

# The Role of Teaching Using the Strategy of Brainstorming in the Development of Life Skills in the Tenth Grade Students from the Point of View of Teachers

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## Abstract

The study aimed to identify the role of teaching using the strategy of brainstorming in the development of life skills in the tenth grade students from the point of view of teachers, the researcher used descriptive analytical approach to achieve the objectives of the study. The study sample consisted of (200) male and female teachers selected randomly. The researcher used the questionnaire as a tool for study, which consisted of (45) paragraphs divided into four areas (decision making skill, interpersonal skills, time management skill and stress management skills). The results showed that the ability to communicate with others came first, followed by decision-making skill, then time management skill, and in the last rank the skill of dealing with stress. The researcher recommended the use of modern teaching strategies in teaching and getting away as much as possible about the method of indoctrination.

**Keywords:** brainstorming strategy, life skills.

## Introduction

The importance of education as one of the most important tools of civilizational building is becoming increasingly important as it is an important means of preparing the human element that constitutes the basis of social, economic and political development. Education plays a major role in the success of all development plans as an effective factor for achieving this progress. Efforts have been made and are still being made to improve and improve education throughout its various stages.

The level of basic education is at the forefront of the various stages of education, which ends in the tenth grade at the age of (16) years of the student, and given the size of this education and importance as a key stage should be obtained by all students, it is the basis for the growth of the personality and the formation of its characteristics and development to raise a good and useful citizen, and prepare a generation aware of its responsibility in the face of future challenges, in addition to the stage of basic education is a mandatory stage through which the student gets the minimum of knowledge and science diverse, and life skills multiple methods and methods and various activities and strategies for their development. (Bayoumi, 2011).

The importance of the variety of teaching methods, strategies and activities used by the teacher in teaching is that it expands the horizons of the educational process and helps students to develop and encourage their life skills, such as developing research and discovery skills, problem solving, communication with others, decision-making, enriching their knowledge, for self-learning, and to provide students with skills that will enable them to benefit from the rapid developments in information systems ... by learning about the methods, methods and strategies used by teachers and their use in teaching (Al-Sumairi, 2006). The strategy of brainstorming is one of the most prominent modern methods used in the field of education, which is an educational method that can be used with students and be free to think about them freely in a matter or problem, in search of the largest number of possible solutions, ideas flow abundantly and quickly and without restraint (Al Bakr, 2007), then comes the stage of structural structure to display and arrange ideas and criticism and fix the most correct and appropriate. (Abu Sinina, 2008).

Some studies suggest that the implementation of the brainstorming strategy in education will have results in providing students with many different knowledge and life skills. Life skills constitute the necessary abilities to achieve adaptive positive behavior, which enables the student to effectively deal with the requirements of everyday life (John, 2008). (Hamed, 2004). It also helps students to manage their lives, to live up to their requirements, to deal positively with their problems, and to meet the challenges that they face. Imposed by the age, and effective communication with others. (Hindy, 2002).

Based on the importance of the subject of life skills, and the role of teaching using modern strategies in the learning process emerged this study to identify the role of teaching using the strategy of brainstorming in the development of life skills in the tenth grade students from the perspective of teachers

## Study problem and questions:

Many of the literature pointed out that the traditional method of teaching in education can not be ignored. It is that it makes the teacher a center or focus of the process of education and the active element in it. The teacher is the one who casts, explains and explains. The students' attitude is negative. Modern teaching methods and

diverse techniques that make an active contribution to the process of education, especially the achievement of students and the development of life skills, and in theory there is a prior agreement on the importance of developing the thinking skills of students and considered one of the objectives of teaching, Which is characterized by thinking skills, especially brainstorming method, which is one of the modern educational methods that reveal the mental abilities of students, but some studies showed the absence of this skill in the classroom, as study (Slim, 2011).

Therefore, the problem of the study emerged through the researcher's sense that the life skills of the students are low, through her personal observations that she has been the director of a private school for decades, as well as through her continuous meetings with teachers and teachers of the basic education stage, based on the above, this study came to answer the main question:

- What is the role of teaching using the strategy of brainstorming in the development of life skills in the tenth grade students from the point of view of teachers?

From which the following sub-questions arise:

1. Are there any statistically significant differences in the level of  $\alpha \leq 0.05$  teachers' views in the role of teaching using the strategy of brainstorming in the development of life skills in the tenth grade students due to gender variable?
2. Are there any statistically significant differences in the level of  $\alpha \leq 0.05$  teachers' views in the role of teaching using the brainstorming strategy in the development of life skills in the tenth grade students due to the variable of experience?
3. Are there any statistically significant differences in the level of  $\alpha \leq 0.05$  teachers' views in the role of teaching using the strategy of brainstorming in the development of life skills among the tenth grade students due to the variable of scientific qualification?

#### **The importance of studying:**

The importance of this study came from two aspects:

*The theoretical importance:* of this study is summarized in the modernity of its subject, the need to research it, and the lack of studies that dealt with the subjects of brainstorming and life skills within the researcher's knowledge, the expected benefit added by the results of scientific knowledge in this field, As well as the importance of brainstorming as a strategy used to develop and acquire these skills for the group to be studied as an important age group with future responsibilities that contribute to the building and development of society.

*Practical importance:* This study may provide a frame of reference and an introduction to future research and studies in the fields of brainstorming and life skills, as well as opening up for other researchers in the future to take care of this subject and study it from other perspectives. The study provides a tool that can be used in future studies, in addition to providing quantitative data and information about the nature of the relationship between the variables of the study. It also provides a theoretical framework of concepts, data and information, Educational institutions in modern methods and strategies, including brainstorming in the development of life skills of students, and it can be a scientific addition to the Arab library in general, and the Library of Jordan in particular.

#### **Procedure definitions:**

*Brainstorming:* It is defined as the way in which ideas will be generated from the minds of students to obtain as many of them as possible, in order to reach creative solutions and measure the degree to which the subject is obtained on the scale prepared for this study.

*Life skills:* are defined as a set of positive abilities and behaviors that the student acquires and adapts to enable him to effectively deal with the requirements and attitudes of daily life. This study includes the following life skills: decision making skill, interpersonal skills, time management skill, The skill of dealing with stress, measured by the degree obtained by the examinee on the scale prepared for this study.

#### **The limits of the study:**

The current study is limited to the following limits:

*Objective limitations:* The current study is determined by the subjects of brainstorming and life skills.

*Spatial Boundaries:* Special Education Schools in the Capital Governorate of Amman, Jordan.

*Time limits:* This study was applied during the academic year 2017/2018.

*Human boundaries:* A sample of teachers and teachers of the tenth grade basic number (200) teachers and teachers.

## Theoretical framework and previous studies

### *Brainstorming:*

The definitions of active learning varied, and (Jarwan, 2002) knew it: as it is one of the methods used to stimulate creativity and creative treatment in different fields of life. It means generating a list of ideas that solve the problem with the participation of all members of the group. The success of the brainstorming depends on the experience of the session leader or the teacher.

Brainstorming is defined as a discussion, or a mode of deliberation in which a group of individuals try to find a solution to a particular problem by assembling and restricting all the spontaneous and actively generated ideas of the storm from the group members to crystallize the problem and form a solution. (Osborn, 2001).

Abu Sinayna (2008) defined it as a well-defined, carefully defined educational situation, in order to get as many ideas as possible without criticism or change, trying to grasp the dimensions of the material to be taught to the students. And the most appropriate in understanding and interpreting the educational material.

One of the most fundamental principles proposed by Osborn, which is based on brainstorming, is what he (Wahib and Zidan, 2001) said: "Delaying evaluation and releasing freedom of deliberation generates quality and building on the ideas of others."

### **Life skills**

The attention to life skills is one of the most important modern trends in the field of education. There has been increasing interest in education, which aims to develop it in order to prepare the student for a comprehensive preparation for life,

(Al-Awad, 2008). Al-Laqani and Faraa (2001) emphasized the importance of including life skills in curricula as one of the most important educational outputs that students are willing to attend at any stage of study. Their daily affairs in order to achieve an integrated and sustainable education.

There are many approaches to the definition of life skills, and this diversity is due to the lack of a specific list of these skills, and from these approaches (Hussein, 2006):

The first entrance: Defines life skills as a set of personal performance and choices that cause or increase the happiness, benefit and comfort of the individual.

Second: Life skills are defined as the mental and sensory abilities used to achieve desired goals in the individual.

The third defines life skills as the set of processes and procedures through which an individual can solve a problem, face challenge, or make changes in his life.

Hijazi (2006) defines it as a set of skills that a student needs to manage his life, earns himself self-reliance, accepts other opinions, achieves psychological satisfaction, and helps him adapt to the changes of his age, such as communication skills, leadership, teamwork and problem solving, and make a decision.

In terms of the classification of life skills, there is no uniform classification of these skills. Rather, they are determined by knowing the needs and aspirations of students, as well as by the problems that arise when students do not achieve the expected behaviors and by referring to the lists and models assumed by the specialists as life skills. (Survivor, 2010). Among these ratings, the classification of global organizations, UNICEF (2005) classified life skills into:

(Communication and interpersonal skills, negotiation and rejection skills, emotional rethinking skills (understanding and empathy for others), collaboration and teamwork skills, lobbying skills of information gathering, critical thinking skills, skills of increasing the focus of the inner mind of control, emotional management skills, managing stress management skills.

This study will adopt the latest trend, which involves integrating life skills into the content of the curriculum by building appropriate educational activities for its development. This study identified the appropriate life skills for the tenth grade students. The content was selected for its development using brainstorming as a method of interactive educational activities.

### **Previous studies**

#### *Studies that deal with brainstorming:*

Maw (2006) conducted a study aimed at understanding the effect of reward and teaching methods on brainstorming on learning mathematics, direction, achievement, and problem solving ability for first grade students in secondary school. The study sample consisted of (70) male and female students. Statistical significance in the ability to solve problems in both the verification of the problem and identify factors and information processing, and the results indicated that giving the reward and learning math brainstorming can improve the student's ability to solve problems.

The study (Al-Zyadat and Al-Edwan, 2009) aimed to find out the effect of the use of brainstorming on the development of the decision-making skills of the ninth grade students in the field of national education and civic education in Jordan. The study sample consisted of a random sample of 158 students. The study found the

following results: In the development of decision-making skills in favor of brainstorming method, and the absence of statistically significant differences in the development of decision-making skills due to gender, and the absence of differences due to interaction between method and gender.

Agha (2009) conducted a study aimed at knowing the effect of the use of brainstorming strategy in developing mathematical thinking skills on both sides of the brain in the 11th grade students of the scientific branch in Gaza,. The sample of the study consisted of (60) students. The sample was selected in a deliberate manner. The researcher reached the following results: There are differences between the control and experimental groups for the experimental group. This confirms the positive use of brainstorming strategy on the development of mathematical thinking on both sides of the brain. Students of the 11th grade of the scientific branch.

### Studies dealing with life skills:

Abu Hajar (2006) examined a study aimed at investigating the effectiveness of a program based on school activity in the development of life skills in science for the students of the higher elementary stage in Palestine, The researcher used the descriptive analytical method. The sample consisted of (80) students from the ninth grade in the primary school of Abad Al-Rahman model. The most important results of the study were the development of life skills in their dimensions using the proposed educational program.

Hanley, Heal, Tiger, Ingvarsson (2007) conducted a study aimed at evaluating a program to develop life skills for pre-school students. The program was applied to 16 children between the ages of 3-5 years, Of the beneficial effects of the program, and the teachers who worked on the implementation of the program showed high levels of satisfaction with the program and the skills and results that resulted.

The study (Keshta, 2008) strives to know the impact of the use of meta-knowledge strategies in the development of concepts and life skills in science among the students of the fifth grade in Gaza, Palestine, and used the researcher descriptive analytical method, and the experimental method based on the design of the control group with a tribal measurement and once, The sample consisted of (84) students from two divisions at the Rafah elementary school, randomly selected from the fifth graders, and distributed equally to the two study groups. The tools were identified in the content analysis tool, the scientific concepts test, the life skills test, The study confirms the impact of life skills development using meta-knowledge strategies.

The current study was characterized by previous studies that collected brainstorming and life skills, and the current study benefited from previous studies in building the study tool and discussing the results.

### Method and procedures

#### Study approach:

The researcher used the descriptive analytical method to suit the nature of the current study.

Sample of the study: The sample of the study was randomly selected from the basic schools of the Directorate of Special Education (200 teachers). Table (1) shows this.

Table 1. Frequency and Percentages by Study Variables

	Categories	Repetition	Percentage
sex	male	71	35.5
	Female	129	64.5
Experience	Less than 5 years	62	31.0
	From 5 to 10	59	29.5
	More than 10	79	39.5
Qualification	Diploma	41	20.5
	Bachelor	121	60.5
	Higher studies	38	19.0
	The total	200	100.0

### Stability of the study instrument:

In order to ensure the stability of the study instrument, the test-retest was verified by applying the standard and reapplying it after two weeks to a group of outside the study sample consisting of (30) teachers and teachers. Therefore, Pearson correlation coefficient was calculated between their estimates at both times.

The coefficient of consistency was also calculated in the internal consistency method according to the Kronbach alpha equation. Table (2) shows the coefficient of internal consistency according to the Kronbach alpha equation and the regression coefficients for the domains and instrument as a whole.

Table 2. Cochranbach alpha consistency coefficient and repeatability of the fields and the total score

The field	Repetition stability	Internal consistency
Decision making skill	0.84	0.76
The skill of communicating with others	0.86	0.74
Time management skill	0.83	0.77
Dealing with stress skill	0.87	0.73
Total score	0.90	0.84

### Study tool:

The researcher developed the study tool after reference to educational literature and previous studies such as the study of Abu Senina (2008) and the study of Aga (2009). The study tool consisted of (45) paragraphs divided into four areas (the skill of decision-making, the skill of communication with others, the skill of time management and the skill of dealing with pressure), and the researcher to verify its sincerity and persistence.

### Validation of the tool:

To verify the validity of the tool and its stability, the researcher presented them to a group of arbitrators with competence in the Jordanian universities and the number of (12) arbitrators, and took their views and make amendments, which most of the arbitrators.

### View and interpret results:

Question 1: What is the role of teaching using the strategy of brainstorming in the development of life skills in the tenth grade students from the point of view of teachers?

To answer this question, the arithmetical averages and standard deviations of the teaching role using the brainstorming strategy in the development of life skills of the tenth grade students were extracted from the teachers' point of view, and the table below illustrates this.

Table 3. The mathematical averages and standard deviations of the role of teachers using the strategy of brainstorming in the development of life skills in the tenth grade students from the point of view of teachers descending order by the arithmetic averages

Rank	Number	The field	Average	Slandered diffusion	Degree
1	2	Decision making skill	3.78	.635	High
2	1	The skill of communicating with others	3.72	.621	High
3	3	Time management skill	3.60	.665	Medium
4	4	Dealing with stress skill	3.35	.491	Medium
		Total score	3.60	.555	Medium

Table 3 shows that the mathematical averages ranged from 3.35 to 3.78. The communication skill was ranked first with the highest mean score of 3.78. This may be due to the fact that communication skills represent a universal communication in order to reach the goal. While the skill of dealing with pressure came in last place with an average of 3.35. This may be due to the fact that life in the current era is full of anxiety, turmoil and stress, which in turn affect the mental state of teachers and students. The mean for the average as a whole was 3.60.

The averages and the standard deviations of the estimates of the individuals of the study sample were calculated according to the paragraphs of each field separately, as follows:

### First: the skill of decision-making

Table 4. The arithmetical averages and standard deviations of the paragraphs related to the skill of decision-making are ranked descending by arithmetical averages

Rank	Number	Paragraph	Average	Standard diffusion	Degree
3	4	Plans the tasks entrusted to him	3.90	.833	High
5	9	Agree with his colleagues to define the action steps	3.88	.654	High
6	11	His findings are judged without hesitation	3.73	.792	High
7	5	Explains his view of others in an easy way	3.64	.874	Medium
7	12	The proposed alternatives are prioritized	3.64	.875	Medium
9	7	Predicts the effects of a chosen alternative	3.50	.868	Medium
10	3	Be careful when choosing the right alternative	3.49	.935	Medium
11	6	Innovates in offering solutions and alternatives	3.45	1.074	Medium
12	2	Proposes alternative solutions to a problem he face it	3.39	.685	Medium
		Decision making skill	3.72	.621	High

Table (4) shows that the arithmetic averages ranged between (3.39-4.05). Paragraph (10), which states that "an effort is made to perform the task presented to him", came in first place with an average of (4.05) The students of this stage are characterized by the desire to challenge and highlight the potentials for self-affirmation. The student seeks to exert his utmost efforts in the pursuit of excellence and self-satisfaction and achievement, while paragraph (2), which reads "proposes alternative solutions to a problem presented to him" at the last rank with an average of 3.39 This may be due to the lack of focus of some teachers on enhancing students 'views and students' feeling of discouragement The proposed solutions, and some students 'shyness from offering solutions, feel that they are not correct, as well as the scarcity of teachers' use of teaching strategies that encourage them. The arithmetic average of overall decision-making skill was 3.72.

**Second: the skill of communicating with others**

Table 5.The arithmetical averages and standard deviations of the paragraphs related to the skill of communication with others are ranked descending by arithmetical averages

Rank	Number	Paragraph	Average	Standard diffusion	Degree
1`	13	He works in team spirit during the execution of a mission assigned to him	4.08	.859	High
1	17	Addresses colleagues by name when communicating with them	4.08	.969	High
3	15	Participates in school activities and events	3.84	.755	High
3	16	Heard to talk to others with concentration	3.84	.755	High
5	20	The skill of communicating with others	3.73	.849	High
6	18	It diversifies in the tones of his voice when dealing with others	3.70	.956	High
7	21	presents interesting topics	3.68	.922	High
8	19	A teamwork relationship has emerged	3.59	.989	Medium
9	14	A link appears in the teamwork performance	3.49	.827	Medium
		The skill of communicating with others	3.78	.635	High

Table (5) shows that the mathematical averages ranged between (3.49-4.08). Paragraphs (13 and 17), which read "work in the spirit of the team during the execution of a task assigned to him" and "address his colleagues by their names when communicating with them" (4.08) This may be attributed to the importance of communication as a means of acquaintance, exchange of knowledge and information and understanding of others. Paragraph 14, which reads "shows a link to the performance of teamwork", came last with an average of 3.49. This may be attributed to the dependence of teachers on individual work due to overcrowding And the teaching burden, which reduces the chances of training students to work together. The arithmetic average of the skill of communication with others as a whole reached 3.78.

**Third: the skill of time management**

Table 6.The arithmetical averages and the standard deviations of the paragraphs related to the skill of time management are arranged in descending order according to the arithmetic averages

Rank	Number	Paragraph	Average	Standard diffusion	Degree
1	24	Performs the task assigned to him on time	3.89	.728	High
2	23	Prioritizes the performance of the task entrusted to it	3.88	.793	High
3	22	Maintains the appointments it specifies to perform a task	3.83	1.083	High
4	25	Feel proud when attenuating achievements	3.63	.996	High
5	32	Perform recreational activities in the remaining time after performing a task	3.58	.979	Medium
6	28	Avoids wasting time when preparing his daily program	3.58	.817	Medium
6	29	Turning his objectives into operational activities of successive stages	3.49	.984	Medium
8	30	Determines the appropriate time to perform the task	3.48	.940	Medium
9	31`	Accommodates emergency events	3.43	.987	Medium
10	27	Time allocated for task execution is distributed correctly	3.38	.877	Medium
11	26	Dealing flexibly with stressful situations	3.24	.685	Medium
12	33	Modifies its practices to achieve the goal on time	3.60	.758	Medium
		Time management skill	3.60	.665	Medium

Table (6) shows that the calculation averages ranged between (3.24 - 3.89). Paragraph (24), which states that "the task assigned to him on time" was ranked first and with an average of (3.89), This may be due to the students' sense of responsibility and a desire for praise at this stage. While paragraph (33), which read "modify its practices to achieve the goal on time" at the last rank with an average of (3.24) This may be due to the fact that the students of this stage are motivated towards the tasks entrusted to them in order to achieve the goal that generates a sense of success, discrimination and self-realization. The arithmetic average of the time management skill was as a whole (3.60).

**Fourth: the skill of dealing with pressure**

Table 7. The arithmetical averages and standard deviations of the paragraphs relating to the skill of dealing with pressures are arranged in descending order according to the arithmetic averages

Rank	Number	Paragraph	Average	Standard diffusion	Degree
1	34	Continue the task despite the obstacles	3.69	.968	High
2	43	Try again when he fail in an attempt	3.68	.861	High
3	36	Speaks to his colleagues fluently	3.63	.603	Medium
4	44	Has the ambition to continue to achieve the goal	3.59	.797	Medium
5	35	It takes a long time to execute a task assigned to him	3.53	.879	Medium
6	39	Perform tasks that may reconcile their abilities	3.45	.741	Medium
7	38	He feels sad if the task assigned to him is not carried out	3.43	.883	Medium
8	40	Deal with emergency situations rationally and calmly	3.29	.966	Medium
9	42`	Adapts to the exciting position easily	3.18	1.083	Medium
10	45	Opposes the roles assigned to his group	2.99	.908	Medium
11	37	Initiate voluntary work	2.98	.896	Medium
12	41	Spoils and quarrels with his colleagues	2.78	1.249	Medium
		Dealing with stress	3.35	.491	Medium

Table (7) shows that the calculation averages ranged between (2.78-3.69). Paragraph (34), which states that "the task continues despite the obstacles," came in first place with an average of (3.69), This may be attributed to the fact that it is characteristic of the students at this stage rush towards self-realization by all means so students continue to take the task until the completion of a challenge to their abilities, While paragraph (41), which read "fights and quarrels with colleagues" ranked last with a mean average of (2.78) This may be attributed to the students of this stage are undergoing physiological changes increase their tension and rapid emotion, They also have an excessive desire to achieve their demands, which leads to their behavior nervously and intransigent, making quarrels with others. The arithmetic mean of the skill of dealing with pressures as a whole was 3.35.

**The second question:**

**Are there significant differences in the level of  $\alpha \leq 0.05$  teachers' views in the role of teaching using the strategy of brainstorming in the development of life skills among the tenth grade students due to gender variable?**

In order to answer this question, the arithmetical averages and standard deviations of the teaching role using the brainstorming strategy in the development of life skills of students in the tenth grade were calculated by sex variable. To illustrate the statistical differences between the mathematical averages, the T test was used, and the tables below illustrate this.

Table 8. Standard averages, Standard Deviations and T-Test of Gender Impact on Teaching Role Using Brainstorming Strategy in Developing Life Skills among Grade 10 Students

	Gender	Number	Average	Standard diffusion	T value	Degree of freedom	Statistical significance
Decision making skill	Male	71	3.47	.659	-4.557	198	.000
	Female	129	3.87	.553			
The skill of communicating with others	Male	71	3.54	.534	-4.025	198	.000
	Female	129	3.91	.651			
Time management skill	Male	71	3.47	.610	-2.011	198	.046
	Female	129	3.67	.685			
Dealing with stress	Male	71	3.20	.438	-3.308	198	.001
	Female	129	3.44	.500			
Total score	Male	71	3.41	.533	-3.699	198	.000
	Female	129	3.71	.540			

Table (8) shows  $\alpha = 0.05$  due to the impact of  $\alpha = 0.05$  statistically significant differences (sex in all fields and in the total score. Differences were in favor of females. This may be due to the fact that the female nature at this stage is more serious, More noticeable than males.

**Question 3:**

**Are there any statistically significant differences in the level of teachers' views in the role of teaching using the brainstorming strategy in the development of life skills in the tenth grade students due to the variable of experience?**

To answer this question, the arithmetical averages and standard deviations of the teaching role using the brainstorming strategy in the development of life skills of the tenth grade students were calculated according to the variable of experience. The table below shows this.

Table 9. Statistical averages and standard deviations of the teaching role using the brainstorming strategy in the development of life skills among students in the tenth grade according to the variable of experience

	Categories	Number	Average	Standard diffusion
Decision making skill	Less than 5 years	62	3.74	.433
	From 5 to 10 years	59	3.92	.524
	More than 10 years	79	3.57	.761
	Total	200	3.72	.621
The skill of communicating with others	Less than 5 years	62	3.79	.615
	From 5 to 10 years	59	3.92	.653
	More than 10 years	79	3.67	.624
	Total	200	3.78	.635
Time management skill	Less than 5 years	62	3.72	.669
	From 5 to 10 years	59	3.64	.682
	More than 10 years	79	3.47	.632
	Total	200	3.60	.665
Dealing with stress	Less than 5 years	62	3.43	.588
	From 5 to 10 years	59	3.42	.385
	More than 10 years	79	3.25	.464
	Total	200	3.35	.491
Total score	Less than 5 years	62	3.66	.520
	From 5 to 10 years	59	3.71	.523
	More than 10 years	79	3.47	.585
	Total	200	3.60	.555

Table 9 shows apparent variance in the arithmetical averages and standard deviations of the teaching role using the brainstorming strategy in developing the life skills of the tenth grade students because of the different categories of the variable of experience and to show the significance of the statistical differences between the arithmetic averages a single variance analysis was used according to table (10).



Table10. Analysis of the mono - variance of the impact of experience on the role of teaching using the strategy of brainstorming in the development of life skills among students in the tenth grade

	The source	Total of squares	Degree of freedom	Average squares	P value	Statistical significance
Decision making skill	Between groups	4.262	2	2.131	5.783	.004
	within groups	72.588	197	.368		
	Total	76.850	199			
The skill of communicating with others	Between groups	2.162	2	1.081	2.725	.068
	within groups	78.122	197	.397		
	Total	80.283	199			
Time management skill	Between groups	2.405	2	1.203	2.772	.065
	within groups	85.466	197	.434		
	Total	87.872	199			
Dealing with stress	Between groups	1.503	2	.752	3.188	.043
	within groups	46.441	197	.236		
	Total	47.944	199			
Total score	Between groups	2.236	2	1.118	3.733	.026
	within groups	59.001	197	.299		
	Total	61.237	199			

Table (10) shows that there are statistically significant differences at the level of  $\alpha = 0.05$  due to experience in all fields and in the tool  $\alpha$  significance ( as a whole except for the skill of communication with others, In order to show statistically significant differences between the arithmetical coefficients, dimension comparisons were used in the same way as shown in Table 11.

Table 11. Post-Comparisons in a Methodical Approach to the Effect of Experience on the Role of Teaching Using the Brainstorming Strategy in Developing Life Skills among Grade 10 Students

	Experience	Average	Less than 5 years	From 5 to 10 years	More than 10 years
Decision making skill	Less than 5 years	3.74			
	From 5 to 10 years	3.92	.18		
	More than 10 years	3.57	.18	.35*	
Dealing with stress	Less than 5 years	3.43			
	From 5 to 10 years	3.42	.01		
	More than 10 years	3.25	.18	.17*	
Total score	Less than 5 years	3.66			
	From 5 to 10 years	3.71	.05		
	More than 10 years	3.47	.19	.24*	

Table (11) shows  $p = 0.05$ ) between 5 years and statistically significant differences (less than 10 years and 10 years and more. The differences in favor of 5 years to less than 10 years in both decision-making skill and the skill of dealing with pressure, And the total score. This may be due to the fact that teachers with 5 to 10 years' experience are still in the tender stage and are keen to make efforts to achieve the goals planned for the students and the number of teachers of the study sample in this category was the most.

**Question 4: Are there any statistically significant differences in the level of  $\alpha \leq 0.05$  teachers' views in the role of teaching using the strategy of brainstorming in the development of life skills in the tenth grade students due to the variable of the scientific qualification?**

To answer this question, the arithmetic mean and the standard deviations of the teaching role using the brainstorming strategy in the development of life skills among the students of the 10th grade were calculated according to the scientific qualification variable. The table below shows this.

Table 12. The average and Standard Deviations of the Teaching Role Using the Brainstorming Strategy in Developing Life Skills among Grade 10 Students by Academic Variant

	Ranks	Number	Average	Standard deviation
Decision making skill	Diploma	41	3.96	.458
	Bachelor	121	3.78	.534
	Higher studies	38	3.28	.808
	Total	200	3.72	.621
The skill of communicating with others	Diploma	41	3.78	.710
	Bachelor	121	3.92	.592
	Higher studies	38	3.35	.486
	Total	200	3.78	.635
Time management skill	Diploma	41	3.59	.671
	Bachelor	121	3.75	.621
	Higher studies	38	3.10	.550
	Total	200	3.60	.665
Dealing with stress	Diploma	41	3.37	.599
	Bachelor	121	3.42	.466
	Higher studies	38	3.11	.359
	Total	200	3.35	.491
Totalscore	Diploma	41	3.67	.584
	Bachelor	121	3.71	.504
	Higher studies	38	3.20	.510
	Total	200	3.60	.555

Table (12) shows an apparent discrepancy in the arithmetical averages and standard deviations of the teaching role using the brainstorming strategy in developing the life skills of the students of the tenth grade due to the different categories of the qualified variable and indicating the significance of the statistical differences between the arithmetic averages the single-variance analysis was used according to table (13).

Table 13. Analysis of the single variance of the impact of scientific qualification on the role of teaching using the strategy of brainstorming in the development of life skills among students in the tenth grade

	The source	Total of squares	Degree of freedom	Average squares	P value	Statistical significance
Decision making skill	Between groups	10.156	2	5.078	14.999	.000
	within groups	66.694	197	.339		
	Total	76.850	199			
The skill of communicating with others	Between groups	9.221	2	4.610	12.781	.000
	within groups	71.063	197	.361		
	Total	61.237	199			
Time management skill	Between groups	12.341	2	6.171	16.094	.000
	within groups	75.531	197	.383		
	Total	87.872	199			
Dealing with stress	Between groups	2.779	2	1.390	6.061	.003
	within groups	45.165	197	.229		
	Total	47.944	199			
Total score	Between groups	7.532	2	3.766	13.815	.000
	within groups	53.705	197	.273		
	Total	61.237	199			

Table (13) shows  $\alpha$ -statistically significant differences at the level of significance ( $\alpha = 0.05$ ) due to scientific qualification in all fields and in the instrument as a whole, and to show statistically significant differences between the arithmetic mean dimension comparisons were used in the same manner as shown in Table 14.

Table 14. Post-Comparisons in a Methodical Approach to the Effect of Scientific Qualification on Teaching Role Using the Brainstorming Strategy in Developing Life Skills among Grade 10 Students

	Experience	Average	Diploma	Bachelor	Higher studies
Decision making skill	Diploma	3.96			
	Bachelor	3.78	.18		
	Higher studies	3.28	.68*	.50*	
Communications with others	Diploma	3.78			
	Bachelor	3.92	.14		
	Higher studies	3.35	.42*	.56*	
Time management skill	Diploma	3.59			
	Bachelor	3.75	.16		
	Higher studies	3.10	.49	.65*	
Dealing with stress	Diploma	3.37			
	Bachelor	3.42	.06		
	Higher studies	3.11	.25	.31*	
Total score	Diploma	3.67			
	Bachelor	3.71	.04		
	Higher studies	3.20	.46	.50*	

Table (14) shows  $\alpha = 0.05$  between that there are statistically significant differences (postgraduate studies on the one hand and both diplomas and bachelor degrees on the other). The differences were in favor of both diplomas and bachelor's degrees in the total score, This may be due to the fact that the tenth graders with diploma and bachelor degrees sense the value of the message they have and work in a planned manner based on good interaction with the students according to their abilities. The postgraduate teachers have a feeling that their place is working in universities, not schools, Study and compare with the number of diploma and bachelor degree teachers.

## Recommendations

- Use modern strategies in teaching and stay away from the method of indoctrination.
- Include the basic stage curriculum minimum life skills needed by the individual in present time .

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