جامعة المستقبل
Mustaqbal University

Teaching and Learning Strategies and Assessment Methods

Prepared by

Standing Committee for Quality Assurance

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In the Name of Allah, the Most Gracious, the Most Merciful

Content

1. Introduction

Generally speaking, achieving quality in the field of improving university education means achieving distinguished practices of different standards and procedures with regard to sustainability and improvement. This process requires a system for quality management of academic processes based on the continuity of evaluation processes and the development as well as improving mechanisms of this system to reach to well-thought-out organized practices so as to ensure the achievement of learning outcomes at the level of courses and programs and their agreement with the National Qualifications Framework. Therefore, the Mustaqbal University felt the need to prepare an educational guide for methods of measurement and evaluation, characteristics of graduates, learning outcomes and teaching strategies, a guide that is a first step in developing methods of measurement and evaluation in its faculties. It is also a prerequisite for academic accreditation. It represents a guiding document, and a working mechanism for the evaluation processes of the targeted learning outcomes. To measure the extent to which the goals are achieved through tools designed according to a comprehensive vision of those outputs, and to be one of the most important controls applied by the university to ensure the quality of its outputs.

2. Terminologies

Academic year
It accounts for two main semesters and one summer semester (if any).

Semester:
It referred to a period of time that is not less than fifteen weeks during which the academic courses are studied (the registration and final examination periods are not included).

Summer semester:
It is considered as a period of time that does not exceed eight weeks (and does not include the registration and final exams periods) during which the period allocated for each course is doubled.

Level :

It stands for the study stage in accordance with the approved study plans.

Study plan:

It is a set of compulsory, elective and free courses, which constitute, from the total of their units, the graduation requirements that the student must pass in successfully in order to obtain the degree in the specified major.

Course:
It is study period within the approved study plan in each major (program); each course has a number, a code, a name, and a detailed description of its vocabulary that distinguish it in terms of content and level from other courses; it has a special file kept by the department for the purpose of follow-up, evaluation and development. Some courses may have pre-required subject/s or some other concurrent subject/s.

Study Unit:
It is a weekly theoretical lecture which takes more than fifty minutes, a clinical lesson which also takes more than fifty minutes, or a practical or field lesson which takes more than one hundred minutes.

Warning notice for the students

It is referred to the waring notice given to the student due to his/her weak cumulative average which is below the minimum accepted score shown in these regulations.

Quarterly Internal degree:
It indicates the marks given to students due to their whole semester performance; it also stands for the results of the tests, the research tasks and the educational activities related to the course.

The final Exam:

It is the exam given to the students once at the end of the semester.

Final exam Mark:

It stands for the marks obtained by the student in each course in the final exam for the semester.

The total final grade

It is the sum of the marks of the semester work with the final exam score for each course. It is calculated out of one hundred.

Accumulative grade rating

It is the percentage or the alphabetical symbol of the final grade obtained by the student in any course.

Incomplete grade rating:

It is a grade assigned temporarily for each course indicating that the student is unable to complete its requirements on the specified date, and is symbolized in the academic record by the letter (L) or (IC).

progressive grade rating:

A grade assigned temporarily for each course which nature of study requires more than one semester to complete, and is symbolized by the symbol (M) or (IP).

Semester average:

It is referred to the result of dividing the total points obtained by the student by the total units prescribed for all the courses taken in any semester; the points are calculated by multiplying the unit assessed by the weight of the grade obtained in each course.

Cumulative average:

It is the result of dividing the total points obtained by the student in all the courses taken during the study by the total units prescribed for those courses.

Overall Grade:

It indicates the total result of the level of the student's achievement during his/her study at the university.

scholastic load:

The total academic units that the student is allowed to enroll in within a particular semester; the maximum and the minimum academic loads are determined according to the university executive rules.

Graduates' characteristics:

It is referred to the total amount of the knowledge background, skills, traits, values and capabilities that qualify the graduate for the future; their importance and relevance to the university community and stakeholders were agreed on.

Learning Outcomes:

They are referred to as nominal labels that accurately describe what the learner is expected to possess in terms of knowledge, skills, and values while going through a particular educational experience.

The Teaching Process :

It is the structured design of the experience that helps the learner to achieve the desired change in performance. It is concerned with the teaching management led by the faculty member; it is an intentional and planned process carried out and supervised by the faculty member inside or outside the educational institution with the intention of helping the learner to achieve the goals and intended learning outcomes.

The Learning Process

It is a subjective activity carried out by the learner, with or without the supervision of the teaching staff, which aims at acquiring a particular knowledge or a skill or changing a behavior. Learning is everything that a person acquires through practice and experience, and it is the other side of the teaching process and its product. The teaching and the learning processes are inseparable to each other.

The difference between teaching and learning:

Teaching differs from learning in that teaching is an activity undertaken by a qualified person to facilitate the learner's acquisition of the required knowledge and skills, while learning is the self-efforts made by the learner to acquire the knowledge and skills he seeks to acquire.

Teaching strategies:

The teaching strategies are the strategies used by a faculty member to improve the students' learning (National Commission for Academic Accreditation and Assessment, 2009). They can be defined as a set of general rules and outlines that are concerned with the tools to achieve the desired goals of teaching; they further refer to the methods and plans followed by the faculty member to reach the learning goals, which are the sets of activities or mechanisms used (presentation - coordination - training - discussion) with the aim of achieving specific teaching goals. Thus, they include the method and the procedures which form an overall plan for teaching a lesson, unit, course, etc. That is, a faculty member may go according to his own style of teaching, using any teaching

method he selects, but he does not depart from the general framework that defines his general teaching procedures known as 'the strategy'.
The teaching strategy includes the following elements:

- The teaching objectives.
- The procedures made and organized by a faculty member according to his teaching style.
- The control and setting of the classroom environment.
- The responses of learners resulting from the stimuli presented, planned, and organized by the faculty member.

Learning Strategies:

The procedures and the activities the learners are engaged to so as to enhance their processes of acquiring the information and learn different tasks. They are also defined as the behavioral patterns and the critical thinking processes applied by the learners that affect what has been learned and the treatment of learning problems. Learning takes place when the learners are aware of the specific skills and strategies (specific procedures and methods) they use in learning, and controls their attempts to get them.

The difference between teaching and learning strategies:
The difference between them is assigned by the roles of the teaching faculty member adapted in the teaching learning processes:

- Teaching strategies focus on the role of the faculty member in managing the educational process.
- Learning strategies indicate the faculty member should be a facilitator of the learning process, and the learner is the center of this process.
- Teaching strategies include the learning strategies; within any teaching strategy, a faculty member can use one of the strategies that centers around the teaching process.

The difference between teaching strategy, method and style:
The Teaching Method includes different forms of teaching such as: lectures, laboratory training, and study assignments (National Commission for Academic Accreditation and Assessment, 2009). Teaching methods can be defined as a mechanism of how to implement each of the actions required to apply the strategy depending on a set of sources and tools. It is the method used by the faculty member to deliver the scientific content to the learner; each faculty member can teach in the style that is commensurate with the nature of the content to be presented, the level of the learner and his capabilities.

Teaching methods are usually used by the faculty member so as to determine the mechanism of creating the appropriate environment for learning and the nature of the interaction between the teacher and the students. The National Commission for Academic Accreditation and Assessment (2009) explains that notion *Teaching Method* should not be mixed with *Teaching Strategies*, which are the procedures used by the teacher within one or more of these methods as part of educational planning to develop targeted learning outcomes.

The difference between the teaching strategy, the teaching method and the teaching style teaching can be briefly outlined in this regards in that the strategy is more comprehensive and more flexible than the method and style; the teaching method indicates the means of communication used by the faculty member in order to achieve the goal of the lesson with the learners; the teaching style is how a faculty member deals with the teaching method. Therefore, the teaching method is more general and comprehensive than the teaching style. Each teaching strategy can be associated with a set of learning methods or strategies. The difference between strategy, method and style is summarized briefly in the following table:

CATEGORY	Concept	Objective	Content	The range
THE STRATEGY	An organized and integrated plan of procedures, including the achievement of the set objectives for a specific period of time	To set an integrated and comprehensive plan for the teaching process	Methods - Approach - Objectives - Activities - Skills - Evaluation - Means – Stimuli	Quarterly - monthly - weekly
Method	The mechanism chosen by a faculty member to deliver content and achieve goals	Delivering the teaching contents by bearing in mind all its elements in the classroom	Objectives - Methods of Activities - Assessment	A topic divided into several lectures - one lecture - part of the lecture
Style	The teaching style used by a faculty member to implement his teaching philosophy	Implementation of the teaching method	Verbal contact - physical contact	Part of the lecture

	when communicating directly with the learner			

Evaluation:

The National Commission for Academic Accreditation and Assessment (2009) defines evaluation as the process of measuring performance based on specific criteria or standards. It points out that it is applied in two different contexts: the first category is related to the assessment of students' performance in tests, exams, or other tasks to measure the achievement of the intended learning outcomes; The second one is related to measuring the quality of performance of elements within the educational institution framework.

Class Evaluation:

It is an interactive process between the faculty staff and the learners which enables them to assess the learners' level. It is used to provide feedback and to improve the teaching and learning processes.

Evaluation includes the systematic collection of information about the learner's achievements in terms of:

- Acquisition of learning outcomes.
- Effectiveness of the teaching strategies used.
- The learner's self-review of his learning.

Assessment :

The National Commission for Academic Accreditation and Evaluation (2009) defines assessment as the process of evaluating the performance, scaling a specific activity or evaluating the quality of a facility. The term “assessment” is sometimes used interchangeably with the term “evaluation,” but it has a slightly different meaning as assessment is associated with decisions about the quality or value of the matter under investigation and evaluation. The element of 'value giving' can be open and more interpretable than evaluation which is usually associated with measuring performance based on fixed, pre-determined criteria. Assessment is defined as judging the value of something. It is also defined as the process of making a judgment about the value of things, objects, situations, or people, based on specific criteria. It uses methods and standards to judge

learners' overall achievement or to assign scores and reports. It is an integral part and essential procedure in the learning process and the course design.

Learning assessment is the process that aims to identify the extent of success or failure in achieving the general objectives of the curriculum, as well as its strengths and weaknesses so that the desired goals can be achieved in the best possible way. The assessment process compares evaluation information with outcome-based metrics in order to take procedural decisions about teaching and learning processes.

Assessing the learning achievement is a process that uses information from multiple sources as to get a judgment regarding the students' academic achievement. This information can be obtained using measurement methods and other methods that give us quantitative or non-quantitative data, such as achievement bag and observation. This data in itself is of no value if we do not use it properly to get an honest judgment on academic achievement.

The quality of learning and the achievement of the course objectives does not mean the amount of information that the learner retained at the end of his study of the course, but rather the extent to which he is able to take the scientific material and use it in the reality of his life, and his ability to make decisions and solve problems, and the extent of the course's contribution to the development of the learner's responsibility for self-learning. This calls for reconsidering the traditional evaluation process, which measures only knowledge and the lowest levels of thinking.

Learner achievement reports should be based on the achievement of learning outcomes. The assessment which is not directly related to the learning outcomes (e.g. attendance, absence, general behavior) can be positioned to complement the achievement of information outcome.

3. University vision, mission, goals and values

Vision:

A nationally distinguished university in education and training for future competencies.

Mission:

To provide outstanding teaching and vocational training; to promote innovation so as to meet the needs of our society.

Objectives:

• Improving the quality of teaching and learning and obtaining program accreditation.
• obtaining academic, skillful, professional and market empowerment for university graduates.
• Improving the academic research and higher studies systems.
• Providing a stimulating environment for innovations and community services of sustainable values.
• Strengthening educational, research and community partnerships.
• Developing the university's own resources, diversifying and sustaining its income sources, and marketing its services and products.

Values:

- Quality: We are committed to high quality in inputs, operations and outputs.
- Honesty: We perform our work with sincerity and dedication in accordance with professional ethics.
- Transparency: We are committed to the highest levels of transparency, integrity and accountability within the framework of corporate governance.
- Solidarity: We perform our missions and tasks as one team.
- Innovation: We promote creative thinking and creative spirit, both intellectually and productively.
- Continuous Learning: We support progressive education and learning inside and outside the university.
- Development: We believe in the necessity of development and growth in all fields and businesses.

4. The characteristics of Mostaqbal University graduates

The university has been constantly developing its educational system and looking for everything new in this regard, which has made it in the ranks of prestigious universities in the country; The university seeks to keep this distinction and achieve more advanced positions.

The university is keen to achieve high specifications for graduates that are consistent with its vision, mission and objectives, and in line with the needs of the labor market and the nature of its programs. It does not accept general and traditional education, but rather it is in a challenge for development and assuming a position worthy for the University future mission (Mustaqbal University). We, at Mustaqbal University, do our best to develop what we do, seek to provide a distinctive educational experience, produce modern innovative

research, activate real community participation, and contribute to develop a knowledge economy.

Consequently, we seek to fulfil the desired characteristics of the graduates that are closely related to the university's vision, mission and goals; So we review them as follows:

1- A comprehensive, organized knowledge of a set of experiences of a particular study program and the related theories and principles.

2. Familiarity with a wide and integrated field of knowledge and skills required for effective practice of the professional fields.

3. Deep knowledge with comprehensive understanding and ability to analyze and interpret the area of specialization (if the program is academic and does not include professional practice).

4. Gaining the skills of solving complex problems and finding innovative solutions.

5. The ability of selecting the best mechanisms to deliver the outcomes to the beneficiaries adequately and appropriately.

6. Gaining leadership skills, having the ability to take responsibilities and cooperating fully with others on joint projects and initiatives.

7. Gaining technical and effective communication skills.

8. Gaining professional ethics and Islamic values.

No.	Characteristics of university graduates	Consistency with the mission of the university
1	A comprehensive, organized understanding of a set of knowledge in a particular program of study and of the theories and principles related to that programme.	Providing distinguished education and professionalization
2	Familiarity with a broad and integrated range of knowledge and skills required for effective practice in a professional field, if the program is professional.	Providing distinguished education and professionalization
3	Deep knowledge, thorough understanding and ability to analyze and interpret the field of specialization, if the program is academic and does not involve professional practice.	Providing distinguished education and professionalization
4	Having the skills to solve complex problems and find innovative solutions.	and enhance innovation
5	The ability to choose the most appropriate mechanisms and use them to convey the results to the beneficiaries.	and enhance innovation

6	Having leadership skills, responsibility and willingness to cooperate fully with others on joint projects and initiatives.	and partnership
7	Having technical skills, and effective communication skills.	Fulfilling the needs of our community
8	Having professional ethics and Islamic merits.	Fulfilling the needs of our community

4.1. Characteristics of University Graduates and their Consistency with the University Mission

4.2. Consistency of the characteristics of the graduates with the university goals

No.	MEASURING THE CHARACTERISTICS OF UNIVERSITY GRADUATES1 1	Consistency with university goals
1	A comprehensive, organized understanding of a set of knowledge in a particular program of study and of the theories and principles related to that programme.	Improving the quality of teaching and learning and obtaining program accreditation.
2	Familiarity with a broad and integrated range of knowledge and skills required for effective practice in a professional field, if the program is professional.	Improving the quality of teaching and learning and obtaining program accreditation.
3	Deep knowledge, thorough understanding and ability to analyze and interpret the field of specialization, if the program is academic and does not involve professional practice.	Improving the quality of teaching and learning and obtaining program accreditation.
4	Having the skills to solve complex problems and find innovative solutions.	Providing a suitable environment for innovations and community services of sustainable value.
5	The ability to choose the most appropriate mechanisms and use them to convey the results to the beneficiaries.	Scientific, skillful, professional and logistic empowerment of university graduates.

No.	MEASURING THE CHARACTERISTICS OF UNIVERSITY GRADUATES1 1	Consistency with university goals
6	Having leadership skills, responsibility and willingness to cooperate fully with others on joint projects and initiatives.	Strengthening partnerships among education, research and community.
7	Having technical skills, and effective communication skills.	Scientific, skilful, professional, and logistic empowerment of university graduates.
8	Having professional ethics and Islamic merits.	Scientific, skillful, professional and logistic empowerment of university graduates.

4.3. Measuring the Characteristics of University Graduates

The university is keen to design appropriate tools for measuring the characteristics of graduates, as shown in Table 4:

No.	Characteristics of University graduates	Measuring tools
1	A comprehensive, organized understanding of a set of knowledge in a particular program of study and of the theories and principles related to that programme.	Final exams - midterm exams - homework - assignments - course evaluation questionnaire.
2	Familiarity with a broad and integrated range of knowledge and skills required for effective practice in a professional field, if the program is professional.	Practical tests - projects - final exams - midterm exams - course evaluation questionnaire.
3	Deep knowledge, thorough understanding and ability to analyze and interpret the field of specialization, if the program is academic and does not involve professional practice.	Final exams - midterm exams - homework - assignments - course evaluation questionnaire.
4	Having the skills to solve complex problems and find innovative solutions.	Oral exams - projects - discussions - group assignments - presentations - course evaluation questionnaire.
5	The ability to choose the most appropriate mechanisms and use them to convey the results to the beneficiaries.	Oral exams - practical exams - discussions - final exams.
6	Having leadership skills, responsibility and willingness to cooperate fully with others on joint projects and initiatives.	Group assignments - projects - questionnaire.
7	Having technical skills, and effective communication skills.	Group assignments - projects - questionnaire.
8	Having professional ethics and Islamic merits.	Group assignments - projects - questionnaire.

5. Learning outcomes

Learning outcomes received great attention from the Ministry of Education and the National Center for Assessment and Accreditation, as a framework for learning outcomes which are consistent with the National Qualifications Framework. Therefore, the university set the learning outcomes that are also consistent with the characteristics of graduates.

Learning outcomes are defined as the various areas of knowledge and skills that the student acquires when completing a certain educational level. These are statements that describe what the student should know and be able to perform, and is expected to achieve at the end of his study of a specific course or educational program. Determining learning outcomes is of great importance to all parties involved in the educational system.

Importance of Learning Outcomes

Learning outcomes are important at the level of the entire educational process, and can be summarized as follows:

- They are effective ways to review course content.
- They are essential tools to determine the appropriate means of evaluation.
- They direct all the efforts towards the student's acquisition and achievement of the intended learning outcomes.
- They stimulate the students for Self-learning in the light of clear and specific goals as they choose activities and tasks according to their tendencies and preparations to achieve such goals.
- They encourage active cooperation between the student and the teacher in the context of acquiring the intended outcomes.
- They trigger continuous evaluation and up-to-date performance in the light of clear rules.
- They result in increasing the rate of performance and higher levels of thinking in order to accomplish the desired tasks.
- They increase the chances of success in acquiring the desired learning outcomes.
- They allows the teacher to evaluate the effectiveness of his teaching (Have the intended outputs been achieved?).
- They facilitates the transition from teaching to learning, centering around the learner rather than the teacher i.e. what the learner is expected to be able to do and not what the teacher can do.

- They guide the students clearly of what they are expected to learn from the recent courses and how their learning achievement will be assessed.
- They give the students the opportunity to be more responsibility for their own learning process as they realize what they are expected to be able to do and the level they are expected to reach.

5.1. Fields of Learning Outcomes

Knowledge:

- Knowledge includes data, facts, information, concepts, ideas, issues, trends, topics, and theories.
- Descriptions that focus on depth and breadth of knowledge in general or private contexts.
- Learning outcomes focused on gaining theoretical understanding.
- What the learner knows and understands in a specific area of specialization, such as knowledge of facts, rules, and theories.

Knowledge
- Theories and facts

Skills
- Practical application of knowledge

Value
- Independence and responsibility
- practice
- Features

Skills:

- Skills are the ability to apply knowledge in practice.
- It can be described as a set of cognitive and physical attributes acquired through learning, training or practice.
- In general, skills are associated with dexterity, accuracy, and speed in accomplishing a particular task or process.
- The ability to put knowledge into practice.
- The ability to complete tasks and operations related to a particular profession.
- The ability to use analytical methods and methods in research and to carry out tasks and duties related to learning.
- Accomplish tasks and solve problems using acquired practical, logical and creative skills.
- Proficiency in the use of Arabic or foreign language according to the employment requirements.

Values:

- Values center around personal traits, values, ethical aspects, responsibilities and the degree of independence in accomplishing tasks and operations, and are related to the individual's ability and performance in life and his interaction in different social situations, cultural environment and work conditions.
- In other words, values are fully manifested when the individual is placed within a practical context related to his work and life.
- Independence and responsibility in applying knowledge and skills
- Practice knowledge and skills in the work environment.
- Features related to the behavioral and social dimensions of job behaviour.

5.2. The difference between learning outcomes and learning objectives

- **Objectives: Focus on the content or what the teacher wants to deliver.**
- **Outcoms: focus on what the student is expected to know and be able to perform at the end of the educational situation.**

There is an overlap between the concept or term learning outcomes and learning objectives.

5.3 List of University Learning Outcomes

The university was keen to follow the scientific bases in determining the learning outcomes with the participation of the concerned parties, reviewing and applying the scientific bases and linking them to the university's vision, mission, goals and characteristics of its graduates. After completing the construction process, the following list was prepared in Table 5, which represents the learning outcomes of the University:

	No.	List of university learning outcomes
Knowledge	1	The student should be able to understand the comprehensive knowledge, theories and principles related to the programmes
	2	The student should be familiar with a broad and integrated range of knowledge and skills required for effective practice in a professional field.

	3	That the student be able to realize deep knowledge, a comprehensive understanding, and the ability to analyze and interpret the field of specialization.
Skills	4	The student be able to have the skills of solving complex problems and finding innovative solutions.
	5	The student is able to choose and use the most appropriate mechanisms for sharing the results with the beneficiaries.
	6	The student be able to have leadership skills, assume responsibility, and be willing to cooperate fully with others on joint projects and initiatives.
	7	That the student be able to have technical skills and effective communication skills.
Values	8	That the student be able to have the ethics of the profession and Islamic values.

5.4. The cycle of achieving learning outcomes at the university

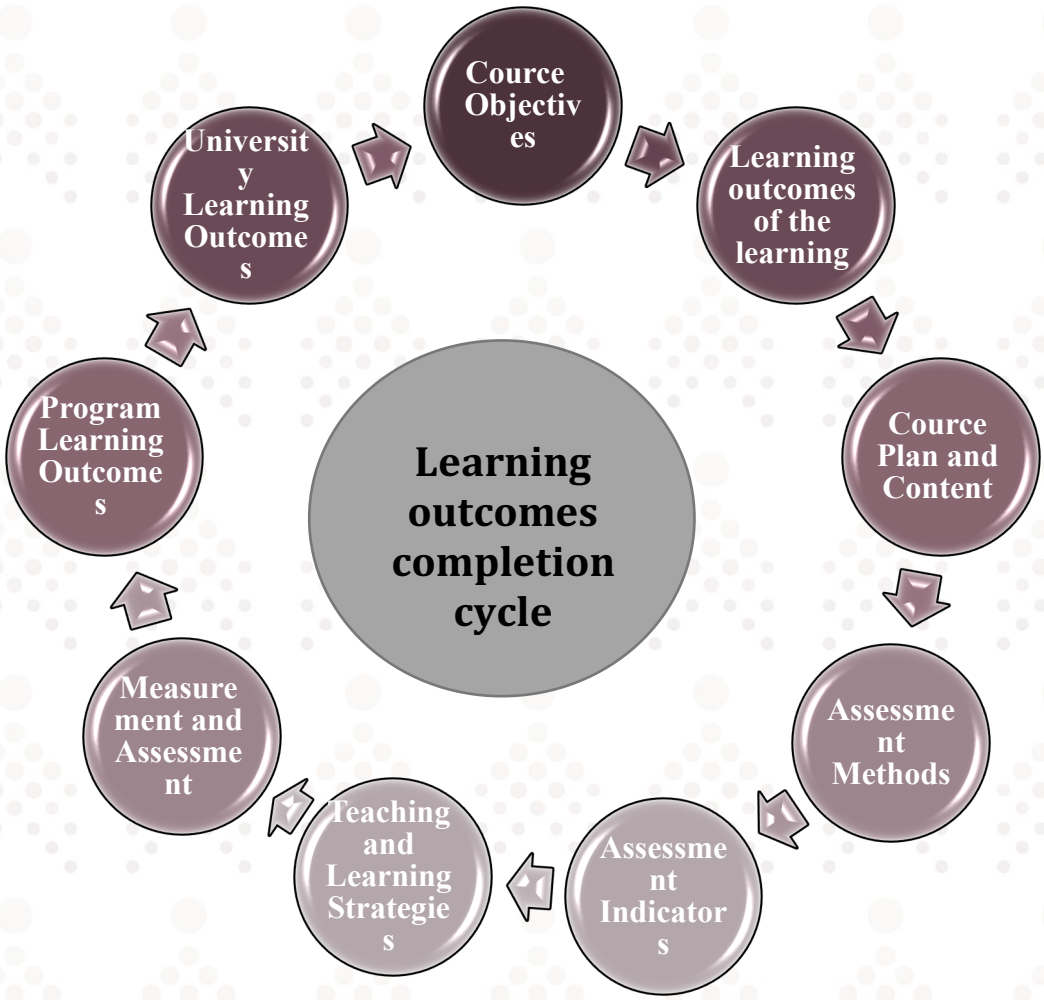


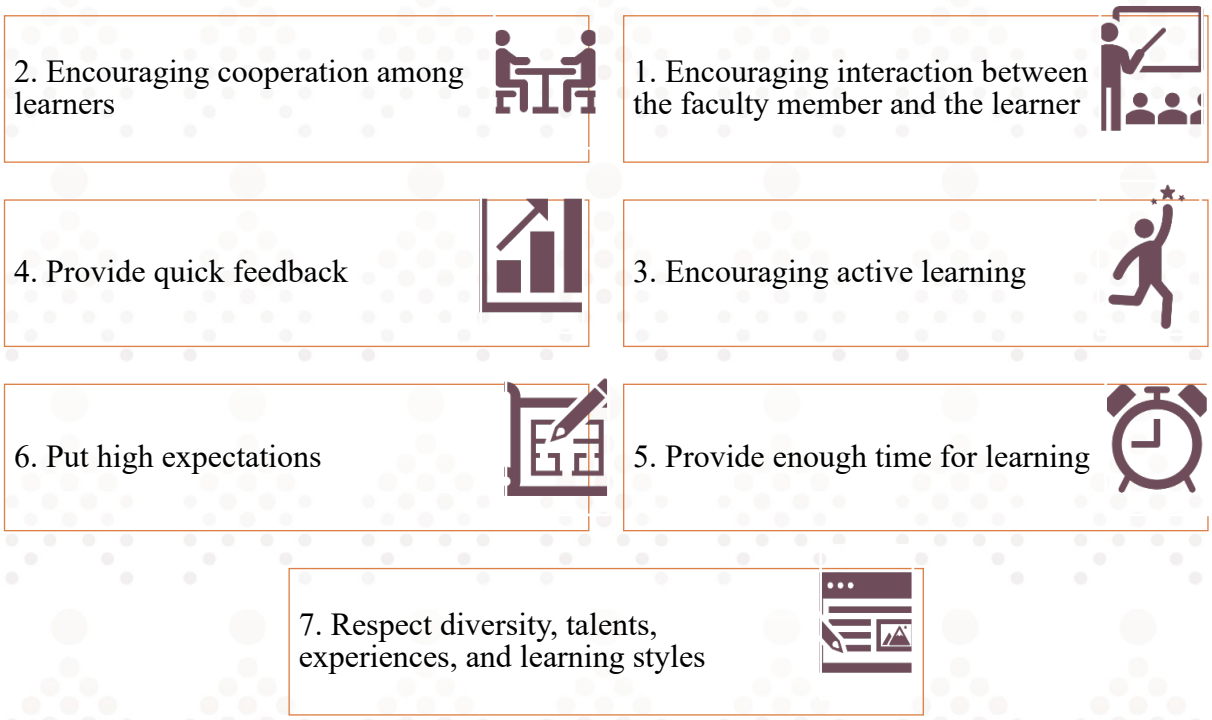
Figure 3: The cycle of achieving university learning outcomes

To achieve the vision, mission and goals of the Mustaqbal University, the university is committed to preparing the vocational output needed for the work market, production and service sectors in society; the University implements advanced educational programs that support mechanisms of scientific research and self-learning skills. This process requires studying appropriate teaching and learning strategies to achieve the learning outcomes of the university, as well as the essential means to act according to these policies.

6. Principles of Good Teaching and Learning

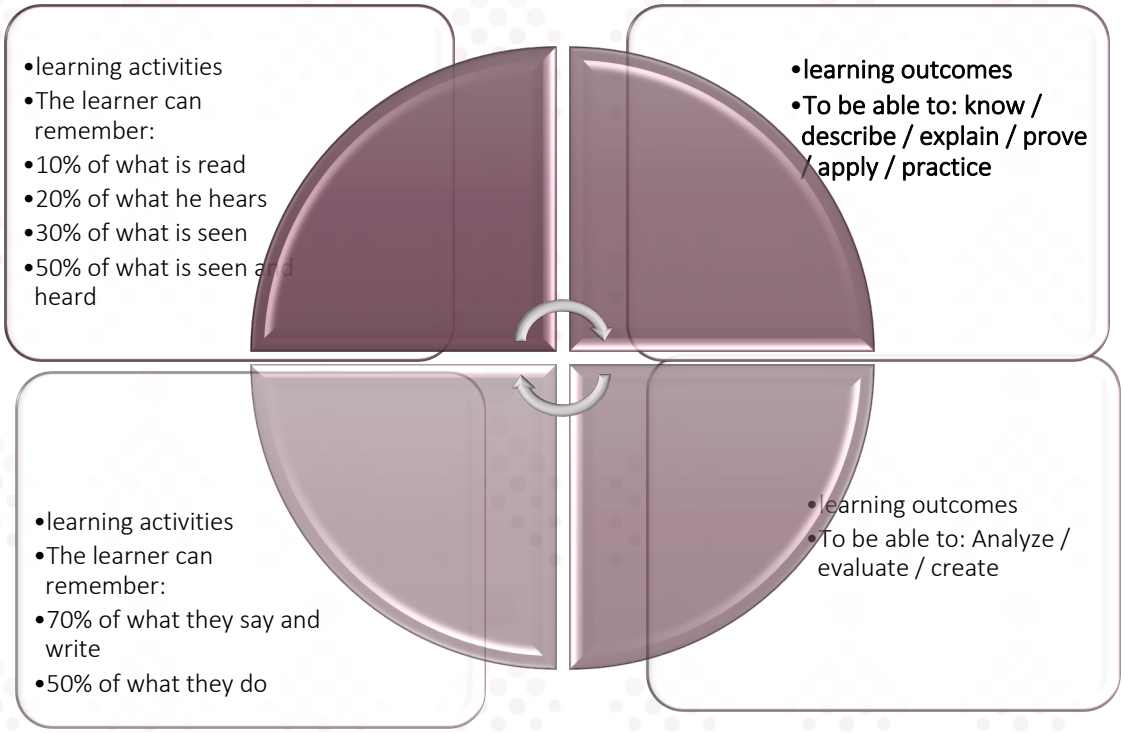
Teaching is not a game to challenge memory in remembering information and knowledge, rather, learning should aim to help the learners understand and

assimilate information and empower them with the skills apply such information in new situations; this can only be done by concerning the seven principles of teaching as shown in Figure 4:



Motivating the learner to learn effectively:

Encouraging and urging the learner to active learning is a possible process if being turned to be an active person in the educational process rather than a recipient person; this can only be done when the learning styles are considered. Figure 5 shows the correlation of the level of learning outcomes with the level of active learning implementation and the practical and applied activities in which the student's role is activated.



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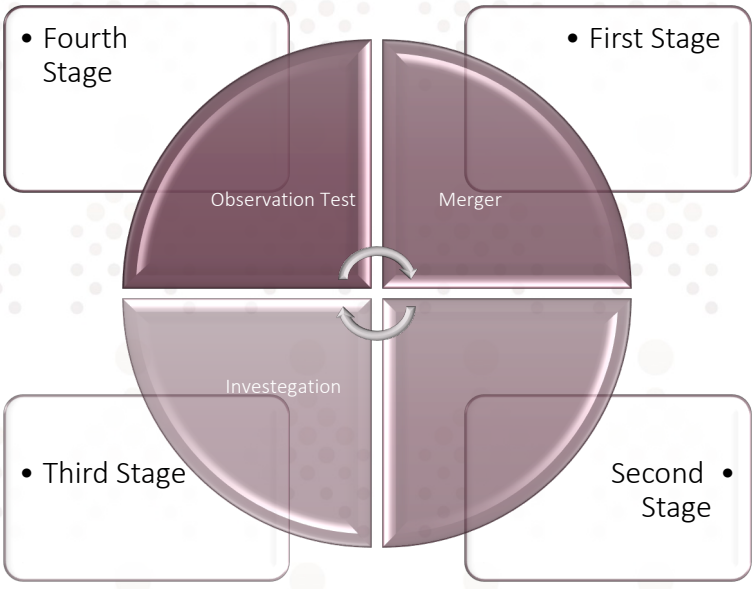


First Stage: Integration:

It is the stage in which the learner feels aware that he needs to acquire information to deal with the scientific content; this step can only be achieved if

the learner is integrated into the learning process by recognizing the general idea of the scientific content.

The second stage: knowledge challenge:

The learner does not move to this stage until he has integrated into the general idea of the subject; This stage is a challenging stage for the learner of what he has learned and what he should learnt. As for the learner to move to this stage, he must engage in a dialogue on the topic, whether with a faculty member or with his collogues as a means of challenge. This method is called learning through dialogue.

Third stage: Investigation :

It is the stage of research and investigation of the information as an attempt to understand the concepts and relationships within it so as to get clear answers for the questions that the learner was unable to deal with in the previous stage.

Fourth stage: Testing the Observation:

It is an attempt by the learner to verify the correctness and accuracy of the answers he reached for the questions. At this stage, the learner is asked to focus on the main idea, and link it to the answer in order to get a true knowledge by providing correct interpretations and justifications for the answer he has already reached.

Learning types:

Learning can be classified into three main types:

1. Competitive learning
2. Individual learning
3. Cooperative learning

Competitive Learning:

Competitive learning is one of the aspects of learning which centers around the subject matter. In this style, the learner's attitude is negative, and the faculty member is the main source of learning as he throws the information to the learners' ears, and the assessment is criteria-based.

Individual learning:

It refers to the independence of the learners in their work from each other as they depend on themselves to accomplish the task assigned to them; the learner's motivation must be raised to complete the task entrusted to him in his own ability, and the role of the faculty member here is to arrange the class in a

way that avoids learners' distraction, and provides him with the necessary tools, and answer his questions.

Cooperative learning:

Many researchers emphasize the high effectiveness of cooperative learning; Cooperative learning increases the learners' motivation and their ability to think critically; through it the emphasis is placed on teamwork as the relationships achieved stimulate the learning process in a very effective way.

Learning styles:

It is a mixture of mental, emotional, and physical characteristics that work as relatively stable indicators of how the learner receives, interacts with and responds to the educational environment. It is represented in the patterns of behavior and performance with which the learner encounters educational experiences. This difference is rooted in the nervous system that is formed and shaped by a person's development, personality, and learning experiences at home, school, and society.

The four learning styles model (mat 4)

It is one of the most popular models used in learning. It is a process of communicating information in a way that suits all learners' learning styles and allows them to practice and use the learning materials during each lesson. The format system encourages the faculty members to pay attention to several aspects of why and how the learner learns, not just what he learns.

The four learning styles are based on different approaches of gaining and processing information.

Figure 7 illustrates the classification of the four learning styles:

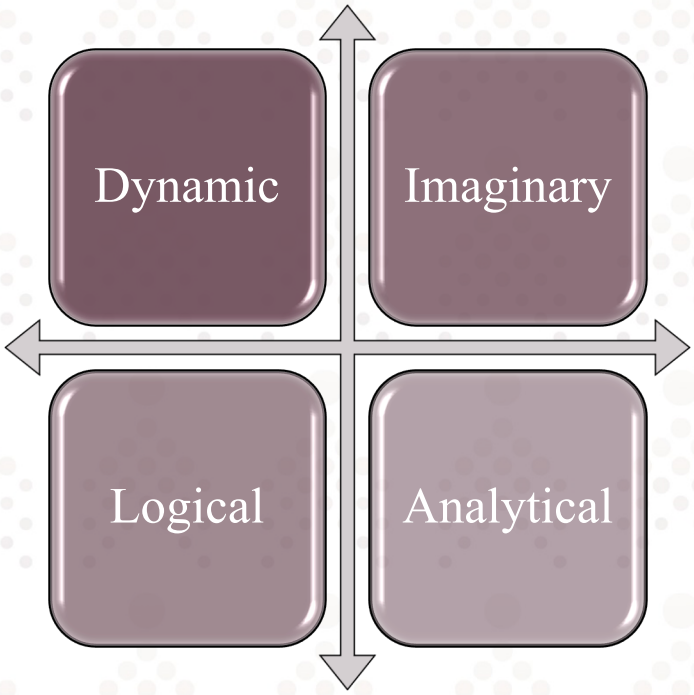


Figure 7: Learning styles

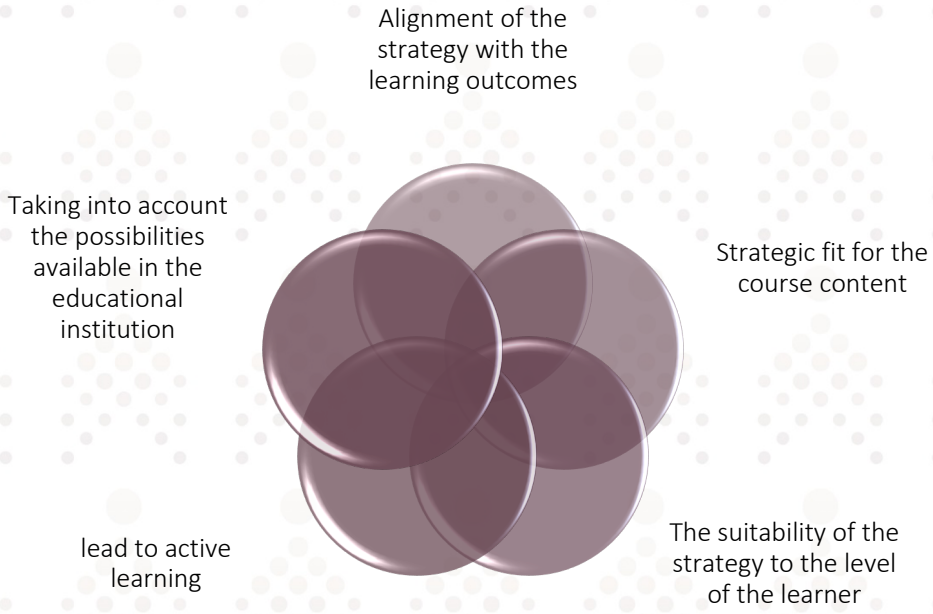
7- Criteria for selecting teaching and learning strategies

Teaching success requires that the faculty member should be familiar with different teaching and learning strategies and able to apply appropriate strategies which push the learners achieve the intended learning outcomes. There are several criteria that should be taken into consideration when choosing a teaching strategy; some of them are shown in Figure 8:

- The suitability of the strategy to the learning outcomes: This refers to the selection of the appropriate strategy to achieve the target educational outcome (what the learner is expected to know and be able to perform after the end of the lecture, course or study program). For example, when the outcome is to prove the knowledge of certain facts, the faculty member uses the direct learning strategy; but, if the output is problem solving, he may use the problem-solving strategy.
- The suitability of the strategy to the course content: the strategy should relate to the content and the nature of the course material; This is because each subject has a special nature that forces the faculty member to choose particular strategies and methods for teaching as there are subjects which are theoretical, and others which are practical or experimental.

- The suitability of the strategy to level of learner: it indicates the necessity of taking into account the individual differences between learners, and their previous experiences.
- The motivation of active learning: it conditions making the learner a positive and active participant in the educational process, rather than a recipient who is not motivated for self-learning.
- Considering the conditions and the settings available in the educational institution: classrooms, learning resources, tools and equipment, and the number of learners.

Figure 8: Criteria for selecting teaching and learning strategies



Characteristics for good teaching and learning strategies

The characteristics for good teaching and learning strategies are as represented in Figure 9 below:

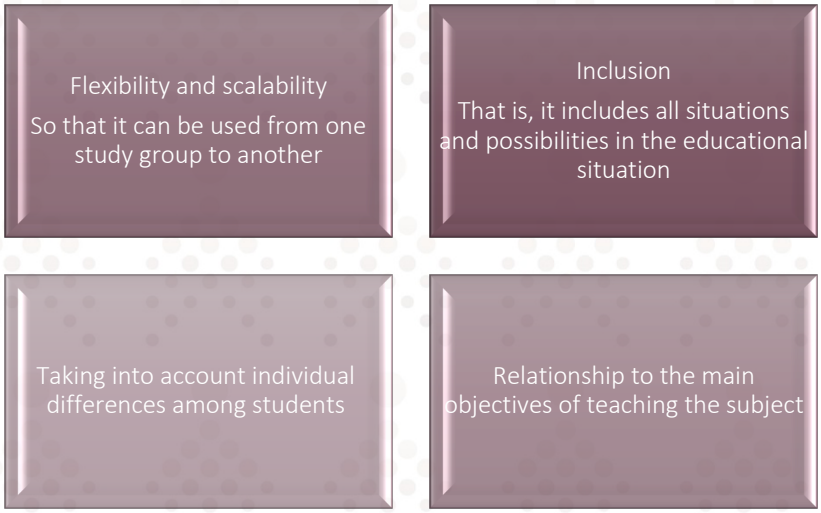


Figure 9: Characteristics of good teaching and learning strategies

This is to highlight that good teaching and learning strategies pushes the learners to act according to the roles shown in the Figure 10 below:

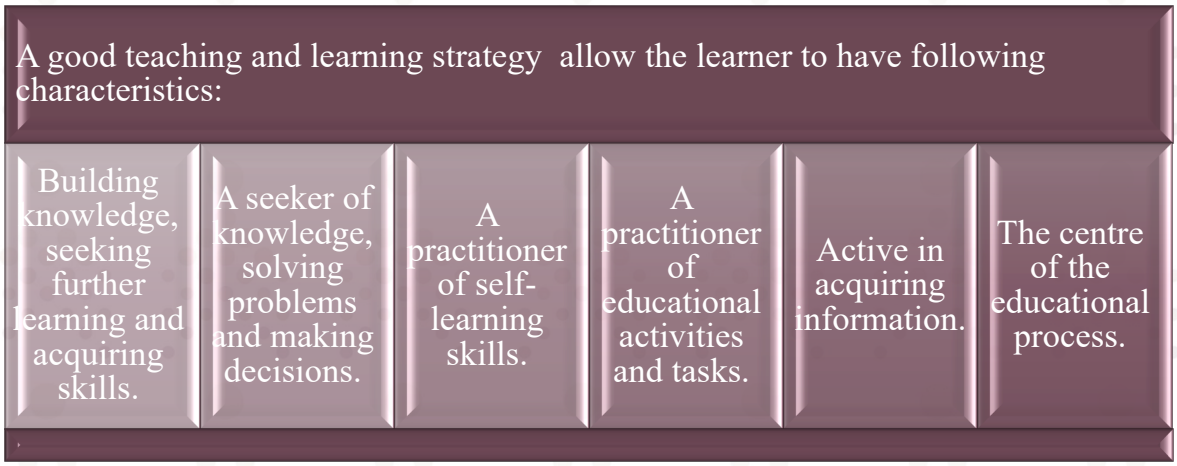
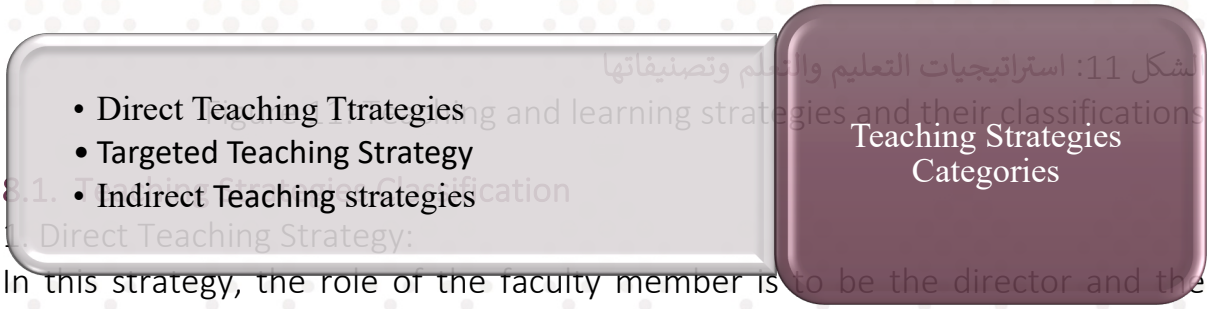


Figure 10: *learners' roles in good teaching and learning strategies*

8. Teaching and learning strategies and their classifications

We will discuss teaching and learning strategies according to their classification as shown in Figure 11 below:



In this strategy, the role of the faculty member is to be the director and the controller of the teaching and learning processes in terms of planning,

implementation, and follow-up, while the learner is a passive recipient who is directed to the knowledge outcomes figured out in the facts, the concepts and the theories taught via the lectures, the use of theoretical and practical books and filling the exercises given.

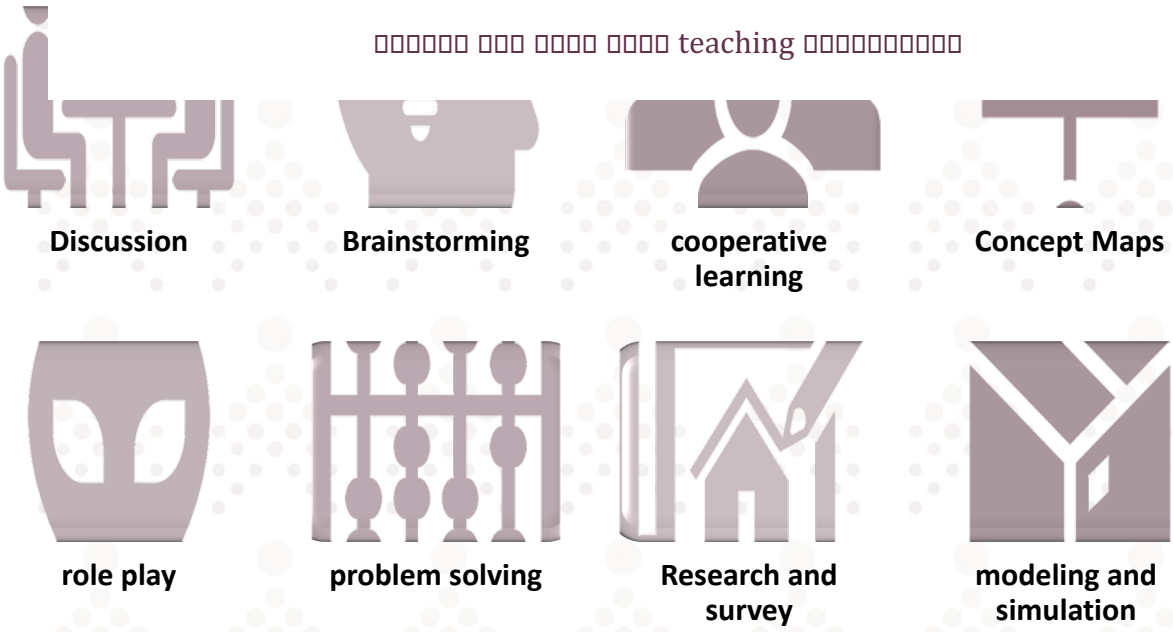
2. Targeted Teaching Strategy:

It is the teaching strategy in which the faculty member plays the role of a facilitator, stimulates the learner to be an active participant in the teaching and learning process. The focus centers around the learning processes and products as in the teaching via guided discovery.

3. Indirect Teaching Strategy:

It is the teaching strategy in which the faculty member plays an active role in facilitating the learning process; the learner is an active participant in the teaching and learning process, and the focus attention is on learning processes and products, as in brainstorming, free discovery, and inquiry.

8.2 The Most Important Teaching Strategies



Discussion strategy:

The faculty member determines the topic that learner will discuss with the elements of the topic and prepares a set of arranged questions that give sufficient answers about each element of the topic; the instructor further asks learners and comments on his answers; and then the faculty member concludes linking all the information and puts it in an integrated picture that gives meaning to the topic.

Discussion is one of the means of widening the understanding of the material being studied and allowing the faculty member to identify the strengths and weaknesses of the learner. It builds the skills of listening and respect for the views of others and the skills of expressing of opinions to be self-confident. It also develops many higher mental skills such as critical and creative thinking, analyzing and deducting.

The faculty member has to take into account a set of points to make this method effectively in teaching some topics:

- The questions should be appropriate to the learning outcomes and the learner's level.
- The questions should stimulate the learner's critical thinking.
- The learners should be given a waiting time so as to permit them to think and communicate in dialogue and discussion.
- All learners should be taking into account for participating in the discussion process.

Problem solving strategy:

Problem-solving processes represent one of the basic strategies in learner-centered activities that depend on stimulating the learner's performance by activating his knowledge background, retrieving his previous experiences, building knowledge, and acquiring new concepts. Problems solving includes multiple processes and activities, and takes into account a set of main principles including:

- Motivating the learning process (the strategy that emphasizes to link learning to life and makes the learner feel its usefulness).
- Thinking (it emphasizes the mental processes of expectation, hypothesizing, examining, selecting, generalizing and the plausibility of solutions).
- Emphasis on the positivity of the learner as they are given an opportunity to communicate through studying the problem, examining it, building expectations around it, predicting solutions, formulating it, and studying it to reach and write the results. This strategy can be applied individually or in groups.
- The problem-solving strategy requires the learner to work independently and reach a solution to the problem by building expectations or imposing and studying hypotheses.

Project based learning strategy:

The project is any field work carried out by the learner and characterized by the practical aspect. In it, the learner is assigned to do the task in the form of a project that includes a number of aspects of the activity. The learner uses books

and searches for information or knowledge as a means towards achieving the project goals under the supervision of a faculty member. This strategy helps in:

- Linking content to real life.
- Developing the learner's planning skills as to carry out various activities that lead to his acquisition of a variety of new experiences.
- Developing habits of responsibility, cooperation, enthusiasm for work, and sourcing.
- Providing freedom of thought, developing self-confidence, and taking into account individual differences among learners.

Cooperative learning strategy

Cooperative learning is achieved by dividing the class learners into small groups, combining different levels of knowledge. The number of member in each group consists of 4 to 6 students. Each group is given one educational task.

Advantages of cooperative learning:

- It makes the learner as the center of teaching process.
- It is suitable for various courses.
- It develops individual and collective responsibility of the learner.
- It helps the learner acquires leadership, communication and time management skills.
- It leads to the strengthening the friendship bonds and the development of personal relationships among learners.
- It develops the learner's self-concept and self-confidence.
- It helps students to learn and master the information and the skills taught.
- It leads to break the routine and find the vitality and activity of the educational situation.
- It provides an opportunity for teamwork and cooperation.

Brainstorming strategy:

Brainstorming is an educational and training method based on freedom of thought. It is used in order to generate the largest number of ideas as to tackle one of the open topics of those interested in the subject during a short session. In this strategy, the faculty member presents the problem and the learner presents his ideas and suggestions related to solving the problem; then the faculty member collects these suggestions and discusses them with the learners and then determines the most appropriate ones. This method is based on giving free thought and focusing on generating as many ideas as possible. It encourages the active participation of learners, stimulates working in groups and triggers the generation of new ideas. It improves the the creativity of the learners, their critical thinking and their ability to express themselves freely so as to be self-confident.

Discovery Learning Strategy:

Discovery is a process that requires the individual to reorganize the information he has stored, and adapt it in a way that enables him to figure out new relationships. The discovery is a very important strategy in that it helps the student leanrs how to track clues, record results, and thus be able to deal with new problems. Learning by discovery provides the following advantages:

- It provides the learner with many opportunities to reach inferences using logical reasoning inductively or deductively.
- It encourages critical thinking and develops higher mental levels such as analyzing, synthesizing and evaluating.
- The learner is accustomed to get rid of submission to others and the traditional dependence.
- It gives the learner an active role in discovering information which helps him to retain learning.
- It helps learners develop creativity and innovation.
- It increases the learner's motivation towards learning by providing the suspense and excitement that the learner feels while discovering the information by himself.

E-Learning Strategies

The current era is characterized by the expansion of knowledge in all different fields. In order to keep pace with this expansion of knowledge, scientific development and technical employment, the role of education aims to improve knowledge and skills of the learner in the knowledge and skill side via various teaching methods. It instills in the learner the direction of employing technology in his daily life. The teaching aids represent a set of devices, tools and materials that a faculty member uses to improve the teaching and learning process. Computer is considered as the most vital tool applied in the teaching and learning process.

Some of the roles played in this context could be shown in the following outline as follows:

a. Educational games:

Educational games are methods that aims to teach some information and skills to learners through a competition between a learner and the other, or between the learner and the program, and the role of the faculty member is limited to giving some notes and directions.

b. Problem solving environment:

Computer programs in this method focus on research and investigation by asking learners progressive questions as to come up with a specific concept. This method is learner-centered.

8.3. Learning strategies and classification:

Since the learning process is a complex process that requires the learner to realize the essential skills to succeed in, the interest in study skills, study habits and learning strategies has increased, in light of activating the role of the learner in the learning process on the one hand, and the increasing complexity of educational tasks with the progression of school stages on the other. The main purpose of learning strategies is self-reliance in learning.

Learning strategies can be classified to:

1. Cognitive Strategies: It is concerned with analyzing the text, clarifying or detailing the subject to be studied, such as: recitation - organization - and clarification.

2. Metacognitive Strategies:

It is concerned with managing the learning process, such as: selective attention to a specific part of the text, monitoring of comprehension, controlling and evaluating what has been learned, or self-assessment of comprehension.

The following table classifies and summarizes some learning strategies:

Strategy category	THE STRATEGY	Characteristics
Cognitive Strategies	Put or specify important information	Identify the main ideas and important parts of information for the knowledge content. The text takes the form of the first sentence of the paragraph, terms, formulas, definitions, and equations that seem clear. Interesting and exciting phrases or topics.
	take notes	The learner makes his or her own assumptions about what is important or useful from the lecture and what will come on the exam The quantity and quality of feedback taken is positively correlated with academic achievement: a learner who takes more notes scores higher on achievement tests
	Include, underline, or underline the important	Putting lines or lights that facilitate learning so that these lines are placed under the main ideas or important details
	Retrieval of relevant prior knowledge	It means that the learner creates the multiple connections between the experience (the new material and the knowledge base he has, such as reading aloud a part of the text and then stopping to link an idea he read

Strategy category	THE STRATEGY	Characteristics
		to something he has previously learned in the classroom with something from his personal experiences. This strategy requires preparing the learner to evoke his relevant mental stores It may be in the form of concepts, definitions, or rules.
	Organization	It is the ability to build structures and organizational charts that fit the information obtained in lectures or books. The good learner is more inclined to make plans for the course compared to the average learner. Also, the structured information is stored and retrieved more easily than the unstructured information.
	Summery	It means an abstract representation of the course or titles that define the important units for it, reducing and reducing ideas and reducing their size while preserving their integrity from deletion or distortion, i.e. preserving the general shape of the material
	Observe understanding or comprehension	The high-achieving learner takes steps to correct his understanding, such as re-reading the paragraphs, while we find that the low-achieving learner does not do this procedure, and the learner monitors himself at regular intervals in order to ensure the extent to which he understands and remembers the course
metacognitive strategies	Cognitive control and monitoring	The learner's ability to select, use, and monitor learning strategies appropriate for both his learning style, the current situation, and the visually oriented learner's use of a concept map
	self-regulation mechanisms	The learner organizes his learning process according to the academic content and his available abilities

8.4 Consistency between teaching and learning strategies and learning outcome

List of university learning outcomes			Teaching and learning strategies					
field	No.	Items	Brainstorming	Cooperative learning	Discussion and dialogue	laboratory method	Self-Learning	Others
Knowledge	1	The student should be able to understand the comprehensive knowledge, theories and principles related to the programmes	√	√	√	√	√	

List of university learning outcomes			Teaching and learning strategies					
field	No.	Items	Brainstorming	Cooperative learning	Discussion and dialogue	laboratory method	Self-Learning	Others
	2	The student should be familiar with a broad and integrated range of knowledge and skills required for effective practice in a professional field.	√	√	√	√	√	
	3	The student should be able to realize deep knowledge, comprehensive understanding, and the ability to analyze and interpret the field of specialization	√	√	√	√		
Skills	4	That the student be able to possess the skills of solving complex problems and finding innovative solutions.	√	√	√			
	5	The student is able to choose and use the most appropriate mechanisms for sharing the results to the beneficiaries.				√	√	
	6	That the student be able		√		√		

List of university learning outcomes			Teaching and learning strategies					
field	No.	Items	Brainstorming	Cooperative learning	Discussion and dialogue	laboratory method	Self-Learning	Others
		to possess leadership skills, assume responsibility, and be willing to cooperate fully with others on joint projects and initiatives.						
	7	That the student be able to possess technical skills and effective communication skills.		√		√		
Merits	8	That the student be able to possess the ethics of the profession and Islamic values.			√			

Table 7 indicates the appropriate education strategies for each of the learning outcomes according to the learning domains identified by the National Commission for Academic Evaluation and Accreditation; the right side represents the domains, and the numbers refer to the different types of outcomes under each domain. The horizontal row also contains the most important teaching and learning strategies.

9. Learning and achievement assessment and assessment objectives

Assessment goals:

Assessment is a sensitive and complex process, and mostly we perform learners for three purposes:

1. Encouraging and enhancing the learning process (Constructive Assessment).
2. Finding a necessary basis for decision-making regarding the learner's success and obtaining the certificate (final evaluation).

3. Reasons related to improving and ensuring the quality of teaching and courses.

Assessment function:

As for the assessment function, there are several objectives of assessment, each of which gives a picture of the student's learning.

Assessment for Learning

It includes the use of information on learners' progress to support and improve learner's achievements and the teaching practices. It is characterized as:

- It is developed for the use of the learner and the teacher.
- It occurs during the teaching and learning processes via the application of multiple tools.
- It makes the faculty staff engaged in providing individualized instruction that fits students' learning styles.
- It provides continuous feedback to learners to improve their learning.
- It involves learners in self-evaluation and provides feedback on their learning and peer learning.
- It provides information to beneficiaries to support learning.

Assessment as a Teaching Process

It includes evaluating the learners' progress, and is characterized as:

- It focuses on learners' analysis and criticism of their learning related to learning outcomes.
- It concentrates on the learner and his application of information in learning.
- It occurs during the learning process.
- Learners participate in the learning evaluation, the future learning, and thinking processes (metacognitive).

Evaluating as a Learning Process:

The faculty member's use of evidence on learners' learning to make judgments about their achievement, and is characterized as:

- It provides an opportunity to show evidence of achievement.
- It is linked to teaching outcomes.
- It appears at the end of the learning period via using multiple tools.
- It provides a basis for judging success.

9.1 Basics of assessment

There are bases for evaluation, which are:

- It is inclusive to all the learning outcomes.

- It is a continuous process that can be employed in the processes of diagnosis, treatment and enrichment.
- It must be real and truly reflects the learner's performance.
- It should be fair and objective.
- It should make opportunities to measure the thinking processes and skills.
- Assessment processes should be clear and transparent.

9.2 Assessment types

Assessment can be classified into two types as in Figure 13:

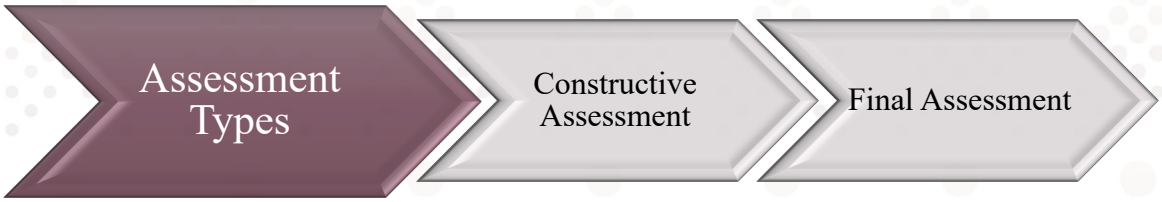


Figure 13: Assessment types

1. Constructive/ Formative Assessment:

It is sometimes called continuous assessment; it is defined as the assessment process carried out by a faculty member during the learning process, which aims at directing the learner's learning to the correct path or enhancing his learning path and level. It begins at the initial phases of learning and accompanies it during the course. Among the assessment methods that can be used are: class discussion, observation of learners' performance, assignments, and reports.

Formative assessment includes the systematic use of assessment in the process of designing the curriculum, in teaching and in learning, with the aim of improving these three aspects. Since structural evaluation occurs during construction or formation, every effort must be used in the improvement of such a process.

2. The Final Assessment:

It indicates the assessment process that is carried out at the end of a course, to determine the extent to which the learners achieve the main outcomes of learning a course.

In light of the results of this type of assessment, judgments are made regarding learners such as success and failure, and judgment on the effectiveness of teaching methods and various activities, and the extent to which the learning outcomes are achieved. It is also possible to make comparisons between the results of learners in the different academic divisions or the different programs

in which the same course is taught, and to produce indicators of the quality of performance in the course or educational program.

3.9 Assessment Strategies and Methods

It is a set of procedures and processes which aim to judge the learner's performance by referring to specific standards and using appropriate methods and tools.

As for the assessment method, it is the method or tool used within a limited strategy to determine the extent to which the learner has mastered the course.

Evaluation Strategies

There are several evaluation strategies and methods such as:

- Strategies for performance-based evaluation, which require the learner to demonstrate his learning through tasks that demonstrate his acquisition and use of skills in daily situations.
- The paper-and-pencil strategies which focus on the extent to which learners have knowledge and intellectual skills by using tools based on answering questions presented in papers.
- Observation strategies which aim to collect information about the learner's behavior and describe it verbally.
- Communication strategies focus on gathering information through communication activities about the extent of the learner's progress and identifying his thinking and his method of solving problems.
- Self-review strategies that show the cognitive growth of the learner and give the learner an opportunity to develop metacognitive skills, critical thinking and problems solving.

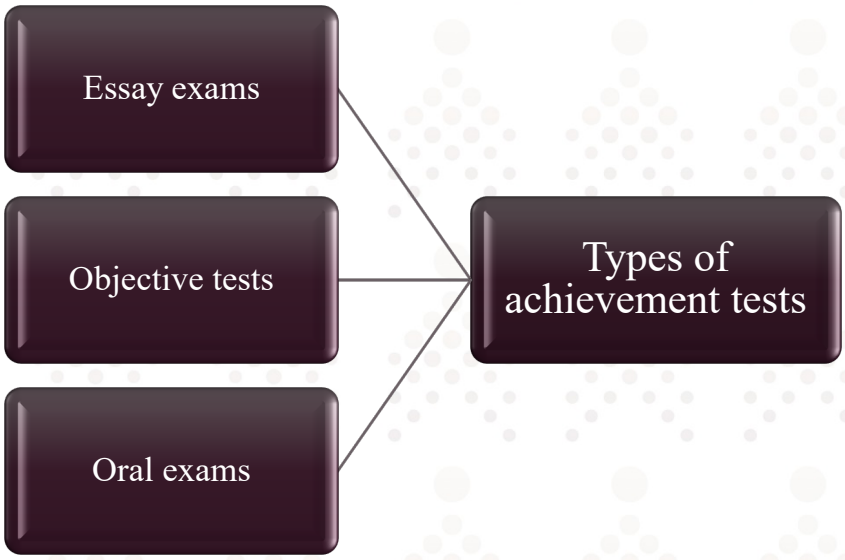
Methods of assessing learners' learning and achievement:

There are several ways to assess learners' learning and achievement such as the achievement tests and observation, practical tests, classroom activities and interviews, and the learner's achievement portfolio. It can be summarized in Figure 14:

Figure 14: Methods for assessing learners' learning and achievement

• Achievement tests:

One of the techniques of determining the level of learners' acquisition of information and skills in a subject. It is conducted through his answers to a set of statements representing the content of the subject. It is used to measure many aspects of the learner's learning outcomes. This method includes three types as the following: essay tests, objective tests, and oral tests.



Essay tests:

This type requires the learner to provide specific answers to the questions. Essay tests are used to measure higher mental abilities, such as the ability to analyze, structure and evaluate. It measures the learner's ability to express and link ideas, organize information and perform written skills.

It includes two types:

a. Specific-answer tests: These include tests of which the questions given require specific or short answers.

b. Unspecified answers: Tests of which the questions given require open answers. It gives the learner the freedom to choose the method and quantity of the answer.

- Oral exams:

It is an important means of assessing the learner's achievement that depends on oral questions being asked and answered orally. It is used to measure the learner's ability to read and pronounce correctly, and to measure the learner's ability to discuss and link information.

- Objective tests:

These include tests that require the learner to identify specific answers to his questions, and they are called objective tests as it correction is not affected by the subjective judgement of the instructor. It is recommended that there has to be a bank of objective questions covering each of the learning outcomes to ensure the validity and reliability of this type of test.

These tests have many forms as in the following:

Completion questions: They are characterized by the presence of a blank in which the learner writes the answers to the question given. When using this type of question, the following should be taken into account:

- The facts asked in the question must be true.
- The linguistic structure of the question is correct.
- The completion question is limited to the level of memorization and simple applications.

True and False Questions: It is a declarative sentence that the learner is asked to read and put (√) or (X) in the space provided for the phrase. These questions require the retrieval of facts, principles and generalizations. This type of question aims to measure the learner's ability to distinguish between true and false information. It is used to measure learning outcomes in the cognitive domain. When using this type of questions, the following should be taken into account:

- The sentences should be clear and short.
- Avoid questions that include more than one idea, especially if one idea is right or the other is wrong.
- Avoid using phrases such as “sometimes, often, most.”

- Avoid phrases attached to conditional sentences, because they cause confusion for the learner.
- Avoid negative statements.

Multiple-choice questions (MCQs): They are the most flexible and widely used objective questions because they are suitable for evaluating most of the learning outcomes that require understanding, reasoning, application, and analysis. These questions consist of two parts, the first is called the root of the question, in which the problem around which the question revolves is presented. It is in the form of an interrogative sentence or in the form of an incomplete sentence. The second part represents the phrases or sentences that range from (3-5), one of which constitutes the correct answer. Rules to be considered while using this type:

- The root of the question should be clear.
- Only one correct answer must be among the alternatives.
- The question root is free of any indication of the correct answer.
- It is preferable that the question stem contains the largest part of it and that the alternatives must be short.
- It is preferable not to use negative forms in the root or alternatives.
- It is preferable (if possible) not to use statements of the type “all of what has been mentioned, none of what has been mentioned”, except under certain conditions such as verifying the validity of these alternatives, and repeating it in the test so that it comes right sometimes and wrong at other times.

Pairing (or matching) questions: This type of question consists of two lists in that one of them contains the problems and the other the answers. The learner is asked to link the problem and its answer in any way the faculty member deems appropriate. This type is used to measure the learner's ability to link scientific concepts, principles and generalizations; here are some guidelines to be followed when using this type of question:

- All question problems must be from one topic.
- All question items must be on one page in front of the learner.
- The number of answer items must be more than number of problem items.
- Avoid using a long list of data.
- It is preferable that all items in the question can be relatively short.

Observation

It is an observation of the performance or behavior of the learner that is evaluated according to specific criteria. Through it, information about learning

outcomes that cannot be provided by other assessment methods can be obtained. It provides qualitative information that gives a high degree of confidence in the information when making decisions, and is frequently used to measure communication skills and psychomotor skills.

There are two types of observations:

• Simple Observation: It is a simplified form of observation carried out by the observer to observe the behavior of the learners as it happens automatically in real situations.

• Codified Observation: It is the pre-planned observation, in which the conditions and criteria of the observation are specified; a special card can be used to include those criteria.

• The Interview

It involves a kind of conversation between two people to collect data and information directly via a personal contact. It is used to explore learners' opinions on a specific topic, and diagnose some aspects of learners' personality such as self-confidence and self-understanding, and through which some emotional aspects can be checked.

• 4. Classroom Activities:

Tasks and actions practiced by the learners in the classroom and their performance is evaluated accordingly.

• Homework:

Subject-related tasks and activities that the learner does outside the classroom; they may include solving exercises, solving questions, drawings, reports, and so on.

• Practical tests:

The tests that measure the practical and performance skills which are used as objective means to measure psychomotor skills, and estimate efficiency and accuracy.

• 7. Achievement portfolio:

It is a bag containing a diverse and selected sample of learners' work chosen by themselves to reflect their achievements in the course, and through which it is judged on his performance in the course according to specific criteria. It is one of the modern methods that are very popular in many higher education institutions. This method helps to identify the learner's critical and creative thinking skills, organization skills, and autonomy.

Rules for teachers to keep in mind when using it:

Explain its subject accurately and in detail to the learners.
Help learners know what they expect from the portfolio.
Follow up on the construction of the bag and the growth of the learner and provide him with feedback progressively.
Encourage learners to exchange experience and information among themselves about the portfolio.
Hold continuous meetings with the learner to discuss the extent of his learning from the contents he collects.
Evaluate the portfolio comprehensively.

- Using the Achievement File in Assessment:

The followings can be specified when preparing the completion file:

- File contents: who collects it, when to collect it, and what it includes.
- Where to store it.
- Mechanism of evaluating the content of the file.
- Determining other assessment tools, such as: achievement tests along with the file.
- Continuous assessment of it through periodic meetings with the learner.

- Components of the bag:

The learner decides, in cooperation with a faculty member, colleagues, or on his own, the content of the bag. It may include the following items:

- Evaluated assignment sheets.
- Classroom and non-classroom activity sheets in which the learner participated.
- Study notes for the learner.
- The learner's drawings.
- Newspaper clippings he collected while carrying out his activities.
- Pictures of works he has carried out.
- Programs recorded on tape or CDs
- Explanation of the learner's work.
- Certificates of appreciation obtained by the learner.

- Determining an assessment method:

When choosing an assessment method, it is important to think firstly about determining the learning outcomes that the learner wants to achieve, or the abilities and skills that we seek to find in the learner. Table 8 shows the appropriate assessment methods for each field of the university learning outcomes:

جدول 1: طرق تقويم مخرجات التعلم

List of university learning outcomes			assessment methods						
field	No.	Items	achievement tests.	Note	Practical tests	class activities	The Interview	Assignments	achievement bag
Knowledge	1	The student should be able to understand the comprehensive knowledge, theories and principles related to the programmes	√		√	√	√	√	
	2	The student should be familiar with a broad and integrated range of knowledge and skills required for effective practice in a professional field.		√	√	√	√		
	3	The student should be able to realize deep knowledge, comprehensive understanding, and the ability to analyze and interpret the	√				√	√	√

List of university learning outcomes			assessment methods						
field	No.	Items	achievement tests.	Note	Practical tests	class activities	The Interview	Assignments	achievement bag
		field of specialization							
Skills	4	That the student be able to possess the skills of solving complex problems and finding innovative solutions.	√	√	√	√	√		
	5	The student is able to choose and use the most appropriate mechanisms for sharing the results to the beneficiaries.		√	√		√		√
	6	That the student be able to possess leadership skills, assume responsibility, and be willing to cooperate fully with others on joint		√	√		√		

List of university learning outcomes			assessment methods						
field	No.	Items	achievement tests.	Note	Practical tests	class activities	The Interview	Assignments	achievement bag
		projects and initiatives.							
	7	That the student be able to possess technical skills and effective communication skills.			√		√		
Merits	8	That the student be able to possess the ethics of the profession and Islamic values.	√	√		√			

10. Steps to construct an achievement test

There is a number of procedures that the test maker can follow to prepare a good achievement test which are as follows:

- Determining the purpose of the test or the job for which it is used by specifying the area of achievement, the target group, and the time of the test.
- Analyzing of the content of the educational material, as in the example attached to Table 8.
- Determining the learning outcomes to be measured by the learner.
- Building a specification table for the test to link objectives and content, as in the example attached to Table 8.
- Determining the form of the question and the way it is formulated so that each question measures a learning outcome for a specific academic content.
- Writing clear instructions showing the way to answer.

- Revising the questions linguistically and scientifically after writing them as to check any errors.
- Determining the mark of each question and writing them in the exam paper.
- Determining the time of the test.
- Defining test application procedures.
- Setting key answers to test questions.
- Determining the method of correcting the test and extracting the marks.

The course content can be analyzed by using tables to analyze the contents of the course that are placed on the right vertical side; then instructors identify the cognitive levels or areas of the target learning outcomes that are placed horizontally above. Then the weights of each knowledge level are determined according to each topic based on the allotted time, so that the total sum is 100%. After that, the questions are placed according to the specific weights for each topic and domain (relative weight x number of questions) as shown in Tables 9 and 10.

Course content	Cognitive level			Total
	Remember	Comprehension	implementation	
concepts	10%	15%		25%
circulars	15%	10%	10%	35%
Skills		5%	35%	40%
Total	25%	30%	45%	100%

Course content	Cognitive level			Total
	Remember	Comprehension	implementation	
concepts	10	15		25
circulars	15	10	10	35
Skills		5	35	40
Total	25	30	45	100

10.1 General Policies for Exams and Student Performance Assessment at the University

The process of measuring and evaluating the performance of students and trainees is an essential part of all educational curricula and cannot be separated

from the teaching and learning process. In order to ensure the quality of the evaluation process at the university, and to ensure its comprehensiveness and accuracy in measuring learning outcomes for all areas and for all educational programs offered by the university, and then benefiting from the results to improve the educational process, the university considered the need for clear policies for tests and other means of evaluating students' performance, including procedures and policies followed in the evaluation process. It also includes the tasks of all parties and individuals responsible for the process of evaluating students' performance and exams. These comprehensive and flexible policies have been taken into account so that they serve as a general framework through which the university various sectors and practical departments set their own executive rules.

10.2 Objectives of testing policies and assessing students' performance

The objectives of the policies of examinations and student performance evaluation are:

- Familiarizing the university sectors and scientific departments of the importance of the evaluation process and the need to develop evaluation strategies and tests.
- Setting general policies and procedures for developing tests and evaluating students' performance in all academic programs at the university.
- Introducing the ideal standard practices for testing procedures and evaluating students' performance at the university.
- Stimulating scientific departments and colleges to pay attention to measuring learning outcomes and to continuous development of methods for evaluating students' performance and tests to ensure the objectives of educational programs.
- Determining the procedures followed in the process of evaluating the performance of students and the tests that include the procedures before, during and after the evaluation process and the tests.
- Develop a clear vision and standard governance for the process of evaluating students' performance, including the responsibilities and roles of the entities and individuals associated with the examination process and evaluating students' performance at the University of the Future.

10.3 Standards for evaluating student performance

The university follows the effective evaluation standards, and is keen to adapt them when designing exams and selecting the various evaluation methods so that the exams meet all the following criteria:

- Credibility
- Constancy.
- Objectivity.
- Diversity.
- Inclusiveness.
- The possibility of applying the tests on the ground.

10.4 General Executive Rules for Examinations and Student Performance Evaluation

To implement the policies, the university applies the executive rules, which can be summarized as follows:

- The process of students' performance at the university is committed to the distinguished standard practices included in the third item (teaching and learning) related to the standards of the National Center for Academic Accreditation and Assessment.
- Academic programs, departments, and colleges are committed to paying attention to the continuous evaluation of students' performance, including semester work, periodic exams and ongoing assignments.
- Stimulating scientific departments, programs and faculty members to provide students with feedback on the development of their educational performance and skills, and for the feedback to be an essential part of the process of evaluating students' performance in all sectors of the university.
- Ensuring that the appropriate assessment performance is used to measure educational goals and motivate diversity in the use of assessment tools and tests in a way that contributes to the improvement of the measurement of outcomes and learning outcomes. The university highly concerns the development of test methods and the adoption of the latest global means for each specialization/program.
- Paying attention to measuring educational and professional skills using tests and evaluation methods to achieve the goal, including:
- Performance appraisal by observation.
- Evaluating students' work and products.
- Evaluation during teaching and during the training phase.
- Participation of an external assessor for the examination process (whenever possible), who is assigned to participate in the examination process and measure students' performance, and contribute to the improvement of assessment methods and to ensure learning outcomes.

• Academic programs, colleges and departments set controls that guarantee confidentiality in designing the exams.
• All study programs in all grades must include mechanisms for measuring learning outcomes, during and after the completion of the program.
• The importance of having a comprehensive plan for evaluating each academic program in the academic departments and colleges according to national and international standards including the method and periodicity of measurement for the program and courses. It is considered as the curriculum map in it and as a roadmap for the evaluation process for each academic program.
• Practical departments/faculties adopt well-known international standards to determine grades of success and failure whenever possible and adhere to the university's policy to determine the grades of failure and success in the course. This includes the use of standardized scientific methods such as:
• Hollow method.
• EBEL method.
• Boundary line method.
• Stimulating programs, scientific departments, and colleges to use the electronic examination methods available in the university systems if the appropriate infrastructure is available for them, in proportion to the objectives and learning outcomes and to ensure that the educational process is not affected; it is done highlighting the importance of constantly updating and developing question banks, in order to ensure the achievement of educational goals.
• Stimulating programs, scientific departments, and colleges to use electronic technologies and programs offered by the university to reveal the scientific reasoning process, with the need to inform students of the importance of avoiding it and the blame that may fall upon them if it is discovered.
• The administration of the academic program represented by the college/scientific department sets the detailed executive rules for evaluating students' performance in the academic program, while adhering to what is stated in these policies in addition to what is stated in the study and examination regulations at the Mustaqbal University.
• In addition to the executive rules for evaluating students in colleges and scientific departments at the university, the following policies are implemented:
• Formative evaluation and feedback policy.

- Test specification schedule policy.
- Policies for reviewing test questions.
- Scientific inference policies.
- Policies of internal and external audits for tests.
- Policies to verify the level of students' achievement of educational and learning outcomes.

10.5 Procedures for assessing student performance

The procedures for the assessment process are divided into procedures for formative or constructive evaluation and procedures for the final evaluation:

1. Formative or constructive assessment procedures

It refers to the means of evaluating students' performance and tests which aims at introducing students and training them to perform the various tests and giving them feedback on the level of their achievement of educational goals without counting this in their academic record. These procedures include the following:

- A schedule is designed for the formative evaluation process during the semester for each subject, including the date of each test, the scientific content it covers, and the type of questions used in the test.
- It is taken into account to give feedback to students after each constructivist test as to identify strengths and points that need improvement.
- Students with poor performance are identified by constructivist tests and the necessary measures are taken to improve their level or develop appropriate solutions to the difficulties they face.
- In addition to formal structural tests, other methods should be used in the classroom to evaluate students' performance structurally.
- Scores are not calculated on the constructivist tests.
- Each college sets executive rules that clarify the policies and procedures for the formative evaluation followed in it.

2. Final Assessment Procedures

The final assessment process goes through four stages:

- The stage of preparation for the assessment or pre- assessment.
- Assessment stage.
- Post- assessment 1
- Post- assessment 2

Each of these stages is characterized by a number of procedures that must be followed in order to ensure the quality of the process of assessing the

performance of students at Mustaqbal University, which is implemented in accordance with the Quality Department.

10.6 Methods of assessing students' performance

Diversity and the use of more than one method should be taken into consideration when implementing the methods of evaluating students' performance. Their relevance to the educational outcomes are considered, as well. These methods may include:

1. Assessment methods based on tests: These include both written and electronic achievement tests:
   - Objective: It includes multiple-choice tests of various types and levels of knowledge.
   - Non-objective: These include short and extended essay questions, taking into account that their levels of knowledge vary, and are not limited to remembering only, but also include questions that depend on critical thinking.
2. Performance-based evaluation methods: These include the following evaluation methods:
   - Presentations.
   - Field practical Assessment.
   - Simulation and role playing.
   - Discussion and debate.
   - Student's portfolio: the file includes the student's most important work during the semester which shows the development of the student's skills and knowledge during the year. The students should know this procedure at the beginning of the semester with the method of evaluation used, and the objective ratio applied in it.
   - Methods of evaluation by communication: It includes the following evaluation methods: interview, questions and answers.
   - Methods of evaluation based on observation:

     It includes different evaluation methods, for example
     - Objective practical test.
     - Objective clinical test.
     - Mini clinical test.
     - Assessment via direct observation of skills.
     - Test discussion cases.

   The scientific department/the subject professor should take into account the use of objective tools to evaluate students' performance with regard to performance-based evaluation, such as grade scales and evaluation lists.
3. Methods of self- evaluation /peer evaluation of each other: The methods of evaluation include the following:
   - Self-assessment.

- Learner's Diary.
- Learner profile and peer assessment.

The pyramid (Miller) may be used in choosing the different evaluation methods that are appropriate for the fields and educational outcomes at their different levels.

10.7 Responsibilities of Student Performance Evaluation

There are many responsibilities and departments assigned in the process of evaluating the performance of students; Consequently, this manual includes the various responsibilities of the evaluation process according to the bodies entrusted with its implementation in order to avoid any overlap in the responsibilities of such faculties. It is formulated through the organizational structure which includes all beneficiaries starting from the assistant president of the University for educational affairs and ending with the student who is the corner-stone of the educational process. It is very important in this respect to note that the faculties still have the freedom in the organizational process in terms of defining the authorities and responsibilities within the college, its programs and departments based on the executive regulations of evaluation and examinations.

The responsibilities of evaluating students' performance at the University include the following:

- Responsibilities of The Center of Plans and Curricula.
- Responsibilities of The Permanent Committee of Plans and Curricula.
- College responsibilities.
- Responsibilities of a faculty member.
- Student responsibilities and rights.

11. References

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Mustaqbal University

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Mustaqbal University Manual of Structure and Job Description

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Prepared by

Standing Committee for Quality Assurance

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