002
	2.067	1	2.067	11.975	.001	.245
The error total summation	6.385	37	.173			
	651.007	40				

The above table shows that the value of the (F) statistic amounted to (11.975). The significance level is equal to (.001). This value is less than the level of significance (0.05), it is statistical indication. Therefore, there are statistically significant differences in the level of students' attitudes towards the course of scientific research methods between the control and experimental group, which are due to the evaluation method (traditional, alternative). To find out if the differences were in favor of the experimental or control group, the modified arithmetic means were calculated for the experimental and control group. Table 9 shows the modified arithmetic means in the level of students' attitudes towards the scientific research curriculum according to the group.

Table 9. The modified arithmetic means for the experimental and control groups, and the standard error in the level of students' attitudes towards the scientific research curriculum course

The Group	The Modified Arithmetic Means	Standard Error
Control	3.767	.096
Experimental	4.248	.096

It is evident from the above table that the modified mean of the experimental group is equal to (4.248). It is greater than the adjusted arithmetic means of the control group, which amounted to (3.767). Thus, the differences between the two groups are in favor of the experimental group that used the alternative evaluation method in evaluating the performance of the students. It is also evident from table 8 that the Effect Size (Eta squared) for the group amounted to (0.245). This shows the magnitude of the effect of using the alternative evaluation method on the level of students' attitudes towards the course of scientific research methods for the

experimental group. This indicates that the use of the alternative calendar has an effect on students' attitudes towards the course of scientific research curricula, compared to the traditional method of evaluation.

3. The results related to the third sub-question, the text of which is as follows

Is there an impact on the level of university skill courses outputs which is attributable to the evaluation method used (traditional, alternative)? To answer the third sub-question, the arithmetic means and standard deviations of the average marks of the students in their applied skills were calculated for the preparation of a research plan for both groups, as shown in table 10.

Table 10. The arithmetic means and standard deviations for each of the control and experimental groups in students' applied skills on preparing a research plan

The Group	Arithmetic Mean	Standard Deviation	The Number Of Groups
Control Group	75.60	5.23	20
Experimental Group	86.55	4.25	20

It is clear from the above table that there are clear differences between the arithmetic averages of the control and experimental group in the applied skills on preparing a research plan. To verify that the differences between the means of the control and experimental group are statistically significant, the t-test independent was used for the two groups. The results of table 11 show that in detail.

Table 11. The results of the "t" test on the arithmetic means of the control and experimental groups in the skills of students on preparing a research plan to examine the significance of differences according to the evaluation method

The Control And Experimental Groups In Students' Applied Skills To Prepare A Research Plan	Test Value (T)	Test Value (F)	P-Value (Sig)
	-7.271	1.546	0.000

The above table shows that the value of the (t) test reached (-7.271). The significance level is equal to (0.000), This value is less than the significance level (0.05). This is a statistical indication. That is, there are statistically significant differences in the level of students' skills in preparing a research plan between the control group and the experimental group, which are attributed to the evaluation method (traditional, alternative). With reference to the table of arithmetic means, it is noticed that the differences were in favor of the experimental group. This indicates that the use of the alternative evaluation method had an effect on the students' applied skills level on preparing a research plan.

4. Conclusion

In light of these results, the researchers recommended the following:

1. A review of current evaluation practices that use traditional examinations.
2. Amending the rules and regulations governing the evaluation policy in universities, developing them in line with modern strategies for evaluation, and providing for the use of alternative evaluation tools.
3. Attention to psychological and behavioral aspects in parallel with the cognitive aspect.
4. Conducting more studies in the same specialty according to other variables.

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References

- Abdel-Hamid, Jaber (2013). System of comprehensive educational evaluation for the stage of basic education. Ministry of Education, Amman, Jordan.
- Afaneh, Muhammad Atiyah Ahmad (2011). The reality of Arabic language teachers' uses of assessment methods in the preparatory stage in UNRWA schools in the Gaza Strip in light of recent trends. Master Thesis, College of Education, Islamic University, Gaza, Palestine.
- Allam, Saladin (2004). Alternative educational evaluation. Cairo: Educational Thought House.
- Al-Zoubi, Aamal (2013). Degree of Mathematics Teachers' Knowledge and Practice of Realistic Evaluation Strategies and Tools, the Educational and Psychological Islamic University Journal, 21 (3): 165-197.
- Assaf, Muhammad (2017). Predictive ability of the cumulative average in the level of job performance of Al-Istiqlal University graduates in Palestine, Master Thesis, Yarmouk University.
- Boud, D, (2000) .Sustainable assessment: Rethinking assessment for the learning society, Studies in Continuing education, 22 (2): 151-167.
- Diab, Suhail (2011). The Effect of Using Various Evaluation Tools on Students' Basic Achievement in Science and Their Attitudes Toward It, Al-Najah University Journal for Research, Nablus, 26 (3).
- Espinoza, O., González, L., McGinn, N., & Castillo, D. (2020). Alternative education programs for high school age students in Chile. Education and Urban Society, 52(4), 561-589.
- Fook, C & Sidhu, G. (2010). Authentic assessment and pedagogical strategies in higher education, Journal of Social Sciences, 6 (2): 153-161.
- Hunter, R. A., Pompano, R. R., & Tuchler, M. F. (2022). Alternative Assessment of Active Learning. In Active Learning in the Analytical Chemistry Curriculum (pp. 269-295). American Chemical Society.
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- Liu, Q. H., Zhang, J., Peng, C., Litvinova, M., Huang, S., Poletti, P.,... & Ajelli, M. (2022). Model-based evaluation of alternative reactive class closure strategies against COVID-19. *Nature communications*, 13(1), 1-10.
- Marzano, R.J. (2002). A comparison of selected methods of scoring classroom assessments. *Applied Measurement in Education*, 15, 249-267.
- Napoli, A. R. & Raymond, L. A. (2004). How reliable are our assessment data? Comparison of the reliability of data produced in graded and ungraded conditions. *Research in Higher Education*, 45(8): 921-929.
- Kayal, Nadia (2011). Opinions of graduate students regarding evaluation methods used by faculty members at Birzeit University. Master Thesis, Birzeit University, Palestine.
- Kyper, S. M. (2020). A Multi-Site Case Study: Alternative Educational Programming for High School Students in Central Pennsylvania. Drexel University.
- Majeed, Sawsan Shaker (2011). Contemporary developments in the educational calendar. Safaa House for Publishing and Distribution, Amman.
- Odeh, Ahmed (2010). Measurement and evaluation in the educational process. 4th floor, Irbid: House of Hope.
- Suskie, L. (2004). *Assessing Student Learning: A Common-Sense Guide*.
- Tomlinson, C. A. (2001). *How to differentiate instruction in mixedability classrooms* (2nd Ed.). Alexandria, VA: Association for Supervision and Curriculum Development.
- Ventouris, A., Rousoulioti, T., & Iliopoulou, K. (2022). Alternative Evaluation as a Means of Inclusion: The Case of the Public Greek Educational System. In *Handbook of Research on Policies and Practices for Assessing Inclusive Teaching and Learning* (pp. 333-359). IGI Global.
- Wikstrom, N. (2007). *Alternative Assessment in Primary years of International Baccalaureate Education*, The Stockholm Institute of Education, Thesis 15 ECTS.
- Zaitoun, Hassan and Zeitoun, Kamal (2003). *Learning and teaching from a constructivist theory perspective*. Cairo: The World of Books.

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