

Comparative Analysis between Teaching Methods from the Standpoint of a Faculty Member

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مقارنة تحليلية بين طرائق التدريس من وجهة نظر عضو الهيئة التدريسية

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تأتي أهمية طرائق التدريس من خلال مساهمتها في اعداد طلبة قادرين على تحديد حاجاتهم واهتمامهم فضلاً عن قدرتهم في توظيف المعارف والمهارات التي يتعلمونها في خدمة المجتمع ، وطرائق التدريس لا تعني اعداد طلبة تتعلم دون تطبيق او العيش في فراغ بل انها تحاول تنمية العقل وجمع المعلومات والاستفادة منها واصبحت بعض طرائق التدريس تعتمد على التكنولوجيا واستمرت في التقدم حتى وقتنا الحاضر واخذت تتجه اتجاهاً جديداً بمعنى انها اصبحت في خدمة المجتمع ولأهميتها اجرينا استعراضاً لأهم طرائق التدريس المتبعة من قبل التدريسيين وتم استخدام استمارة استبيان خاصه بذلك وتحليل بيانات الاستمارة باتجاهين ، الاتجاه الوصفي من خلال ايجاد النسب المئوية ومناقشتها والاتجاه التحليلي من خلال تطبيق اساليب كمية متقدمة لمعرفة مدى معنوية الفروق بين طرائق التدريس وخلص البحث الى مجموعة من الاستنتاجات والتوصيات اهمها:

- هناك فروق ذات دلالة معنوية بين طرائق التدريس المختلفة المستخدمة من قبل اعضاء الهيئة التدريسية.
- ضرورة قيام إدارات الجامعة بدورها في إيضاح طرق التدريس والاختلافات بينها لإزالة الغموض الموجود لدى بعض المعلمين ، وإدراج الحقيبة التعليمية ومفردات المناهج كأكثر طرق التدريس ملائمة لتلك المفردات. الكلمات المفتاحية: طرائق التدريس ، طريقة الانقاء ، طريقة المناقشة والحوار ، التحليل الكمي.

Abstract:

For the purpose of following the development in the era of knowledge and scientific progress, it is necessary to focus on the ways of the success of the educational process, and among the most important elements that must be taken care of in the educational process are teaching methods, as they are the tool that helps the learner to understand and assimilate the scientific material. Therefore, the success of the educational process is linked to choosing the appropriate method for the presented material and for the level of the learner. However, teaching methods have developed in accordance with the requirements of contemporary life. And this research aims to identify the teaching methods used by the faculty member in communicating the scientific material and their role in motivating students to learn, and the methods do not overlap among them, and to know whether the differences between teaching methods have an ethical significance or not, using the means of quantitative analysis with its descriptive and analytical aspects. As well as, the research focused on reviewing the four most used methods, where only two methods were chosen by the research sample. Hence, the research reached a set of conclusions and recommendations, the most important of which are:

- There are significant differences between the different teaching methods used by faculty members.
- The need for university administrations to take their role in clarifying teaching methods and the differences between them in order to remove the ambiguity that exists among some teachers, and to include the educational bag and curriculum vocabulary as the teaching methods most appropriate to those vocabularies.

Keywords: Teaching methods, method of recitation, method of discussion and dialogue, quantitative analysis.

1. Introduction:

In the age of knowledge and scientific progress in which we live, we must follow this development, and there is no way to do that other than learning, so it is necessary to pay attention to it, and this responsibility is on the educational family in all its branches, especially the teacher and the learner, where, the role of each of them has changed. The teacher is no longer a mere giver of information as well as, the learner a passive recipient of it. Rather, each of them has a new role and more burdens than the previous one (Tetzlaff et al 2022). The teacher has become charged with planning, organizing, teaching and evaluating, as well as guiding students and delivering scientific material. As for the learner, he has become the focus of the educational process, he is an active participant who has an important role in it, because he is the product that the teacher seeks to pay attention to from many aspects, to become a conscious human being capable of progress and development in society (Shah and Habib,2022). And this will only be achieved through the success of the educational process, and among the most important elements that must be taken care of in the educational process are teaching methods as the tool that helps the learner to understand and assimilate the scientific material(Poling et al 2022), so the success of the process is linked to choosing the appropriate teaching method for the presented material and for the level of the learner, and it has evolved these methods are in accordance with the requirements of contemporary life, after they depended on pronunciation and recitation, they expanded to include the perceptual and cognitive levels of the learner (Mihut, 2022). And it

is necessary for the faculty member to be flexible and initiator of change and familiar with everything that is new in order to master the selection of the appropriate method(Lie et al 2021). However, this research came to shed light on the teaching methods and the moral differences between them. In addition, the research problem can be identified with most faculty members the traditional method of delivering the scientific material and the lack of diversification in their use of teaching methods, which would stimulate students' thinking and motivation. While the importance of the research lies in the possibility of identifying the teaching methods used by the faculty members and the possibility of determining the best ones in meeting the needs of students in delivering the scientific material and stimulating their thinking and motivation for education. This research aims to identify the teaching methods used by the faculty member in his delivery of the scientific material and its role in stimulating students' motivation to learn and the methods do not overlap among them and to know whether the differences between teaching methods are significant or not through the use of quantitative analysis methods and the research adopted the following hypotheses:

- 1- There are significant differences between teaching methods.
- 2- Diversification in the use of teaching methods has an important role in stimulating students' thinking.
- 3- The teaching methods used are appropriate to the content of the presented scientific material.
- 4- The teaching methods used are appropriate to the levels of students, as well as taking into account the individual differences among students. Meanwhile, the research adopted the descriptive approach through the application of the Triple Likert scale, and the analytical approach through the adoption of analysis of variance (ANOVA), to achieve the goal of the research. As for the limitations of the search, they are as follows: Spatial limit: represented by the teaching methods used by faculty members who hold graduate degrees in the College of Administration and Economics, University of Fallujah. Time limit: the 2016-2017 academic year.

2. Literature Review

Study by Odeh et al, 2021 aimed to know the effect of using teaching methods in the achievement of the upper basic stage and their attitudes. The study volume consisted of all students of the tenth grade in the schools affiliated with the International Relief Agency in the Irbid region, and their number was (2479) male and female students distributed over (37) school, and the study sample was (514) male and female students, and the study found:

- There are statistically significant differences in the direct achievement test due to the teaching method used
- There are statistically significant differences due to gender in favor of females. This study aims to achieve the most advantage for new teachers, however it's offer a new methods in teaching and all aspects about it. It give them the information needed, determine the nature of the method of teaching methods, and identify the role of academic achievement in the educational process. The result of this study it revealed that the development of teaching goes through many stages, the first of which is the transfer of information and its consolidation to the learner and the learner has become the main focus in the educational process.(Khadija et al 2020) This study aims to reveal the educational methods (dialogue, survey, and practical practice) and reveal the opinions of teachers in the educational process. The researcher adopted the analytical description approach, the study revealed that the years of experience and the available educational methods were of clear significance to males in the educational process (Yacoub, 2015).

3. Theoretical framework:

3.1 Teaching Method

It is a set of procedures and activities carried out by the teacher to communicate the content of the study material to the learner, or it is a philosophical orientation that consists of several consistent and interconnected hypotheses related to the nature of the material and its teaching, and its effects on what students learn. It can also be defined as the approach followed by the teacher to communicate the curriculum, knowledge, skills and activities to the learner easily through the interaction between the two parties (DeMatthews et al 2021).

3.2 Criteria for a good method of teaching:

The modern trends in education and teaching methods acknowledge a scientific fact that should be taken into consideration, which is that relying on one method in teaching one of the sciences negatively affects the delivery of scientific material and the level of students.(Al-Rubaie and Dawod, 2016). However, it is possible to set general indicators that can determine the parameters of a good method of teaching and to say that a good method is the one that achieves the goals of teaching with less time, effort and cost. There are a number of conditions that, if the method is met, can make it effective, which are:

- 1- It should match the learners' abilities and capabilities.
- 2- To be able to achieve the educational goal in the least time and effort.
- 3- To motivate learners to learn.
- 4- The possibility of using it in more than one educational situation.
- 5- The possibility of modifying it according to the material and social conditions of teaching.
- 6- To adopt the transition from the known to the unknown, from the easy to the difficult, and from the whole to the part.

3.3 Characteristics of Teaching Methods:

The most important general and specific characteristics of teaching methods can be identified as follows (Al-Ani, 2015) (Al-Yassin, 2017).

- 1- To be clear about the goal
- 2- It suits the abilities and tendencies of the learners and takes into account the individual differences between them
- 3- A variety of educational activities
- 4- Provide the teacher with feedback
- 5- It motivates students and motivates them to learn
- 6- It prepares them for constructive thinking and dialogue calmly and objectively
- 7- Achieve the goals in the least time, effort and cost
- 8- It develops in the learner's new knowledge and positive trends

3.4 The basic rules upon which teaching methods are built: (Al-Ahmad2011).

- 1- Progression from the known to the unknown: If the new information is related to the old information that the student knows, then it is understood.
- 2- Progression from easy to difficult: easy and difficult mean what the student sees as easy or difficult, not what the teacher sees.
- 3- Progression from the whole to the part: This principle goes along with the nature of the mind in perceiving things.
- 4- The gradation from the tangible to the semi-tangible to the abstract.

3.5 Teaching Methods:

The references talk about many methods of teaching, in this research four methods were mention because the research revolves around these four methods in addition to being the most widely used (Faraj and Hussain,2013)

- 1- The method of presentation (lecture): It is the method of teaching that depends on the faculty member delivering information to his students, while sometimes using the blackboard to organize and simplify some ideas.
- 2- The method of discussion and dialogue: It is the method of teaching that depends on the faculty member managing the dialogue during the teaching situation in order to reach new data or information, and the controls of this method include:
 - 1- The questions should be appropriate to the objectives and the level of the students.
 - 2- The questions should be thought provoking.
 - 3- The questions should be gradual in difficulty and straightforward.
 - 4- All students should participate in the discussion and be given the opportunity to discuss with each other.
- 3- The inductive method: one of the forms of inference where the course of teaching is from the particulars to the whole and induction is a process by which generalizations are reached by studying a sufficient number of individual cases and then deducing the characteristic that they share.
- 4- The method of presentation or scientific statement: It is when the faculty member demonstrates the skills or movements that are the subject of learning in front of the students. This performance may be repeated and then some students are asked to repeat the performance. To ensure the success of the presentation in achieving its goals, the following basic conditions must be met:
 - 1- Presenting the presentation in an interesting way to ensure the attention of the students before starting to perform the skills.
 - 2- Involve the students periodically in all or some of the presentation.
 - 3- Organizing the students in the show place in a way that allows each of them to see and hear clearly what is going on during the show.

4. The practical side:

4.1 Research data:

The research data was collected through a questionnaire form prepared for this purpose and distributed to a number of faculty members in one of the colleges of the University of Fallujah, and the numbers are as shown in table (1). The questionnaire questions (as illustrated in Appendix No. (1)), amounting to (25) questions, were formulated in proportion to achieving the goal of the research, and were presented to a group of (7) experts and arbitrators, and the observations received from them were taken into account. Whereas, the questions that obtained an agreement (80%) or more of expert opinions on their validity were maintained, and the questions that obtained an agreement percentage of less than (80%) were modified, deleted or changed. Moreover, for obtaining more accurate data, an experimental sample was adopted, where the questionnaire form was distributed to a small sample of teachers, and the process was repeated after a week, and the answers were largely identical. The number of completed forms reached (40) forms after excluding two incomplete forms. The questionnaire data was classified as follows: Table No. (2) shows the answers of the research sample about the questions of the questionnaire Through the answers of the faculty members to the questions of the questionnaire can note that there is a discrepancy in the answers about the questions, so it is necessary to search for the reasons that led to this and the possibility of finding solutions to them, and in order to be able to distinguish between the teaching methods used by the faculty members, which would simplify scientific matters for students to understand and comprehend it, the methods used by the study sample were identified in two of the four methods presented to them. Where, the answers of the study sample indicated that (30) teachers use the method of recitation or lecture and (10) use the second method represented by the method of discussion and dialogue. As shown in table (2) the answers of the study sample were collected with respect to each of the methods used to identify the features of the method and the non-overlap of the methods used among them, and Table No. (3) Shows the answers of the study sample about the first method, while Table No. (4) represents the answers of the study sample about the second method.

4.2 Analysis and the results discussion:

For the purpose of knowing the differences between teaching methods, two types of quantitative analysis were adopted, the first is descriptive and is represented by the adoption of the Triple Likert scale, and the second is analytical using the analysis of variance (ANOVA).

The Triple Likert scale was adopted and the following weights were given to the answers:

Yes	3
To some extent	2
No	1

The statistical package of SPSS ready-made programs was used for the results shown in tables (5-6-7), where the arithmetic mean was found, and here is meant the weighted arithmetic mean, as well as the standard deviation, percentage, and t-test, as well as finding the direction of the sample, which is extracted by:

$$\text{Sample direction} = \frac{\text{greater degree} - \text{smaller degree}}{\text{greater degree}} = \frac{3-1}{3} = \frac{2}{3} = 0.67$$

And the boundaries between each level of the answer will be as follows;

No	To some extent	Yes
1.66-1	2.33-1.67	3-2.34

By applying the Triple Likert scale, table. (5) shows the results of the Triple Likert's analysis of the opinions of all the members of the sample, which are (40) from the point of view of the sample members, where the questions came (20, 18, 10, 6, 5, 25, 22, 8, 3) respectively towards a sample Yes, with averages ranging between (2.80) and (2.38), and with percentages ranging from 93.33% to 79.17%.

While the questions (7, 13, 23, 4, 14, 15, 16, 17, 12, 2, 1, 11, 24, 9, 19) respectively came in a somewhat similar direction, with averages ranging between (2.33) and (1.68), and percentages ranging between 77.50 % to 55.83%.

While question No. (21) came in the same direction as No, with an average of (1.38) and a percentage of 45.83%.

With regard to Table (6), which represents the results of Likert's triple analysis of the sample members who support the first method, and the results, were;

The questions (9, 10, 6, 8, 3, 25, 22, 5) came in the same direction, yes, with averages ranging between (2.83) and (2.40), and percentages that ranged between 94.44% and 80%, while the questions came (23, 13, 4, 14, 15, 16, 11, 2, 19, 1, 24, 17, 12, 20, 18) respectively, in the same direction to some extent, with averages ranging between (2.33) and (1.70), and percentages ranging from 77.78% to 56.67%.

The questions (21.7) came in the same direction, no, with averages ranging between (1.43) and (1.33), and percentages of 47.78% and 44.44%.

As for the results of table (7), which represents the results of the triple Lakerd analysis of the opinions of the sample members who support the second method of education, the questions came (12, 7, 25, 18, 16, 15, 22, 20, 1, 24, 6, 2, 19, 11, 8, 3) respectively, in the same direction, yes, with averages ranging between (3) and (2.40), and percentages ranging from 100% to 80%.

While the questions (4, 13, 9, 23, 17, 14, 10, 5) respectively, came in a somewhat similar direction, with averages ranging between (2.30) and (1.70), and percentages ranging from 76% to 56.67%.

And for the question no. (21) Came in the same direction, no, with an average of (1.50) and

The analysis of variance depends on finding the total sum of squares, the sum of squares between the methods and the sum squares of error, where (Total Sum of Squares) (SST) represents the total sum of squares and (Sum of squares due to Regression) (SSB) represents the sum of squares between the methods and (Sum of squares due to Error) (SSE) represents the sum squares of the error and its results can be obtained according to the following equations: Sum of squares =

$$SST = \sum X_i^2 - C$$

$$C = (\sum X_i)^2 / n$$

With a degree of freedom (n - 1)

Sum of squares between methods

$$SSB = (\sum B_i^2 / n_i) - C$$

With a degree of freedom (number of methods - 1)

Sum squares of the error (SSE)

$$SSE = SST - SSB$$

By adopting the data from table no. (3), the sums of squares were found according to the above equations:

$$SST = (12)^2 + (11)^2 + (22)^2 + \dots + (7)^2 + (8)^2 \dots - C$$

$$C = (507)^2 / 50 = 2014.02 - C [(353)^2 + (154)^2] SSB = 1/25 = 792.02$$

$$SSE = 2014.02 - 792.02 = 1222$$

Table No. (8) Variance analysis

Through the above table analysis of variance and by testing the calculated (F) value, which is equal to (31.11) with the tabulated (F) value (4.04) for the significance level (0.05), it becomes clear that there are significant differences between the two methods used, and this proves the first hypothesis of the research.

5. Conclusions and Recommendations:

The research reached a number of conclusions and recommendations, which are:

- 1- There are significant differences between the different teaching methods used by faculty members.
- 2- The answers of the research sample and their identification of two methods does not mean the use of these methods only, that is, the specialization has a role in determining the method of teaching.
- 3- Some of the questionnaire's items scored high, which confirms the faculty member's ability to do so, while other items got weak marks, which necessitates a search for the reasons and the possibility of addressing them.
- 4- Adopting the research method on a wider sample with other specializations such as medicine and engineering to identify the trends of faculty members in their use of teaching methods.
- 5- Be careful in choosing the teaching method appropriate to the nature of the scientific material presented. Which mean study of the relationship between the nature of the material and the appropriate method of teaching.
- 6- The need for university administrations and planning authorities to take an active role in clarifying teaching methods and the differences between them to remove the ambiguity that exists among some teachers and the teaching methods do not overlap among them.

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