Teaching, Learning and Assessment Strategies

Pharos University in Alexandria

1st Edition

2020


بسم الله الرحمن الرحيم

كلمة رئيس الجامعة

تسعى جامعة فاروس بالإسكندرية نحو التقدم والتميز لتكون عنواناً للرقى وذلك من خلال توفير بيئة أكاديمية ملائمة للطلاب هدفها رعاية الإبداع والتميز والابتكار ، وإيمانا من الجامعة بأهمية إمداد المجتمع بخريجين قادرين على تلبية احتياجاته وتوفير متطلبات المهن وفرص عمل جديدة وفى ضوء ذلك تسعى إدارة الجامعة إلى توفير المواصفات التي ينبغي أن يتحلى بها الخريج الذي يعمل بالمهن المختلفة ويتصف التعليم الجيد في عصر المعرفة باكتساب الطالب القدرة على الإبداع والابتكار واستخدام التكنولوجيا والتعليم الذاتي والتعلم مدى الحياة ومن ثم التحول من نمط التعليم التقليدي إلى نمط التعليم الفعال وهو الأمر الذي يجعل من الضروري تطوير وتفعيل العملية التعليمية.

في ظل تحديات العصر المتسارعة واتساع آفاق المعرفة مع تعدد وتنوع التقنيات المستخدمة ومع متطلبات سوق العمل المتغيرة كان لزاما على الحياة الأكاديمية في جامعة فاروس بالإسكندرية ان تلعب دورا حيويا في تشكيل منهجيه التفكير والعمل لدي الطلاب الذين يمثلون مسؤولي المستقبل وان تعدهم ليكونوا قادرين على الاستمرار في مسار التعلم الذاتي وتنميه مهاراتهم الذهنية والمهنية ومعارفهم العلمية ليخرجوا عناصر فاعله في صناعه مستقبل الاوطان.

من هذا المنطلق سعي مركز ضمان الجودة بالجامعة لتعظيم دور المتعلم في مجال العملية التعليمية وإعادة رسم دور المعلم ليصبح في إطار الموجه والمرشد بدلا من الملقن وهو ما يعرف بالتحول من "التعليم" للتعلم". وعليه فقد قام المركز بإعداد استراتيجية للتدريس والتعلم والتقويم لإعداد خريج مؤهل لما سيكلف به من مهام ومسؤوليات في سوق العمل.

رئيس الجامعة

ا.د.محمود محى الدين

Pharos University in Alexandria is one of the Top Universities in Egypt that seeks to fulfill its different roles and social responsibilities in achieving comprehensive development. Pharos University dedicates its efforts to be a unique University that rapidly and usually copes with local and global changes as well as plays its important role in developing Faculties programs with new teaching, learning and assessment strategies which in turn improve the attributes of graduates and responds to needs of the labor market and economic conditions at both National and International levels.

The updated teaching, learning and assessment strategy of Pharos University creates opportunities to the students to learn, train, research, and acquire skills and provide them with comfort and a university environment that stimulates creativity and excellence. They will enjoy the experience of learning, thinking, discussing, expressing their opinions and solutions for different community problems.

The Educational process in Pharos University is implemented by a Team work of well dedicated staff members and their assistants who improves continuously their capabilities and applies the modern teaching, learning and assessment strategy to cope with the modern and updated tools in classrooms, labs, studios ……

Finally, I would like to thank the members of the committee responsible for their great efforts to update the teaching learning strategy of Pharos University in Alexandria.

Vice President for Education & Students

Prof. Nourhan Fanaki

No.	Name	Title
1.	Prof. Dr. Nourhan Fanaki	Vice President of Pharos University in Alexandria for Education and Students affairs
2.	A. Prof. Dr. Ahmed Allam	Director of Quality Assurance Center, Pharos University in Alexandria
3.	A. Prof. Faika Ibrahim	Deputy Director of Quality Assurance Center, Pharos University in Alexandria
4.	Dr. Inas Masoud	Faculty of Pharmacy and Drug Manufacturing, Pharos University in Alexandria
5.	Dr. Maha Farag	Faculty of Dentistry, Pharos University in Alexandria
6.	Dr. Wegdan Wagdy	Faulty of Engineering, Pharos University in Alexandria
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Mission

The mission of Pharos University is to provide qualitative higher educational opportunities that would enable students to develop advanced knowledge and skills, provide leadership and service to their communities, and improve the productivity of their organizations through the integration of practical, educational and research capabilities.

Vision:

Pharos University aspires to be one of the leading comprehensive universities in the region and across the globe. It strives to meet the needs of the community, cope with the continuing technological development and enhance its students' educational, professional, research and leadership abilities.

History of Teaching and Learning Strategy:

Teaching is giving lessons about a particular subject to a group of learners. While learning is gaining knowledge by studying, discussing being taught and experiencing. Students can learn without teachers, but teachers can't teach without learners[(1)].

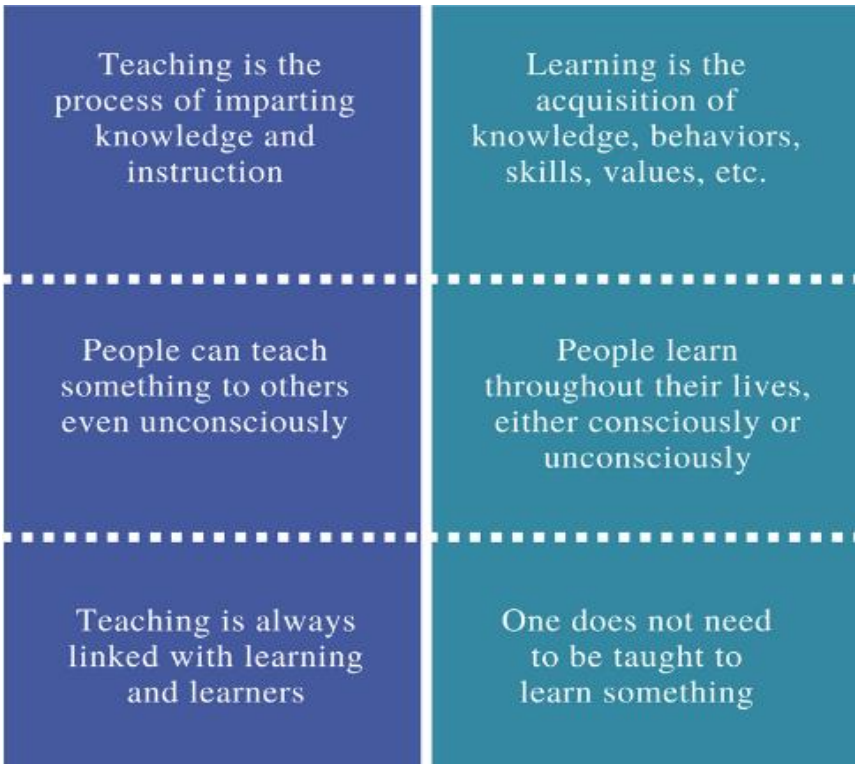


Figure (1): Shows the difference between teaching and learning [(1)]

Teaching and learning - the passing of knowledge from one generation to another - has been in existence from the earliest times of human civilization. It began in 1801, with a large piece of slate hung on the wall in a school in Scotland to provide information to a large audience at one time. In the US by mid-19th century, every classroom had a blackboard to teach students. The modern version of the blackboard is either green or brown board in late 1960s. The whiteboards came into use during the late 1980s. Projected aids have been used since 1420. The various devices used are the epidiascope, slide projector, overhead projector for transparencies and the micro projector. An instrument to project images from a horizontal surface onto a vertical screen was invented in the 1870s. By the 1960s, transparencies were in use in classrooms [(2)].

The 'Hyalotype', a transparent image of a photograph using actual black and white photographs on a glass slide that could be projected was invented in 1851. By 1916, the German company Agfa started producing colored lantern slides. The first version of PowerPoint was released by Microsoft in the year 1990[(2)].

Cell phones, palmtops, and handheld computers; tablets, laptops, and media players are included under mobile learning devices. With the evolution of technology, students achieved competence and interested in interactive learning. The education industry has moved from distance learning to e-learning and finally to m-learning as knowledge expanded exponentially and the demand escalated [(2)].

While using teaching aids with advanced technology, we must not forget the lessons from the past, striking a balance between embracing new methods of teaching and learning while upholding the timeless principles of education. The newer educational technology can be part of a comprehensive system for lifelong education, (Figure 2)[(2)].

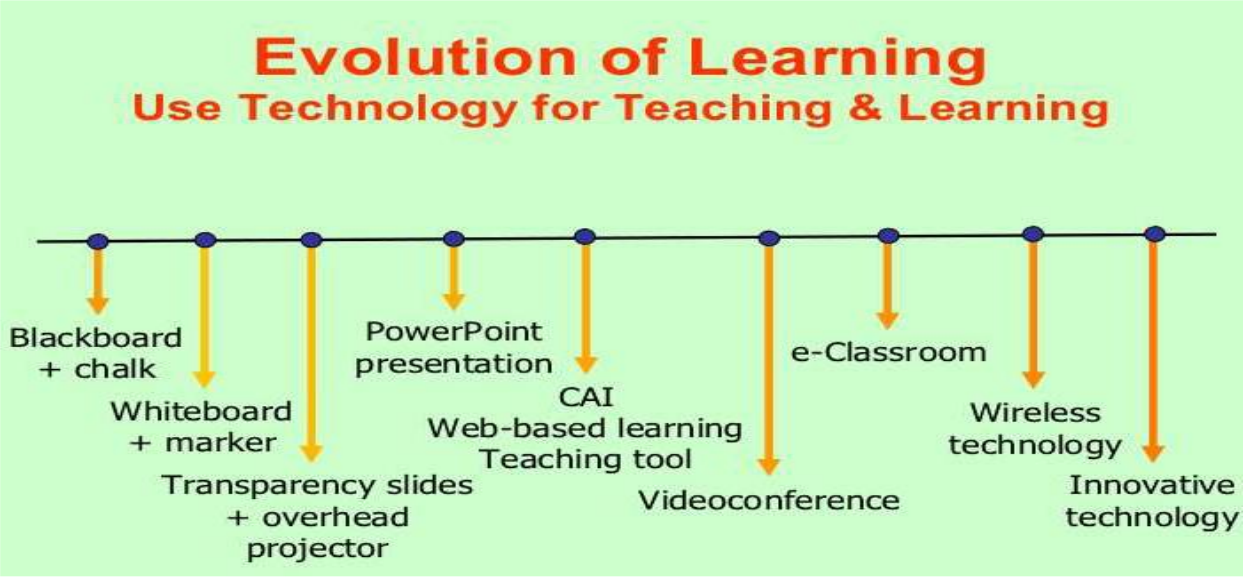


Figure (2): Shows the evolution of technology in teaching[(2)]

The interactive teaching and learning strategies described in this section are used to engage students in the resilience and wellbeing, drug education and road safety content included in each focus areas of this resource. Teachers should refer to this section of the resource for an explanation of the purpose and how to implement the strategy with their students. The strategies aim to promote critical and reflective thinking, research and evaluation skills that will help students to take positive action to protect, enhance and advocate for their own and other's health, wellbeing and safety[3].

Students use personal and social capability to work collaboratively with others in learning activities, to appreciate their own strengths and abilities and those of their peers and develop a range of interpersonal skills such as communication, negotiation, team work, leadership and an appreciation of diverse perspectives. The learning activities and strategies have been organized under the basic elements of an inquiry process [3]:

- **Tuning in** strategies:

They provide opportunity for students to explore their current knowledge, attitudes and values about health and safety issues. While working independently or collaboratively, students can use suggested graphic organizers to record and share information. Teachers will also be able to use evidence gathered from students' responses to plan a program to cater for the needs of all students [3].

- **Finding out** strategies:

They help students' identify gaps in their existing knowledge and understanding of key health, safety and resilience and wellbeing concepts, and work collaboratively to gather information through self-directed investigation. Students will be able to use the information gathered to generate and communicate ideas and record responses[3].

- **Sorting out** strategies:

They encourage students to sort, analyze, organize, review, compare and contrast information to further develop and consolidate their knowledge, understandings, skills, attitudes and values. Summarizing key information and clarifying relationships or associations between information and ideas will assist students to draw conclusions and apply their understandings [(3)].

- **Reflecting** strategies:

They allow students to identify, discuss and consider changes in their understandings, skills, attitudes and values. These elements are also fundamental to the decision-making process in the Health and Physical Education Learning Area and reflect self-management, social management, self-awareness and self-management skills [(3)].

According to the World Economic Forum 'the skill sets required in both old and new occupations will change in most industries and transform how and where people work." 'Ten Skills You Need to Thrive in the Fourth Industrial Revolution' in 2015 were upgraded in 2020 where creativity was the 10th skill in 2015 and became the 3rd one, in addition quality control and active listening in 2015 were replaced by emotional intelligence and cognitive flexibility in 2020 [(4)].

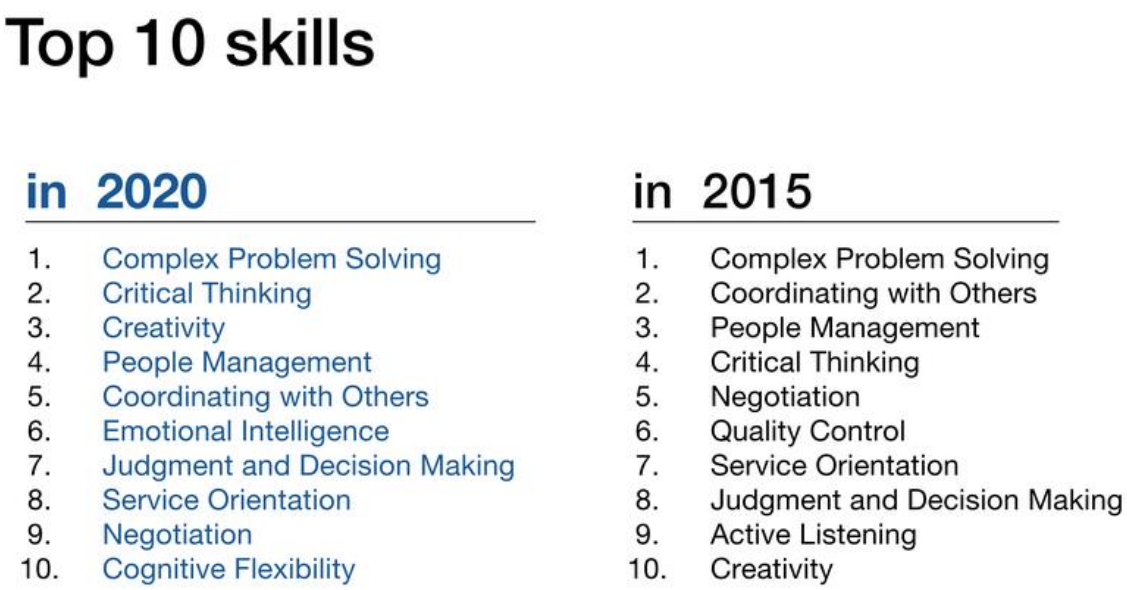


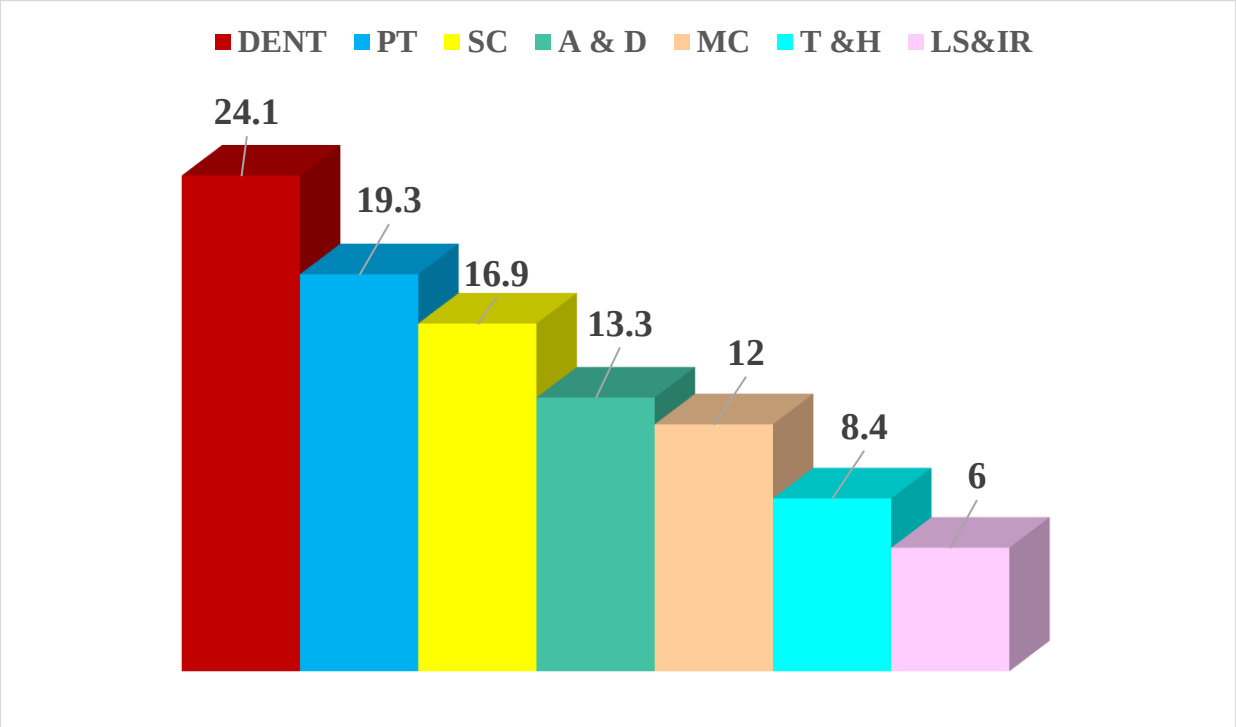
Figure (3): Shows the top ten skills that it needs to thrive in the fourth industrial revolution [(4)]

Believing from the Pharos University in Alexandria, the importance of development in the educational process, its Quality Assurance Center conducted a self-study in order to prepare a new strategy for teaching and learning for Pharos University that adopts the ten skills that it needs to thrive in the fourth industrial revolution.

Studying the Current Status for the Programs in PUA:

Accordingly, the Quality Assurance Center formed a committee to prepare new teaching and learning strategy. A power point presentation followed by a questionnaire were prepared to determine the teaching, learning and evaluation methods used in the different colleges of the university. The result of analyzing these questionnaires was as follows:

The total number of the staff members who participated were 83 and the highest percentage of participation was observed in the faculty of Dentistry (24.1%), Applied Health Sciences Technology (19.3 %), followed by Faculties of Physical therapy, Mass communication, Art & Design, Tourism & Hotels and finally Faculty of Legal Studies and International Relations (16.9%, 13.3%, 12%, 8.4% and 6.0% respectively).



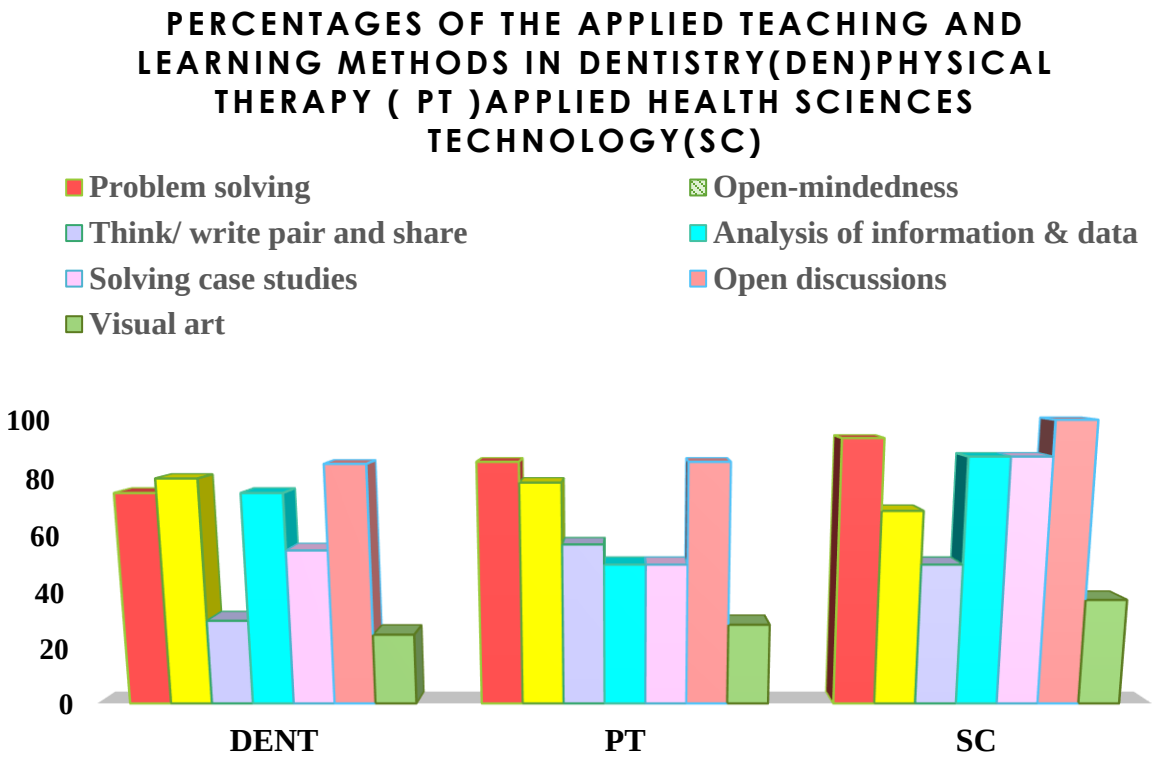
DENT: Dentistry PT= Physical Therapy SC: Applied Health Sciences Technology A &D: Art and Design MC: Mass Communication T&H: Tourism and Hotel Management LS &IR: Legal Studies and International Relations

Figure (4): Shows the percentages of the staff members participated from different faculties

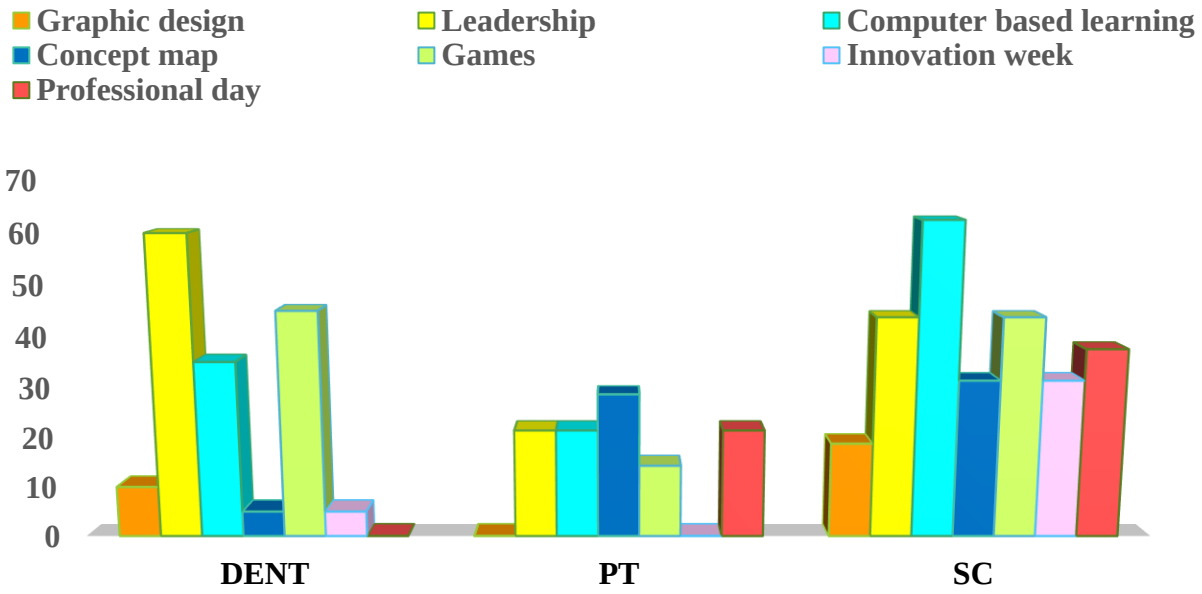
Table (1): The Percentages of the Applied Teaching and Learning Methods in Different Pharos Program:

Teaching & Learning Methods	DENT* (N=20)		PT** (N=14)		SC*** (N=16)	
	n	%	n	%	n	%
Problem solving	15	75	12	85.7	15	93.8
Open-mindedness	16	80	11	78.6	11	68.8
Think/ write pair and share	6	30	8	57.1	8	50
Analysis of information & data	15	75	7	50	14	87.5
Solving case studies	11	55	7	50	14	87.5
Open discussions	17	85	12	85.7	16	100
Visual art	5	25	4	28.6	6	37.5
Graphic design	2	10	0	0	3	18.75
Leadership	12	60	3	21.4	7	43.75
Computer based learning	7	35	3	21.4	10	62.5
Concept map	1	5	4	28.6	5	31.3
Games	9	45	2	14.3	7	43.75
Innovation week	1	5	0	0	5	31.3
Professional day	0	0	3	21.4	6	37.5
Design of brochure	11	55	4	28.6	7	43.75
Individual competitive learning	9	45	4	28.6	15	93.8
Graduation Projects	16	80	6	42.9	12	75
Communication	18	90	9	64.3	10	62.5
Community project	5	25	8	57.1	7	43.75
Site visit	2	10	5	35.7	8	50
Sales & Marketing	0	0	1	7.1	2	12.5
Flash cards	4	20	0	0	3	18.75
Peer teaching	6	30	9	64.3	11	68.8
Team competitive learning	10	50	8	57.1	7	43.75
Self-awareness	13	65	8	57.1	4	25
Social awareness	12	60	7	50	1	6.3
Self-management	19	95	9	64.3	6	37.5

*** Dentistry ** Physical Therapy *** Applied Health Sciences Technology**


PERCENTAGES OF THE APPLIED TEACHING AND LEARNING METHODS IN DENTISTRY(DEN)PHYSICAL THERAPY (PT)APPLIED HEALTH SCIENCES TECHNOLOGY(SC)
Problem solving
Open-mindedness
Think/ write pair and share
Analysis of information & data
Solving case studies
Open discussions
Visual art
100
80
60
40
20
0
DENT
PT
SC

(a)


Graphic design
Leadership
Computer based learning
Concept map
Games
Innovation week
Professional day
70
60
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40
30
20
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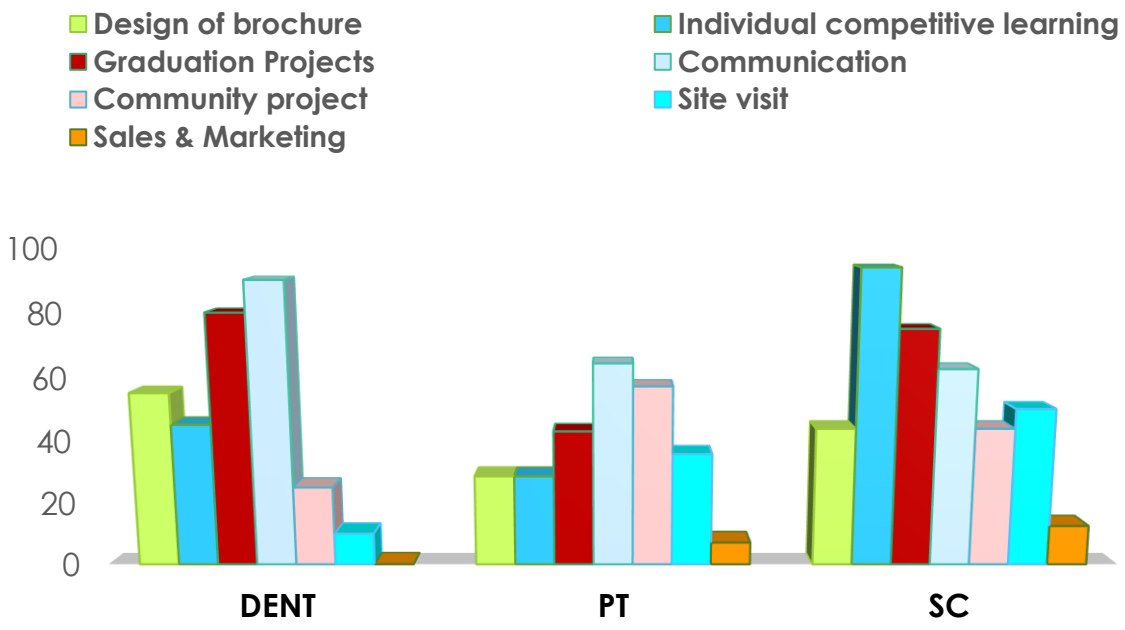
0
DENT
PT
SC

(b)



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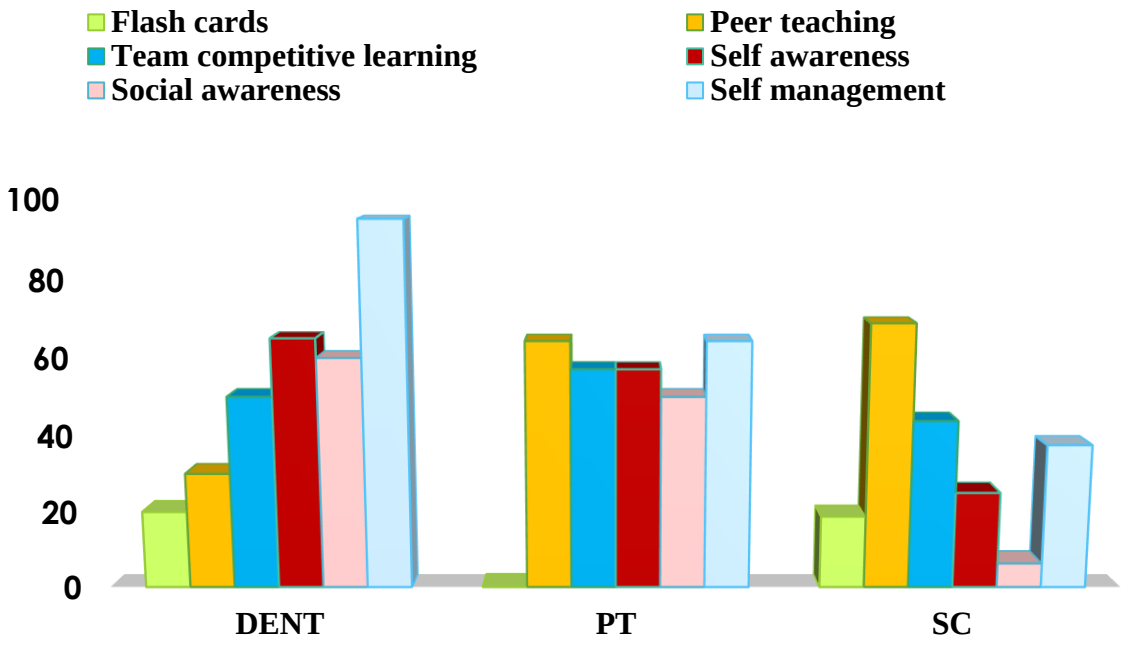


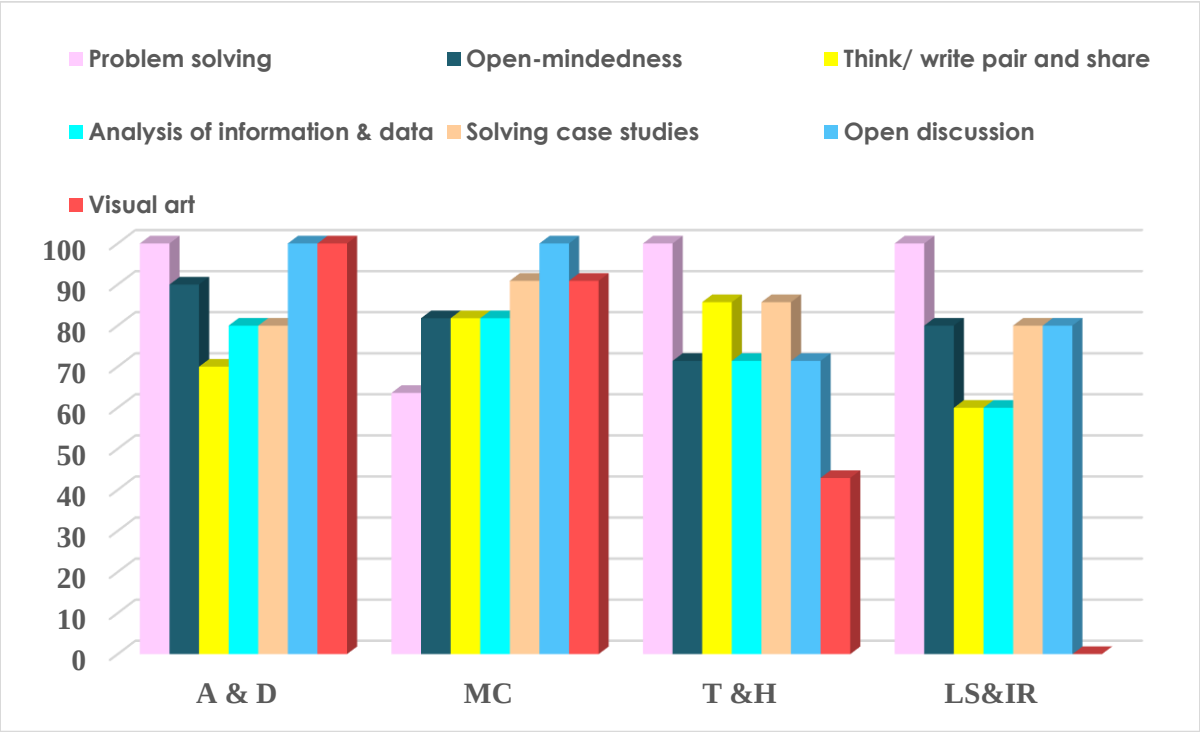
(d)

Figure (5): Shows the percentages of the different teaching and learning methods in Different Pharos Programs

Table (2): The Percentages of the Applied Teaching and Learning Methods in Different Pharos Program (Cont.):

Teaching & Learning Methods	A&D* (N=10)		MC** (N=11)		T& H*** (N=7)		LS&IR**** (N=5)	
	n	%	n	%	n	%	n	%
Problem solving	10	100	7	63.6	7	100	5	100
Open-mindedness	9	90	9	81.8	5	71.4	4	80
Think/ write pair and share	7	70	9	81.8	6	85.7	3	60
Analysis of information & data	8	80	9	81.8	5	71.4	3	60
Solving case studies	8	80	10	90.9	6	85.7	4	80
Open discussion	10	100	11	100	5	71.4	4	80
Visual art	10	100	10	90.9	3	42.9	0	0
Graphic design	8	80	6	54.5	0	0	1	20
Leadership	4	40	10	90.9	4	57.1	2	40
Computer based learning	7	70	6	54.5	6	85.7	0	0
Concept maps	7	70	8	72.7	5	71.4	1	20
Games	4	40	7	63.6	5	71.4	1	20
Innovation week	5	5	4	36.4	6	85.7	0	0
Professional day	6	60	3	27.3	2	28.6	1	20
Design	8	80	10	90.9	6	85.7	0	0
Individual competitive learning	6	60	4	36.4	4	57.1	**2**	40
Graduation Projects	10	100	11	100	6	85.7	0	0
Communication	7	70	11	100	4	57.1	3	60
Community project	9	90	11	100	7	100	4	80
Site visit	7	70	9	81.8	7	100	5	100
Sales & Marketing	7	70	7	63.6	4	57.1	0	0
Flash cards	3	30	3	27.3	2	28.6	3	60
Peer teaching	9	90	11	100	6	85.7	3	60
Team competitive learning	6	60	7	63.6	4	57.1	3	60
Self-awareness	7	70	10	90.9	2	28.6	2	40
Social awareness	6	60	10	90.9	0	0	2	40
Self-management	4	40	10	90.9	3	42.9	2	40

Art and Design** * Mass Communication** *****Tourism and Hotel Management**
******Legal Studies and International Relations**


Problem solving
Open-mindedness
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Open discussion
Visual art
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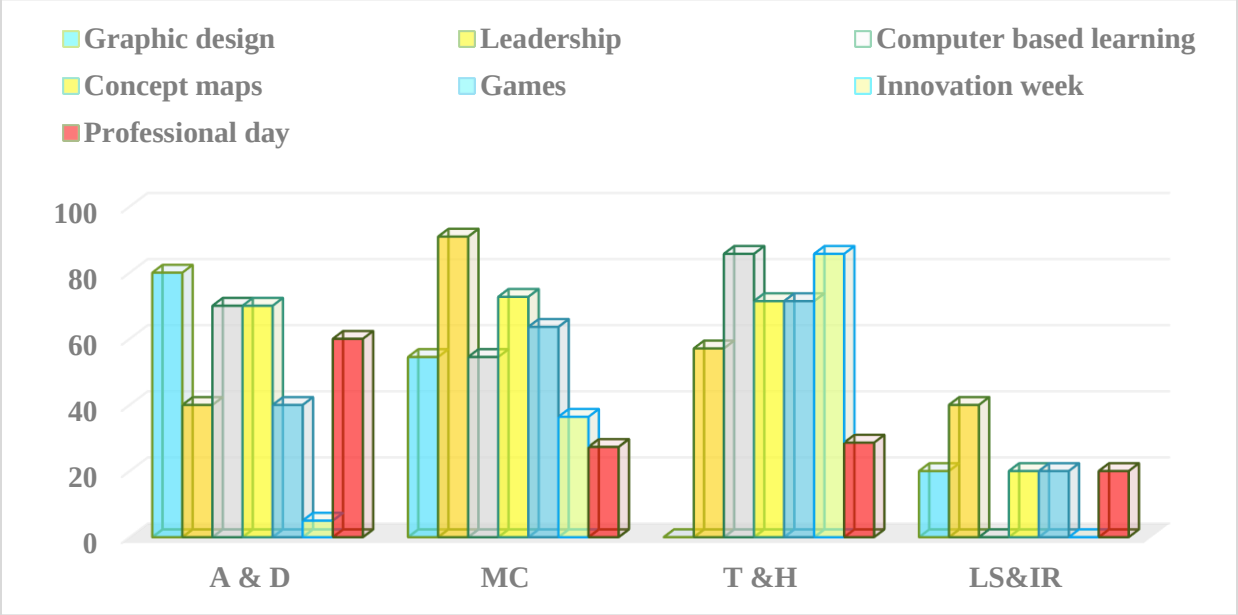
A & D
MC
T &H
LS&IR

(a)


Graphic design
Leadership
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Innovation week
Professional day
100
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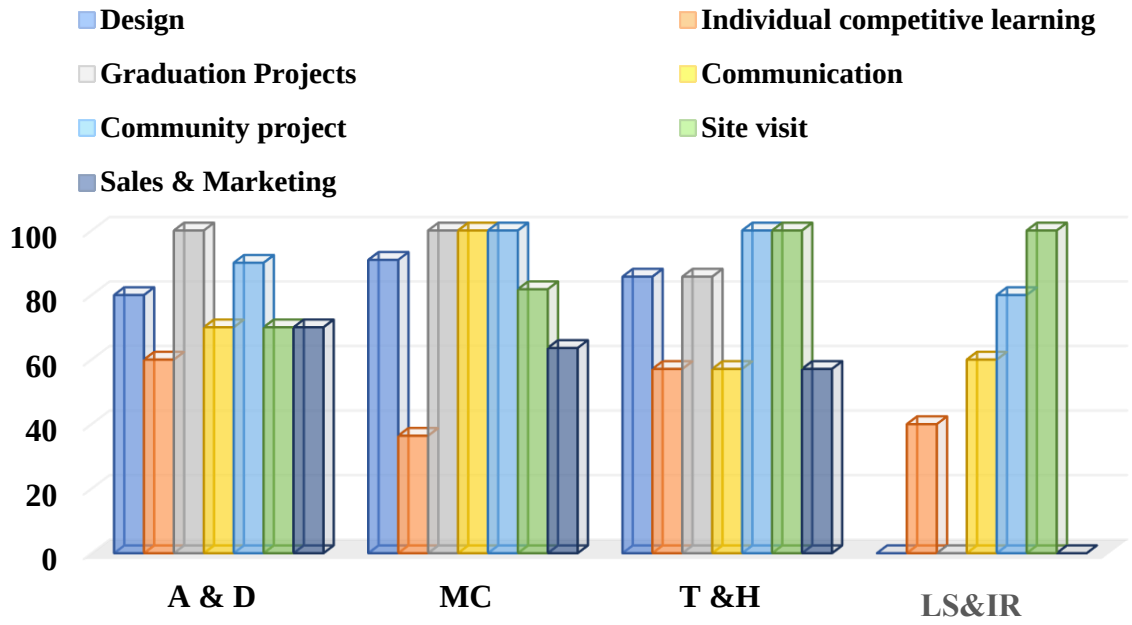

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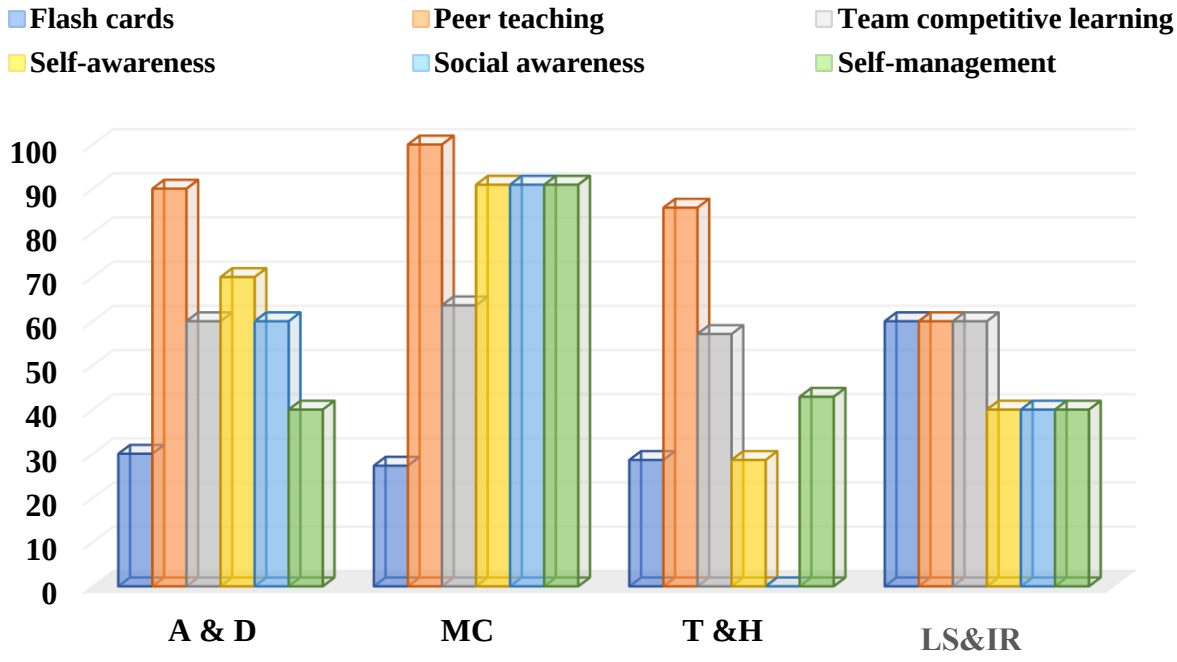

(d)

Figure (6): Shows the percentages of the different teaching and learning methods in Different Pharos Programs (a, b, c &d)

Proposed Teaching and Learning Strategies

Pharos University in Alexandria

I- The Job Skills at 2020:

1. Complex Problem Solving:

Complex problem-solving skills are the developed capacities used to solve novel, ill-defined problems in complex, real-world settings. Complex problem solving takes place for reducing the barrier between a given start state and an intended goal state with the help of cognitive activities and behavior. Start state, intended goal state, and barriers prove complexity, change dynamically over time, and can be partially intransparent. In contrast to solving simple problems, with complex problems at the beginning of a problem solution the exact features of the start state, of the intended goal state, and of the barriers are unknown. Complex problem solving expects the efficient interaction between the problem-solving person and situational conditions that depend on the task. It demands the use of cognitive, emotional, and social resources as well as knowledge [(5)].

1.1. Case Study

1.2. Role play

2. Critical thinking:

Critical thinking refers to the ability to analyze information objectively and make a reasoned judgment. It involves the evaluation of sources, such as data, facts, observable phenomena, and research findings [(6)].

2.1. Analysis: gathering information & data

2.2. Data analysis

2.3. Think/write pair and share

2.4. Flash Cards

2.5. Solving case studies

2.6. Community Based Learning

2.7. Graduation Projects

2.8. Site Visit

2.9. Computer Based Learning

3. Creativity:

Creativity as a set of skills and attitudes that anyone is capable of: tolerating ambiguity, redefining old problems, finding new problems to solve, taking sensible risks, and following an inner passion. All of this involves a creative eye that can take a different approach from all other approaches [7].

- Flexibility
- Conceptualization
- Curiosity
- Imagination
- Drawing Connections
- Inferring
- Predicting
- Synthesizing
- Vision

3.1. Open-Mindedness
3.2. Analysis: gathering information & data
3.3. Individual Competitive Learning
3.4. Innovation Week
3.5. Concept map
3.6. Community Projects
3.7. Leadership
3.8. Graduation Project
3.9. Graphic Design
3.10. Visual Art
3.11. Design Brochure, leaflet, questionnaires, checklist & Scenario
3.12. Sales & Marketing
3.13. Pharmacy, Engineering and Professional Day

4. Coordinating/Collaborating with others:

Encourage students of mixed abilities to work together by promoting small group or whole class activities. Through verbally expressing their ideas and responding to others your students will develop their self-confidence, as well as enhance their communication and critical thinking skills which are vital throughout life[8].

4.1. Think/write pair and share
4.2. Games/Puzzles
4.3. Experiment
4.4. Concept map/Design sketches
4.5. Graduation Project
4.6. Community Based Projects
4.7. Peer Teaching
4.8. Open Discussion
4.9. Team Competitive Learning

5. Emotional Intelligence :

Emotional intelligence (otherwise known as emotional quotient or EQ) is the ability to understand, use, and manage your own emotions in positive ways to relieve stress, communicate effectively, empathize with others, overcome challenges and defuse conflict. Emotional intelligence helps you build stronger relationships, succeed at school and work, and achieve your career and personal goals. It can also help you to connect with your feelings, turn intention into action, and make informed decisions about what matters most to you [9].

Emotional Intelligence isn't something you achieve in one day but a continuous process which involves working on these following aspects [10]:

1- **Acknowledge emotions –** To not just being emotional, but to understand the origin of your emotions and acknowledge them would help you to handle them in a better way. This also involves showing genuine interest while engaging in conversation with others and retaining what they say, so as to connect with them better.

2- **Differentiate and analyze emotions –** Learn to differentiate and analyze the emotions by acknowledging them and act accordingly. Not all emotions are the same and not every individual feels the same emotion in necessarily the same way. So to better understand how one reacts to it you need to have the ability to see the difference between them.

3- **Accept and appreciate emotions –** Growing to become a more emotionally intelligent person requires one to accept and appreciate their emotions. To not let their emotions take control of them, but to be able to control them. This happens when you have a positive outlook towards the different facets of emotions and learn to appreciate them because emotions are not good or bad, they just receive these connotations from society.

4- **Reflect on your emotions and their origin –** Try to understand why you reacted in a certain way in a certain situation, try to reflect back on those emotions you felt and that is how you will be able to track down the reason behind them. When you learn this well, you will be in a better position to handle your emotions and also understand yourself better. When you understand yourself better, then you can make sure that others also see you in the same light.

5- **Handle your emotions –** Others might advise you to handle your emotions in a lot of ways, but you can only work the best way out to handle them. This is because only you can reach the origin of your emotions and understand how your emotions erupt and find out the best possible way to not freak out in a situation when things are not going according to you, instead use your methods to avoid these scenarios and learn to perfectly deal with your emotions.

6- **Handle the emotions of others –** When you learn the art of handling your own emotions, then you can also handle the emotions of others or help them in handling it by themselves. You can understand better how an individual deal with emotions and use them to build better connections with others on an emotional level. This helps you in your professional as well as your personal life.

5.1. Projects

5.2. Open Discussion

6. Cognitive Flexibility:

Cognitive flexibility refers to our ability to disengage from one task and respond to another or think about multiple concepts at the same time. Someone who is cognitively flexible will be able to learn more quickly, solve problems more creatively, and adapt and respond to new situations more effectively, which is why it's so important in both educational settings and the workplace [12].

6.1. Community Project

6.2. Concept map

II- The Methods and Tools

1- Analyzing:

- Analyzing gathering information

Analyzing information is checking sources and accuracy of information. The analysis could simply be adding up numbers and averaging them. Or comparing information to examine the relationship of one thing to another or two things together. It could be combining pieces of data in new and interesting ways [13].

- Interviews.
- Questioning.
- Questionnaires.
- Observation.
- Study of existing organizational documents, forms and reports.

2- Data analysis:

It can provide a snapshot of what students know, what they should know, and what can be done to meet their academic needs. ... This **data**-use support includes helping teachers use assessment results and student work samples to identify and address learning difficulties and academic needs [14, 15].

Data can be collected using three main types of surveys: censuses, sample surveys, and administrative data. Each has advantages and disadvantages. As students, you may be required to collect data at some time [14, 15]. ...

- Example 1: The Census.
- Example 2: A sample survey.
- Example 3: Administrative data.

3- Field-Based Learning

In field-based learning, teaching is extended to a site outside of the classroom or laboratory, exposing students to a real-world setting. Students learn though direct interaction with an environment that reflects taught concepts rather than learning through indirect presentations of the setting such as textbooks or lectures [16-19].

4- Flash cards:

A flash card is a card containing a small amount of information, held up for students to see, as an aid to learning. These cards or tickets give teachers immediate feedback from students, which is extremely useful for teachers and helps them guide which way a lesson should go. The information that the students give is used as a benchmark to measure learning against, which is very useful [20].

5- Competitive learning (Team / Peer):

Competition learning enhance students' participatory motivation and encourage deeper engagement in learning activities. It can be either group competition or peer competition. **Team competition**, where all group members have a common goal to achieve through teamwork. Students are not only individually accountable, but share group responsibility for reaching the common goal. It has a positive impact on student learning attitude and improved achievement [21, 22].

Peer competition highlights the dyadic competition that takes place between two individuals. One of the challenges of peer competition lies in finding a suitable peer as an opponent who will challenge the student to learn. One student competes against another student. The tendency to self-evaluate by comparing ourselves to others—is an important source of competitive behavior''. Specifically, the classroom is a small society where students cannot avoid comparing themselves with others [21, 22].

6- Problem Solving

Problem solving is another critical thinking skill that involves analyzing a problem, generating and implementing a solution, and assessing the success of the plan. Employers don't simply want employees who can think about information critically. They also need to be able to come up with practical solutions [23, 24].

- Attention to Detail
- Clarification
- Decision Making
- Evaluation
- Groundedness
- Identifying Patterns
- Innovation

7- Open-Mindedness:

It is a willingness to try new things or to hear and consider new ideas. To think critically, you need to be able to put aside any assumptions or judgments and merely analyze the information you receive. You need to be objective, evaluating ideas without bias [23, 24].

- Diversity
- Fairness
- Humility
- Inclusive
- Objectivity
- Observation
- Reflection

8- Innovation:

It is a simple process that involves breaking down a problem to understand it, generating ideas to solve the problem and evaluating those ideas to find the most effective solutions. It is a special form of problem solving in which the solution is independently created rather than learned with assistance. Creative problem solving requires more than just knowledge and thinking [5].

Innovation Steps

1. Clarify and identify the problem
2. Research the problem
3. Formulate creative challenges
4. Generate ideas
5. Combine and evaluate the ideas
6. Draw up an action plan
7. Do it! (implement the ideas)

9- Peer teaching:

Peer teaching refers to the use of teaching and learning strategies in which students learn with and from each other without the immediate intervention of a teacher. Help from peers increases learning both for the students being helped as well as for those giving the help. For the students being helped, the assistance from their peers enables them to move away from dependence on teachers and gain more opportunities to enhance their learning. For the students giving the help, the cooperative learning groups serve as opportunities to increase their own performance. They have the chance to experience and learn that "teaching is the best teacher" [25, 26].

10- Open discussion:

It is a free verbal exchange of ideas between group members or teacher and students. For effective discussion the students should have prior knowledge and information about the topic to be discussed.

A problem, an issue, a situation in which there is a difference of opinion, is suitable for discussion method of teaching [23, 24].

11- Concept mapping:

A concept map is a visualization of knowledge that is organized by the relationships between the topics. Concept maps have been proposed as a tool that can help develop and exercise higher-order thinking skills, including critical thinking, reflective thinking, synthesis, analysis, among others [8,9].

Implementing concepts maps are as simple (and complex) as:

1. Determine the topic, domain, question or problem that the concept map will focus on
2. Brainstorm key concepts related to this prompt
3. Determine and label the relationships between key concepts and the prompt and across key concepts (start to draw map)
4. Finalize the layout of the concept map (if there are hierarchical topics, the highest level should be at the top and examples and specific details at the bottom)

12- Communication

It is the process of passing information and understanding from one person to another." In simple words it is a process of transmitting and sharing effective ideas, opinions, facts, values etc. from one person to another or one organization to another. To engage critical thinking in a group, there is a need to work with others and communicate effectively to figure out solutions to complex problems [27].

- Active Listening
- Assessment
- Collaboration
- Explanation
- Interpersonal
- Presentation
- Teamwork
- Verbal Communication
- Written Communication

13- Community Based Projects:

Community-Based project is an approach of learning that inspires staff member to develop creative and tangible research projects that offer students "real world" experiences. It provides direct benefit to the community through incorporating service learning and community service into the curriculum of courses irrespective of major. Students who participate in Community-Based projects have an opportunity to gain competencies in research design and practice, marketing skills and an understanding of the nonprofit sector, while gaining a great opportunity to engage with community members and contribute with them. It also fosters students' awareness about their community, and enhance their participation in the communities as well as it measures the ability of students in making differences and have a role in a community [28-31].

14- Graphic or Visual Organizers:

The use of visual supports is an especially powerful teaching strategy. Graphic organizers, often also referred to as key visuals, allow students to understand and represent relationships visually rather than just with language, providing helpful redundancy in making meaning from a text. Graphic organizers can be used to record, organize, compare, analyze, and synthesize information and ideas. Examples of common graphic organizers, include the following: timeline, cycle diagram, T-chart, Venn diagram, story map, flow chart, grid, web, and problem-solution outline [23, 24].

15- Role Play:

Role play allows students to simulate a variety of situations, using language for different purposes and audiences. Through role plays, students can practice and explore alternative solutions to situations outside the classroom. The role-play strategy also allows students to take different perspectives on a situation, helping them to develop sensitivity and understanding by putting themselves in the shoes of others. An important phase in any role-playing activity is the follow-up. Debriefing after a role play allows students to analyze the role-play experience and the learning in the activity [23, 24].

16- Visual Art:

Art Appreciation / Art Criticism: Whole Group Learning in which the whole class can collaborate on a single studio project without total chaos breaking out. Because of the way students' comments connect and build on each other, art criticism activities are particularly suitable for whole class instruction. The steps of art criticism are: describing, analyzing, interpreting and judging [23, 24].

17- Simulation:

Through simulation, students can participate in a replication of real or hypothetical conditions and respond and act as though the situation were real. Simulation is useful when students are learning about complex processes, events, ideas, or issues, or when they are trying to understand the emotions and feelings of others. Simulation requires the manipulation of a variety of factors and variables, allowing students to explore alternatives and solve problems and to take values and attitudes into consideration when making decisions and experiencing the results. Simulation can take a number of forms, including role playing, dramatizations, and enactments of historical events [23, 24].

18- Sketching to Learn:

Through making quick sketches, students can represent ideas and their responses to them during or immediately following a presentation or lesson. They can also take notes in pictorial or graphic form while reading a story for a dance or drama project. Sketching to learn is often used during a listening or viewing experience in order to help students understand new or complex concepts or techniques [23,24].

19- Leadership:

"**A leader is one who knows the way, goes the way, and shows the way**." Irrespective of how you define a leader, he or she can prove to be a difference maker between success and failure. Effective leaders are essential to any organization. They can help build strong teams within a business and ensure projects, initiatives or other work functions are performed successfully. Because the skills of a leader involve multiple interpersonal and communication skills, anyone can exercise and hone their leadership abilities [32, 33].

20- Game-Based Learning:

The core concept behind game-based learning is teaching through repetition, failure and the accomplishment of goals. Video games are built on this principle. The player starts off slow and gains in skill until they're able to skilfully navigate the most difficult levels. Game-based learning takes this same concept and applies it to teaching a curriculum. Students work toward a goal, choosing actions and experiencing the consequences of those actions. They actively learn and practice the right way to do things. The result is active learning instead of passive learning [34, 35].

21- Flipped Classroom:

A flipped classroom is a type of blended learning where students are introduced to content at home and practice working through it at faculty. This is the reverse of the more common practice of introducing new content at faculty, then assigning homework and projects to be completed by the students independently at home [36].

In this blended learning approach, face-to-face interaction is mixed with independent study–usually via technology. In a common Flipped Classroom scenario, students might watch pre-recorded videos at home, then come to faculty to do the homework armed with questions and at least some background knowledge [36].

The concept behind the flipped classroom is rethink when students have access to the resources, they need most. If the problem is that students need help doing the work rather than being introduced to the new thinking behind the work, than the solution the flipped classroom takes is to reverse that pattern [36].

Guidelines for Lecturers for a better enhanced learning environment [34, 35].

- A sufficient time in preparing the process and steps of discussion is Crucial.
- Games can be used to create a virtual environment that recreates realistic situations (simulations). This way, users (students) learn to function in a safe context, but with rules, interactivity and feedback.
- A playful learning environment makes students accept rules more easily.
- After opening the discussion, the lecturer should play the role of a facilitator involving every one and at the end should summarize the discussion.
- Students are especially motivated when they feel they can control the environment and establish relationships with other players. Game-based learning methods incorporate competitive aspects (rankings, prizes, score), which serve as motivators while they ensure that students will interiorize and embrace the knowledge.
- A lecturer should give value to all students' opinions and try not to allow his/her own difference of opinion, prevent communication and debate
- Game-based learning can be applied as a group activity to reinforce curriculum content.
- To guarantee and maintain the motivation of participants, Game based learning is recommended.
- Field based learning stimulates higher understanding and comprehension of previously learned classroom material.
- Relaxed environment should be created to foster the process of discussion.
- Lecturers who would like to seek immediate feedback from students, which is extremely useful should use flash cards.
- The use of project based learning provides opportunities for students to learn traditional academic contents and understand how it applies to the real world.

Assessment Strategy in Pharos University in Alexandria

According to the Exam Administration Guide of Pharos University in Alexandria (the second edition, 2020), the assessment strategy was included.

I- Assessment of Knowledge and its Application:

The most common method for the assessment of knowledge is the written method including the following questions:

1- **Multiple choice questions (a-type: one best answer):**

These are the most commonly used question type. They require examinees to select the single best response from 4 options [37, 38].

2- **Multiple choice questions (r-type: extended matching items):**

One approach to context-rich questions is extended matching questions or extended matching items (EMQs or EMIs) [39].

3- **Key features questions:**

Short clinical cases or scenarios which are followed by questions [40].

4- **Short answer questions (SAQS):**

These are open-ended questions that require students to generate an answer of no more than one or two words, rather than to select from a fixed number of options [41].

5- **Essay questions:**

Essay questions are used when candidates are required to process, summarize, evaluate, supply or apply information to new situations [41].

6- **Modified essay questions (MEQS):**

This is a special type of essay question that consists of a case followed by a series of questions that relate to the case and that must be answered in the sequence asked [42].

7- Script concordance test (SCT):

A new format that is slowly gaining acceptance in health professions education is the script concordance test (SCT). This format is designed to test clinical reasoning in uncertain situations15 and is, as the author puts it, based on "the principle that the multiple judgments made in these clinical reasoning processes can be probed and their concordance with those of a panel of reference experts can be measured" [43].

II- Assessment of Performance

Checklists and rating scales are used as scoring methods in various forms of assessments, including Objective Structured Clinical or Practical Examinations (OSCE, OSPE), Direct Observation of Procedural Skills (DOPS), peer assessment, self-assessment, and patient surveys [44].

1- Checklists:

Checklists are useful for assessing any competency component that can be broken down into specific behaviors or actions that can be either done or not done [45].

2- Rating Scales:

Rating scales are widely used to assess behavior or performance. They are particularly useful for assessing personal and professional attributes, generic competencies and attitudes [46].

3- Objective structured clinical examination (OSCE):

The OSCE is primarily used to assess basic clinical skills. Students are assessed at a number of "stations" on discrete focused activities that simulate different aspects of clinical competence. At each station standardized patients, real patients or simulators may be used, and demonstration of specific skills can be observed and measured. OSCE stations may also incorporate the assessment of interpretation, non-patient skills and technical skills. Each student is exposed to the same stations and assessment. OSCE stations may be short or long (5-30 minutes) depending on the complexity of the task. The number of stations may vary from as few as eight to more than 20 although an OSCE with 14-18 stations is recommended to obtain a reliable measure of performance [44, 47, 48].

4- Short cases:

Short cases assessment is commonly used in several places to assess clinical competency. In this type of assessment, students are asked to perform a supervised focused physical examination of a real patient, and are then assessed on the examination technique, the ability to elicit physical signs and interpret these findings correctly[49,50].

5- Long cases:

The long case has traditionally been used to assess clinical competence. In the long case, students interview and examine a real patient and then summarize their findings to one or two examiners who question the students by an unstructured oral examination on the patient problem and other relevant topics [51].

6- 360° Evaluation:

360° evaluation is a multi-source feedback assessment system that evaluates an individual ' s competency from multiple perspectives within their sphere of influence. Multiple evaluators, who may include superiors, peers, students, administrative staff, patients and families, rate student performance in addition to the student doing a self-assessment. The rating scales vary with the assessment context. 360° evaluations have been used to assess a range of competencies, including professional behaviors, at undergraduate and postgraduate levels [52, 53].

7- Mini clinical evaluation exercises (MINI-CEX):

Mini-CEX are based on tutor observations of routine interactions that supervising clinicians and students have on a daily basis. These student-patient encounters occur on multiple occasions with different evaluators and in different settings. They are relatively short observations (15-20 minutes) in which performance is recorded on a 4 point scale where 1 is unacceptable, 2 is below expectation, 3 is met expectations, and 4 is exceeded expectations[52].

8- Portfolios:

A portfolio is a collection of student work which provides evidence that learning has taken place. It includes documentation of learning and progression, but most importantly a reflection on these learning experiences. Portfolios documentation may include case reports; record of practical procedures undertaken; videotapes of consultations; project reports; samples of performance evaluations; learning plans, and written reflection about the evidence provided. Scoring methods include checklists and rating scales developed for a specific learning and assessment context and are usually carried out by several examiners who probe students regarding portfolio contents and decide whether the student has reached the required standard[54].

III- Oral Exam:

By Using Viva Card:

1- Introductory question (10%)

2- Default question.

3- Focus question (70%)

4- Excellency (20%)

5- Escape question.

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