Constructivist Learning Practices in First-Year Undergraduate Programs in the Light of Key Performance Indicators of Quality

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Abstract

The purpose of this study is to recognize constructivist learning practices as one of the strategies that promote learners' effective participation in the learning process. The research questionnaire consists of four domains, each of which has elements that outline the principles of constructivist learning strategies. By applying the questionnaire to a sample representative of the first-year undergraduate learning program, the research questionnaire was also applied to a sample of teachers in various fields. The current study uses the analytical descriptive approach, specifically to reveal the reality of using the constructive learning strategy, this is because the curriculum is one of the most appropriate for the nature and objectives of the present study.

A closed questionnaire was prepared to achieve the study's objectives and determine its results. The questionnaire includes four main domains of the constructive learning strategy with a view to identifying the reality of their use from the point of view of faculty members and students in the first university year programs (Health, Engineering, Science) at Imam Abdulrahman bin Faisal University for the university year 2021/2022. (30) items under the four domains related to the use of the constructive learning strategy.

The study leads to the following conclusions: In the study of the departmental sample, constructive learning strategies are frequently used in classroom teaching, as evidenced by the analysis and calculation of mathematical averages. Standard deviations of teacher and student responses to learning tools. Despite the differences in teacher and student perspectives, the average is still a function of applying most of the principles of constructive learning strategies. Statistical results show that the compatibility between the teacher sample and the student sample, the first area (planning lectures according to constructive learning strategies) is more applicable, indicating that teachers are interested in planning lectures according to one of the following principles of planning constructive learning strategies.

Fourth, the research sample also agreed that the organization of the classroom does not meet the requirements of constructive learning strategies (organize the classroom according to constructive learning strategies); this highlights the need to provide teachers with an appropriate educational environment to adopt constructive learning strategies, which makes a significant contribution to learner-centred learning. The findings also showed that there were statistically significant differences (0.01) in the mean responses of teachers regarding the level of use of constructivist learning strategies according to their educational field.

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1. Introduction

Today, quality management is a necessary aspect of achieving better with global variables and developments. The concept of quality refers to a culture of engagement with applied institutions not only to ensure the quality of outputs but also to ensure the quality of all input elements, and to achieve the goals set as efficiently as possible (Reham, 2012, 3)

Quality is defined as the set of outstanding organizational principles, policies, and structures using all available material and human resources for the purpose of improving performance and services provided with the highest performance standards and verifying that performance and services provided conform to target standards. (Davis & Ringsted, 2006, 305-315) Quality in education is the driving force required to effectively drive the educational system to achieve its goals and mission that society and various parties involved in education want.

Quality standards in education mean those specifications and conditions that should be met in the education system, namely the quality of management, acceptance policy, educational programs in terms of (their objectives, teaching methods, evaluation, and testing system), teachers' quality, buildings, and physical equipment so that they lead to quality outputs and serve the needs of students.

In recent years, educational institutions, especially universities, have become increasingly interested in the subject of comprehensive quality management in all their activities and effectiveness to obtain a highly efficient exit, whether an excellent producer or student. A key aspect of quality assurance that needs to be addressed and developed is teaching methods.

Teaching methods have a prominent position in the teaching and learning process, and this calls for our attention and development. Recognizing the availability of its comprehensive quality requirements, as their quality and efficiency contribute to the efficiency of the educational process and contribute to the achievement of part of its overall quality requirements; In addition, modern teaching methods and methods interfere with the teacher's success and failure to achieve his educational mission. teaching methods have been strengthened by modern methods based on the use of e-learning and its techniques, methods, and means for the purpose of taking advantage of the advantages of these techniques to develop students' learning, increase their level of achievement and develop their attitudes. (Saleh, 2006).

1.1 Statement of the problem:

The quality of higher education represents the most important challenge for the educational systems of all countries in the world, especially as reports from global organizations highlight the need to rethink the philosophy of higher education and emphasize the importance of setting higher-quality educational standards. This will lead to the development of human personality in their society and support their national culture.

Some studies have indicated the effective use of constructive learning strategies Surhani (2014), Abdullah and Muhsabeb (2014) Al-Shammari (2014), Amina Al-Hassan's study, and Al-Barakat (2013), Deng et al., 2011) Al-Naimi Study (2004), Customer (2013), Students (2013), Zu 'bi (2011), as many studies have shown in the knowledge and practice of constructive learning strategies, with some noting that teachers' knowledge and practice of constructive theory is as poor as in Al-Harbi, 2004; Al-Wahr, 2002, Al-Mehtab, 2005), as some studies have shown an acceptable level of use of constructive theory in teaching, including (Al-Shibli, 2011; Al-Muhtaseb, 2009), and some studies indicated a high level of knowledge and practice of constructive theory, including (Ayash, 2013, Wang & Ha 2012), other studies have also shown a difference in the practice level of constructive theory principles, including the study of Mohammed al-Hajili (2009) To the researcher's knowledge, previous studies have not addressed the reality of using a

constructive learning strategy at university level, nor has its use been linked as a strategy that can contribute to the achievement of quality standards.

The first stage of students' admission to university is a turning point in their future university life; Students choose various disciplines. That phase is therefore essential in supporting and consolidating the principles of self-learning and learner-centered learning. Students can integrate with their future specialties. Some may believe that teaching scientific curricula, especially (science and mathematics), is contrary to constructive knowledge or constructive learning, where knowledge is valid facts, principles, theories, and laws. This is not contrary to the idea of constructivism, which emphasizes that the learner builds his own conclusions, knowledge, and concepts (Drew, 2003).

From this standpoint and to achieve quality teaching, learning, and transition from teacher-centric to learner-centered learning; It is necessary to look for teaching and learning methods that encourage the learner's integration and discover his or her energies during the learning process. Constructive learning is undoubtedly one of the most important methods that encourage a learner to become the center of the learning process. In view of this, the current study attempts to answer the following overall research question:

What is using a Constructivist Learning Practices in first-year undergraduate programs in the light of key performance indicators of quality from the perspective of teachers and students?

This overall question can be divided to the following sub-research questions:

1. To what level do faculty use a constructive learning strategy from the perspective of faculty members and students?

1.   Does the level of faculty's use of the constructive learning strategy vary from male and female students?

2.   Does the level of faculty's use of constructive learning strategy vary according to their academic grades, experience, gender, and type of course?

3.   Does the level of faculty use of the constructive learning strategy vary from the student's point of view to the course?

1.2 The objectives of the study:

-       Recognize the degree to which faculty members use the constructive learning strategy from the perspective of students and teachers.

-       Recognize the degree to which faculty members use a constructive learning strategy according to their academic grades, experience, specialization, sex, and rapporteur.

1.3 The importance of the study:

The importance of the present study comes from the importance of the topic on which it touched. This study was concerned with identifying the reality of using the constructive learning strategy as one of the teaching models that achieve the quality of teaching and learning, from the point of view of teachers and students; In order to benefit from these teaching models, which do learner-centric learning and achieve quality education and learning. The present study has theoretical and practical significance:

-       Linking the theoretical study of the constructive learning strategy with its practical application.

-       Emphasize the importance of the transition from teacher-centric to learner-centric learning to achieve quality education and learning.

- Provide teachers with the reality of using one of the modern teaching methods to achieve the quality of teaching and learning.

- Provide decision-makers with study results to address problems that prevent the use of modern teaching methods.

1.4 Definition of basic term:

Constructive theory: A theory that learning is not done through the machine transfer of knowledge from teacher to learner, but by building a learner's meaning for what he learns himself based on his experience and past knowledge.

Constructive Learning Strategy: This study's constructive learning strategy means activities, methods, and procedures that enable the learner during the lecture to build his or her own knowledge and emphasize meaning-based learning so that the learner is the basis of educational science and actively participates in all stages of learning.

Quality: The present study is intended as "the process of documenting programs and procedures and applying regulations, regulations, and directives with a view to achieving a qualitative shift in the educational process and upgrading students in all aspects of the physical, mental, spiritual and social aspects by mastering and managing the work of educational processes" (Abdul Rauf, Tariq, 2014).

Quality of Teaching: This study is intended to the degree to which teaching practices, procedures, evaluation methods, and outcomes conform to the constructive learning strategy as one of the teaching strategies that make the learner the focus of the educational process, in line with universally recognized teaching quality standards.

2. Literature Review

The quality of a university professor is a key factor in the quality of the educational process and the quality of learning outcomes. The professor has a positive impact on students' learning and development through a combination of academic and applied skills, including content mastery, the leadership of a wide range of educational skills, and interaction skills. (EPE Research Center ,2011)

One of the most famous reports of the United Nations educational commissions, known as the International Committee of Education in the Twenty-first Century, emphasized that the pillars of knowledge to be adopted by the contemporary education institution's mission are four to:

- learn how to learn.

- learn how to think.

- learn how to work.

- learn how to live with others.

in order to achieve the quality of teaching, which in turn is a key pivot to the quality of education; Teaching strategies must be used to help students build knowledge themselves and be integrated into the educational process so that they have increased their self-learning abilities, and constructiveness views learning as an active building of knowledge by a learner influenced to varying degrees by interactions with the environment, communication with others and the learner's own cognitive processes.

Constructive learning involves focusing on the importance of processes, sharing different perspectives, and emphasizing problem-solving (Brewer & Daane, 2002).

UNESCO explained that the quality of a university professor means having a set of skills and standards related to curricula, students and others related to the planning of the

educational process, class management, student evaluation, and outstanding human relations. The roles of a university professor according to quality standards.

The National Evaluation and Academic Accreditation Authority (NCAAA) in Saudi Arabia has set several criteria that must be observed for the quality of educational programs and institutions: (National Evaluation and Academic Accreditation Authority, 2023)

• The curriculum includes comprehensive curricular and co-curricular activities that contribute to the achievement of course learning outcomes.

• Teaching strategies are student-centered and promote active learning.

• Teaching strategies and assessment methods in the program vary according to type and level, improving research skills and ensuring students acquire higher cognitive thinking and self-learning abilities.

• At the start of each course, students are provided with comprehensive information about the course, including learning outcomes, teaching strategies, assessment methods and dates, and what is expected of them while studying the course.

• Regularly evaluate and report on courses to ensure the effectiveness of teaching strategies and assessment methods.

• The program implements clear and public procedures to verify the quality and validity of assessment methods (such as their specification, diversity and comprehensiveness of learning outcome coverage, accuracy of grade distribution and marking) and to ensure student achievement levels.

• Use effective procedures to check that students' work and assignments are their own.

• Provide timely feedback to students on their performance and assessment results to enable them to improve their performance.

• The program has classrooms and facilities that suit their needs.

The constructivism strategy has emerged as a result of the shift of focus from external factors influencing students' learning to internal factors affecting such learning s mind when subjected to educational attitudes such as past knowledge, a preliminary understanding of concepts, and the ability to remember and process information and its motivation for learning and his thinking patterns and everything that makes his learning meaningful, That is, focus on how to shape the meanings of concepts in a learner in a cognitive construction that integrates with his past experiences and emerges in a new image. (Olive, 2007, 22-31, Haider, 2004, 76)

The constructive theory emphasizes that knowledge is personal and that meaning can be built by the individual through experiential learning is an individual and social process in which learners build meaning, impacted by interaction with past knowledge and new learning situations, and therefore the curriculum is no longer a document of important information, however, under construction, it has become a set of learning events under which students and teachers are involved in discussing content and building meaning. (Arndes, 2005, 21-22)

The study "Vermette & Others" indicates that constructive theory is linked to Dewey,1933 educational philosophy, where it refocuses its vision of the learning process, and constructive learning theory is related to the concept of learning at Vygotsky,1962 Piaget,1963 Bruner, 1968 Gardner, 1983.

The constructive theory is not a theory of teaching, it is a theory of knowledge and learning, It is based on a combination of the prevailing work in cognitive psychology and

philosophy, and anthropology, in the view of which knowledge is developmental, social, and cultural learning is a self-regulated process for the resolution of internal cognitive conflicts, which is often shown through sensory experience, reflection, and reflection education ", although construction is not a theory of teaching, it has become the basis of many contemporary educational terminologies and has diverse educational applications in schools. (Jaber, 2006, 240)

The constructive theory is concerned with what takes place within a learner's mind when acquiring knowledge, the extent to which certain variables and factors influence their acquisition of such knowledge such as prior learner information, perceptions, and ability to process information, motivation, attention and thinking patterns, and everything that makes learning meaningful. Hence, we note that the constructive theory of cognitive theory confirms that: (Fahmi and Abd al-Saboor, 2001 al-Wahr, 2002, al-Naimi, 2004)

- Learning is a change in an individual's cognitive structure resulting from their interaction with real data.

- The learner builds his knowledge individually based on his past experiences.

- Meaningful learning depends on personal experience.

- Information is more likely to be acquired, retained, and retrieved in the future if it is built by the learner and related to him or her, and centered around his or her experience.

- Scientific knowledge is beneficial in the sense that it helps the individual to interpret his or her life experiences.

- Learning is not a cumulative process; it is a revolutionary active process and its purpose.

- Learning needs a problem to be discussed and opinions shared.

More specifically, builders emphasize meaning-based learning, that is, understanding-based learning. A learner uses his or her information and knowledge to build the new knowledge he or she is convinced of.

Students should therefore be encouraged to build their own knowledge and the teacher should help them to make their own ideas clear, provide them with events that challenge these ideas and encourage the production of multiple interpretations and provide them with opportunities to use these ideas in multiple situations. Students should also be encouraged to carry out activities so that meaningful learning takes place, and the teacher's role is not limited to the transfer of knowledge but must stimulate and develop it and facilitate and guide the learning process. From a constructive perspective, the teacher facilitates and helps build knowledge. He plans and organizes the learning environment and directs and guides students to build meaningful learning for them. (Maximus, 2003, 51).

The foundations of construction also emphasize learning rather than education and encourage research and investigation. In addition, construction encourages learners to engage in discussion with or among teachers and is based on collaborative learning, providing learners with appropriate opportunities to build new knowledge, and understanding from real-life experiences (Mona Abdul Sabor, 2004, 99:100).

The constructivism entrance came to emphasize the importance of groups that connect learners together, make them interact face-to-face, and negotiate to build the meaning themselves. The study By" Gunderson & Moore" confirms that there are a variety of ways to build groups in classrooms and that students learn better in terms of understanding and building knowledge if they work in groups, and take responsibility for their learning. (Gunderson & Moore , 2008 ,34-45)

The 'Green' study describes the construction classroom based on Social Constructivism as a working cell for learners consisting of collaborative groups, including one that

examines the dimensions of solving the problem and one whose members are engaged to understand the problem, and a third interacting with the teacher and a fourth looking at the computer or other media, Fifth, a student provides assistance to others, thus transforming the classroom into an interactive society, Students participate as members of each of them a role in reaching the fulfillment of the tasks required of them and thus contribute to the development and building of knowledge and even the production of knowledge. (Green & Gredler 2002,53 -70) .

There are several studies on the use of a constructive learning strategy in various respects. The results of study Eman Issa Galy (2022) showed the effectiveness of using the constructivism learning model to teach the manual and technical skills course in developing manual skills and the attitudes towards art education among students of the second year, Basic Education Division, College of Education. And the study of Heba Ghanem (2021) showed there are statistically significant differences at the level of (0.05) between the mean scores of the students of the control group and the experimental group in the post application of the scale of attitudes towards psychology in Favor of the experimental group. That the size of the effect of the model based on constructive learning was great in the development of each of emotional intelligence, and the trend towards psychology, where the value of the effect size for them was (0.78) and (0.73), respectively.

Furthermore, the study by Fozia Khamis (2021) showed that the proposed training program based on the constructive learning model is effective in developing authentic assessments of science teachers, as the results of the study showed statistical significance at the level of significance (α ≤ 0.05) significant difference. Al- Haomada ,Mohamed (2021) The results show that the practice level of constructivist learning reading attitudes is moderate; this means that you are still far from a high level of practice qualification. The statistical mean values of the practice levels of constructivist teaching in reading classes for the three first-year students varied between 1.65 and 1.94, with an overall scale mean of 1.82, indicating a moderate level of practice. The priority is the area of instruction in which students engage, followed by constructivist assessment. Still, using the environment and the local community domain comes last. To this end, the results indicate that constructivist learning practices are yet to take root or be practiced in local communities. The study of Al -Roues ,Abed-Alaziz (2016) showed that teachers who responded to the questionnaire believed that mathematics teachers should sometimes apply constructivist learning principles in mathematics learning and teaching, while general mathematics teachers who practiced the principles supported this view , which supports constructivist learning 2,422 according to the five-fold Likert scale, which is "rare" at each level. Regarding the differences between teachers' perceptions and practices of applying constructivist learning principles in mathematics learning and teaching, the results indicate that teachers' practices that support constructivist learning principles in mathematics teaching are not as much as their knowledge of these principles. Results indicated that no significant differences were found between males and females in implementing principles that support constructivist learning. While the study of Amal Ayyash and Mohammed al-Absi study (2013) showed that teachers' level of knowledge of the constructive learning strategy was high and their level of practice was medium and that differences between science teachers' estimates and mathematics teachers' estimates of their level of knowledge and practice of constructive theory were statistically irrelevant.

The study of (Ryan, 2011) aimed at identifying the practicing of mathematics teachers the principals of constructive teaching. The results of the study showed that the degree of mathematics teachers' practice of constructive teaching was medium level and that there were no statistically significant differences between the averages of practice according to the gender variable, And the study of Abdullah al-Shibli et al. (2011) aimed at identifying the degree of science teachers' employment in constructive theory. The study showed that

science teachers were employed at an acceptable degree of constructive teaching and recommended that teachers should be trained in the principles of constructive theory while teaching science courses .

The study of (Deng et al., 2011), which was aimed at studying the impact of constructive educational activities on students' acquisition of conceptual construction and their beyond-cognitive abilities, consisting of a sample study of (96) 11th graders in China distributed to two experimental and control groups, and the results of the study showed that the experimental group learned through constructive learning in the formation of a strong conceptual building in chemistry where the proportion of the impact of the constructive teaching method was equal (0.67) A high percentage indicates a strong impact of constructive learning in the formation of conceptual construction in chemistry.

3. Methods:

The current study uses the analytical descriptive approach, specifically to reveal the reality of using the constructive learning strategy, this is because the curriculum is one of the most appropriate for the nature and objectives of the present study. The approach used does not stand at the point of description but goes beyond the stage of interpreting and analyzing information and drawing indications as to the extent to which the constructive learning strategy is used and what problems are encountered in its application at the University.

Research community: The study community is one of the 4,000 students in the first academic year (Health, Engineering, Science) at Imam Abdulrahman bin Faisal University for the 2021/2022 university year and one of the 120 faculty members.

Research sample: The study sample consisted of 590 students in the three tracks (Science, Engineering, and Health) of the students' and students' branches, and the study sample consisted of fifty-one faculty members.

Search Tool

A closed questionnaire was prepared to achieve the study's objectives and determine its results. The questionnaire includes four main domains of the constructive learning strategy with a view to identifying the reality of their use from the point of view of faculty members and students in the first university year programs (Health, Engineering, Science) at Imam Abdulrahman Bin Faisal University for the university year 2021/2022. (30) items under the four domains related to the use of the constructive learning strategy as follows:

Table (1) The Domain and items

Domain	Items
First: Planning the lecture according to the constructive learning strategy	6
Second: Organization of the classroom in accordance with the constructive learning strategy	8
Third: Teaching according to the constructive learning strategy	7
Fourth: Evaluation in accordance with the strategy of constructive learning	9

The items of the questionnaire are answered by selecting one of five answers (always, often, sometimes, rarely, never)

Validity and stability of the search tool

- Stability

The stability was calculated in three ways: Cronbach Alpha, the halftime segmentation through "Spearman-Brown Coefficient", and the internal consistency of all the resolution phrases: the "alpha" constant coefficient was "0.92" and the halftime constant "0.84".

- The validity of internal consistency

Validity was calculated by establishing the correlation factor between each of the terms of the identification and the overall degree of the questionnaire, as shown in the following table:

Table (2): Internal consistency of the questionnaire

Items	Correlation	Items	Correlation	Items	Correlation	Items	Correlation
1	0.48**	9	0.51**	17	0.80**	25	0.73**
2	0.51**	10	0.71**	18	0.73**	26	0.73**
3	0.72**	11	0.67**	19	0.64**	27	0.75**
4	0.72**	12	0.66**	20	0.60**	28	0.70**
5	0.73**	13	0.69**	21	0.53**	29	0.74**
6	0.55**	14	0.82**	22	0.72**	30	0.66**
7	0.45**	15	0.65**	23	0.54**		
8	0.72**	16	0.71**	24	0.64**		

Statistical Analysis and Processing

The researcher used the statistical program (SPSS) to process the study's data and answer its questions.

Results and Discussion:

- The first question: " To what the level do faculty use a constructive learning strategy from the perspective of faculty members and students? " To answer this question, computational averages, and standard deviations of the responses of the study sample members of the faculty and students were calculated on the study tool.

Table (3) Group Statistics

Domain	Faculty			Students Male			Students Female		
	averages	standard deviations	rank	averages	standard deviations	rank	averages	standard deviations	rank
1	4.22	0.429	1	3.34	0.939	1	3.75	.698	1
2	4.06	0.608	4	2.90	0.994	4	3.30	.878	4
3	4.06	0.528	3	3.33	0.937	2	3.74	.682	2
4	4.09	0.490	2	3.27	0.948	3	3.70	.663	3

The previous table shows the first domain , which provides for (planning the lecture according to the constructive learning strategy) has the highest average calculation and its amount (4.22), (3.76) from the point of view of faculty members and students respectively, the result of the second rank varied between that of faculty members and

students; Where came the fourth axis (calendar according to the strategy of constructive learning) From the point of view of the faculty in second place and on average (4.1) The third axis (teaching in accordance with the constructive learning strategy) Second, from the student's point of view and averaging 3.75 s view, while the fourth third was from the student's point of view. The views of faculty members and students were agreed on the second axis (structuring the classroom according to the constructive learning strategy), which ranked fourth with an average arithmetic of 4.1 and 2.9 from the viewpoint of faculty members and students respectively.

The following table shows the averages and standard deviations of the responses of the sample to the study tool.

Table (4) Group Statistics

Item	Faculty			Students Male			Students Female		
	averages	standard deviations	rank	averages	standard deviations	rank	averages	standard deviations	rank
1- Ask Questions to diagnose students' Pre-knowledge as a prerequisite for building meaning.	4.47	.644	2	3.50	1.13	3	3.76	1.057	11
2- Design various situations to correct students misguided pre-knowledge.	4.25	.659	9	3.48	1.17	4	3.72	.931	14
3-Use various teaching methods to help students learn and forms their own knowledge.	4.29	.729	7	3.33	1.18	12	3.94	.979	3
4-Offers direct experience situations associated with students' lives and suits their abilities.	4.39	.493	5	3.68	1.21	1	4.05	1.024	1
5-The plans include tasks that require students to observe, investigate, explore, solve problems, and role play.	3.90	.831	22	3.11	1.22	22	3.72	1.075	13
6-Plan performance tasks that do teamwork and confirm interdependence among students.	4.02	.812	19	2.94	1.41	26	3.36	1.164	26
7-Divide students in the classroom into heterogeneous working groups periodically.	3.12	1.227	30	2.35	1.33	30	2.51	1.165	30
8-Provide a working environment for groups by clarifying the criteria and rules of teamwork	3.69	1.049	27	2.65	1.33	28	3.03	1.208	29
9-Provide a realistic learning environment that feels free and drives students to learn.	4.41	.606	4	3.32	1.26	13	3.83	1.065	7
10-The classroom is transformed into a laboratory were students practice learning processes by discovery.	3.76	.815	25	2.60	1.24	29	3.24	1.299	27
11-Provides an active learning environment in which students are trained to use thinking and brainstorming skills	4.04	.824	17	3.06	1.25	24	3.55	1.096	22
12-It allows a loving, attractive, and exciting climate for students in the classroom.	4.45	.757	3	3.30	1.23	14	3.73	1.098	12
13- The classroom is organized so that it helps students build their own knowledge.	3.73	.723	26	2.99	1.24	25	3.37	1.157	20
14-The classroom provides a working environment that develops students' attitudes to work in a team.	3.49	.946	29	2.94	1.26	27	3.20	1.275	28

Item	Faculty			Students Male			Students Female		
15-Apply teaching methods to allow students to participate and learn collaboratively.	4.22	.730	11	3.47	1.17	5	3.79	1.076	10
16-Provide students with experienced attitudes that they go through, interact with, and learn from themselves	4.08	.744	16	3.34	1.12	9	3.85	1.034	6
17-Provide students with opportunities to solve problems themselves and do not provide them with ready solutions.	3.80	.825	24	3.22	1.192	19	3.52	1.115	23
18-Exercises the role of leader, mentor, and instructor to students as members of learning teams.	4.12	.791	14	3.35	1.239	8	3.81	1.000	9
19-Provide students with opportunities to discover their own knowledge without providing pre-prepared information	3.51	.903	28	3.06	1.206	23	3.43	1.092	18
20-Encourages students to dialogue and express their opinions that reveal their cognitive assumptions.	4.51	.731	1	3.57	1.215	2	3.97	1.049	2
21-You ask open-ended questions that inspire students' thinking and help engage and understand	4.24	.815	10	3.36	1.215	6	3.87	1.001	5
22-Assess students' past knowledge to build on new learning.	4.37	.799	6	3.33	1.189	10	3.90	.853	4
23-Use constructive assessment to correct students' cognitive structures.	4.12	.659	13	3.29	1.089	16	3.69	.928	16
24-Indicates performance criteria before they are evaluated according to them.	3.96	.774	21	3.25	1.158	18	3.72	.911	15
25-The assessment focuses more on the extent of learning than on achievement.	4.16	.809	12	3.35	1.198	7	3.66	1.038	18
26-See the assessment as an opportunity to build a new understanding in students.	3.98	.948	20	3.29	1.202	15	3.65	.993	20

Item	Faculty			Students Male			Students Female		
	averages	standard deviations	rank	averages	standard deviations	rank	averages	standard deviations	rank
27-Apply various methods to evaluate students' performance and ability to convey the impact of learning.	4.10	.700	15	3.26	1.158	17	3.67	.947	17
28-Apply different assessment methods with learning (before, during, and after) learning processes	4.04	.747	18	3.20	1.093	20	3.66	.901	19
29-Help students make judgments and make decisions by training them on peer -review.	3.88	.816	23	3.12	1.289	21	3.56	1.074	21
30-Apply summative evaluation focusing on learning without focusing on remembering.	4.27	.777	8	3.33	1.290	11	3.81	1.009	8

The previous table shows the faculty's point of view that the item-20, (Encourages students to dialogue and express their opinions that reveal their cognitive assumptions. This item got the highest average with (4.51) By deviation (.731) from the faculty's point

of view, while the item (1) Ask Questions to diagnose students' Pre-knowledge as a prerequisite for building meaning came in the second level; and the item (7) Divide students in the classroom into heterogeneous working groups periodically, came in the last level. In the other hand from the students' point of view that the item (4) Offers direct experience situations associated with students' lives and suits their abilities, with the highest average (3.8), (4) for male and female students respectively, while the item (7) Divide students in the classroom into heterogeneous working groups periodically; It came in last level from the point of view of students.

The results of the study showed that the faculties often employ a constructive learning strategy during lectures, as evidenced by the results obtained from the analysis, averages and standard deviations of faculty and student responses to the study tool While there is a discrepancy between faculty members' and students' perspectives, the average remains a function of applying most of the constructive learning strategy. (Ayash, 2013, Wang & Ha 2012, Shibli, 2011).

The high average is due to the faculty's attempt to apply modern teaching methods and the diversity of lectures in response to recent trends in the application of strategies that drive the learner to be an active participant in educational science.

The statistical results showed agreement between the teacher sample and the student sample in which the first area was used most frequently (lesson planning according to a constructive learning strategy), suggesting that teachers are interested in planning a lesson using one of the constructive learning zone strategies. The study sample also confirmed that the teaching organization does not meet the requirements of a constructive learning strategy. This highlights the need to provide an appropriate learning environment for teachers to adopt a constructive learning strategy that makes an important contribution to student learning. centered learning.

The results of the study also showed a different perspective for students and faculty members on the extent to which some steps of the constructive learning strategy have been applied, as item (20) of which relates to encouraging students to dialogue and express their opinions that reveal their cognitive assumptions; it came in the first level from the faculty's point of view while From the student's point of view the item (4), which relates to the teacher offers direct experience situations associated with students' lives and suits their abilities, it came in the first level .And the sample study agreed that the application of the division of students in the classroom into periodically heterogeneous working groups would decrease; Where it came last level.

Results and Discussion of the second question:

The second question: " Does the level of faculty's use of the constructive learning strategy vary from male and female students? To answer this question; T-Test has been used to reveal the difference between students' average responses, the following table shows this.

Table (5) One-Sample Statistics

T-Test	Students	number	average	Standard deviations	Sig.
	Male	313	3.2134	0.85203	0.01**
	Female	301	3.6294	0.62166	

The previous table indicates that there are statistically significant differences at the level (0.01) between students' average response about the application level of constructive learning strategy. The results showed average of student female (3.629) while the average of students' male (3.21); Thus, differences between averages in favor of female faculty members using a constructive learning strategy are greater than male faculty members. This may be due to female faculty members' interest in using constructive learning practices, which are primarily focused on the constructive learning strategy. The results of

this study vary with studies (Al-Wahr, 2002; Barakat, 2002; Ryan, 2011), who noted that there were no differences between male and female teachers in the knowledge and practice of constructive theory.

Results and Discussion of the third question:

The third question " Does the level of faculty's use of constructive learning strategy vary according to their academic rank, experience, gender, and type of course? To answer this question; T-Test has been used to detect the difference between teachers' average response in different gender (male, female) and used one-way analysis of variance (ANOVA)in both academic rank, experience, and type of course.

Table (6) One-Sample Statistics

T-Test	Gender	number	average	Standard deviations	Sig.
	Male	26	4.0313	0.37346	0.073
	Female	25	4.0812	0.52241	

The previous table indicates that there are no statistically significant differences between teachers' average response by gender in the degree of application of the constructive learning strategy, with average male teachers (4.0313) and average female teachers (4.0812).

Table (7) Group Statistics

Experience	Number	Average	Standard deviations
1-5	26	4.0270	0.56789
6-10	8	4.1719	0.39792
11-15	10	4.0497	0.25568
more 16	7	4.0383	0.17191
Total	51	4.0558	0.44874

To determine the level of indication of differences between the averages of the responses of the members of the teaching staff to the tool according to the level of experience, a single variance analysis was used as shown in the following table:

Table (8) Group Statistics (ANOVA)

test	Sum square	df	variance	F	Sig.
Between groups	0.132	3	0.044		
Within groups	9.937	47	0.211	0.208	0.890
Total	10.068	50			

The previous table indicates that there are no statistically significant differences between teachers' average response according to their experience in the level of application of the constructive learning strategy.

Table (9) Group Statistics

Academic rank	Number	Average	Standard deviations
Lecture	15	4.0663	0.55706
Assistant Prof.	31	4.0609	0.43364
Associated Prof.	5	3.9919	0.12229
Total	51	4.0558	0.44874

To determine the level of indication of differences between the averages of the responses of the members of the teaching staff to the tool by academic degree, a single variance analysis was used as shown in the following table:

Table (10) Group Statistics (ANOVA)

	Sum square	df	variance	F	Sig.
Between groups	0.023	2	0.011	0.055	0.947
Within groups	10.045	48	0.209		
Total	10.068	50			

The previous table indicates that there are no statistically significant differences between teachers' average response according to their academic grades in the degree of application of the constructive learning strategy.

Table (11) Group Statistics

Course	Number	Average	Standard deviations
Math	9	4.05145	0.369805
Biology	6	3.7693	0.06137
Physics	8	4.06125	0.32579
Chemistry	8	4.1414	0.2436
Learning skills	11	4.02365	0.680675
Communication skills	9	4.15095	0.45594
Total	51	4.0558	0.44874

To determine the level of indication of differences between the averages of the responses of the members of the teaching staff to the tool according to the course he teaches, a single variance analysis has been used as shown in the following table:

Table (12) Group Statistics (ANOVA)

	Sum square	df	variance	F	Sig.
Between groups	1.993	11	0.181	0.875	0.571
Within groups	8.075	39	0.207		
Total	10.068	50			

The previous table indicates that there are no statistically significant differences between the average teacher's response according to the course they teach, in the degree of application of the constructive learning strategy.

The results of the study showed that there were statistically significant differences at the level (0.01) between the average teacher response according to their fields in the level of application of the constructive learning strategy, with average teachers for scientific courses (4.0341) while average teachers for educational courses (4.0893). This difference is attributable to teachers with educational qualifications being aware of the importance of applying the use of a constructive learning strategy that helps in the transition from teacher centered learning to Student centered learning, While the teachers with scientific courses (Physics, Chemistry, Mathematics, Biology) Their knowledge and experience in using a constructive learning strategy needs support to operationalize this pattern of learning and to achieve quality standards that emphasize the importance of the learner's

participation and help him or her to self-learn and practice scientific research skills during his or her studies, The National Qualifications Framework also emphasizes the need for learners to acquire creative and critical thinking skills; This will be achieved only by abandoning traditional teaching methods.

The results of the study also showed that there were no statistically significant differences between the average teachers' response by gender, experience, and academic rank in the level of application of the constructive learning strategy. The lack of statistically significant differences in the level of application of the constructive learning strategy is attributable to (gender, experience, academic rank) due to the level of academic development, and teachers' familiarity with methods that drive Student centered learning, and all faculty members are given the opportunity to attend university development programs and workshops.

Results and Discussion of the fourth question:

The fourth question " Does the level of faculty use of the constructive learning strategy vary from the student's point of view to the courses? "

to answer this question; one way a nova analysis has been used to identify the difference between students' average response to the type of course   which teachers apply the constructive learning strategy.

Table (13) Group Statistics

Course	Students Male			Students Female		
	Number	Mean	standard deviations	Number	Mean	standard deviations
Math	51	3.1676	0.66253	50	3.7167	0.54909
Biology	50	3.1674	0.94507	50	3.4002	0.69315
Physics	65	2.6936	0.61003	56	3.5016	0.45353
Chemistry	57	2.6992	0.63356	50	3.4291	0.73428
Learning skills	45	3.9660	0.59025	45	3.9306	0.56714
Communication skills	45	3.9660	0.59025	50	3.8436	0.52359
Total	313	3.2134	0.85203	301	3.6294	0.62166

To determine the level of indication of differences between the calculation averages of the responses of the sample's student members to the tool by course, a single variance analysis was used as shown in the following table:

Table (14) Group Statistics (ANOVA)

	Students Male					Students Female				
	Sum square	df	variance	F	Sig.	Sum square	df	variance	F	Sig.
Between groups	83.830	5	16.766	36.079	0.01	12.304	5	2.461	7.005	0.01
Within groups	142.666	307	0.465			103.634	295	0.351		
Total	226.496	312				115.937	300			

The previous table indicates that there are statistically significant differences at the level (0.01) between the average student response by course, for the benefit of faculty members who teach the course of learning, research, and communication skills.

Are there statistically significant differences in students' average responses to the degree to which teachers apply the constructive learning strategy in different disciplines, and the course?

The results of the study showed statistically significant differences at the level of (0.01) Between the average response of students about the degree of teachers' application of the constructive learning strategy in each specialty (Scientific, educational), the indicative level indicates that differences are in favor of faculty members with educational qualifications. The results of the study also showed statistically significant differences at the level (0.01) Among the average student response by course, for the benefit of faculty members who teach course learning, searching, and communication skills.

This difference is attributable to teachers with educational qualifications being aware of the importance of applying the use of a constructive learning strategy that helps in the transition from teacher-centric to learner-centric learning, unlike teachers with scientific disciplines (Physics, Chemistry, Mathematics, Biology) as their knowledge and experiences in using a constructive learning strategy need support to activate this style of learning.

Conclusion and Suggestions

Based on the results of the study, the researcher recommends:

- Enriching faculty members through programs and training courses to identify the constructive learning strategy as an important input for learner-centric learning.

- Provide faculty members with programs and applied workshops to implement the constructive learning strategy, so that they can apply it within the classrooms.

- Encourage faculty members to adopt methods that emphasize the learner's activity and effectiveness during the lecture, and that the teacher is directed and guided by the learning process

- Providing the appropriate educational environment for the implementation of the constructive learning strategy, especially the classrooms and laboratories.

- Encouraging faculty members from scientific disciplines to attend workshops and training programs to apply teaching methods and strategies that help the work of the mind and move from the teacher being the basis of the educational process to facilitating and guiding the learning process.

- Training programs and workshops must be compatible with the needs of the trainees, in addition to preparing workshops aimed at the groups that need to develop their teaching performance.

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