

Evaluation of Teaching and Learning Strategies for Enhancing Achievement Motivation among Post Graduate Students

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Abstract

The current study aims to evaluate teaching and learning strategies that enhance achievement motivation among graduate students. The comprehensive social survey method is employed, utilizing an electronic questionnaire administered to a deliberate sample of 128 graduate students (master's stage - third level) enrolled in regular academic studies, comprising both male and female participants. The study confirms the validity of its main hypothesis and its sub-hypotheses, and the results indicate the following rankings for strategies to develop achievement motivation: the brainstorming strategy has ranked first, followed by the cooperative learning and then the group discussion strategy.

Keywords: *Teaching and Learning Strategies - Developing Achievement Motivation.*

Introduction:

The education system in any country is considered a mirror through which the image of the country can be seen because education is the reason for positive change in any society. (Rand, 2004, p.1)

Postgraduate studies represent the top of the educational pyramid due to their importance in preparing cadres of scientists and researchers. This requires providing a distinguished academic environment based on scientific research and encouraging it in order to face the challenges of the future in various fields so that the nation can play the civilized role that it should play. This requires using appropriate strategies in teaching more effectively so that they can deal with the requirements of the era.

Following teaching and learning strategies with graduate students leads to communication and continuity towards achieving the desired goals. Currently, science is advancing to a great extent by relying on strategies that use modern methods to provide students with knowledge and skills, which require attention to teaching and learning strategies (Kamash, 2014, p. 17).

This is confirmed by a study of Elhoweris (2008) which shows that the positive relationship between the teacher and the learner affects the student's academic achievement motivation.

There are many teaching and learning strategies that arouse students' interest and motivate them to learn and provide them with sufficient information and knowledge such as cooperative learning, group discussion, brainstorming, etc.

Abu El-Majd (2008) shows the effect of the cooperative learning method on developing students' achievement motivation. Applying these educational methods raises their awareness and comprehension of the huge amount of information available to them so that it is easily memorized and retrieved.

Mohamed (2014) confirms the positive effect of using the cooperative learning strategy in developing both social responsibility and self-esteem among students.

Moreover, Parthasathy (2009) demonstrates the effectiveness of brainstorming in increasing students' academic performance, which contributes to helping them exchange and generate more ideas about the problems they face. Similarly, Octarina (2021) emphasizes that the brainstorming strategy can improve students' speaking ability and their intellectual fluency and help students with the scientific method in discussion. Muhammad (2001) stresses that using the group discussion strategy can provide students with effective communication skills, which increase their motivation in the educational process. Moxue (2013, p. 14) maintains that group discussions increase the opportunities for interaction and communication, which lead to an increase in their cognitive and cultural level. These strategies are used with graduate students in the faculties of social work to develop the professional performance of their researchers and help them manage some of the challenges they may face to complete their academic studies efficiently and effectively (Apvdgane & Cartney, 2024). This is consistent with the study of Mustafa (2016), which highlights the importance of using modern technologies in education and teaching to achieve high-quality results in teaching social work students. Caballero (2010) emphasizes the necessity for the relationship between the teacher and the learner to be a relationship based on trust and respect because it will open a path for learning and increase the motivation for the student's continuous academic achievement.

Therefore, attention must be given to the achievement motivation of graduate students, as it is a crucial aspect of the human motivation system that has garnered interest from researchers in social psychology and personality studies academic achievement. The significance of studying achievement motivation extends beyond psychology into various applied and scientific fields. It serves as the primary driver for goal attainment, representing the internal desire that influences the student's behavior toward specific activities. Achievement motivation determines the level of effort and

perseverance a student exhibits in pursuit of success and goal realization (Mayers, 2004). For graduate students, the dimensions of achievement motivation include ambition, perseverance, and bearing responsibility (Al-Zaghloul, 2003, p. 142). Consequently, the study problem can be framed around the main hypothesis: there is a positive statistically significant relationship between teaching and learning strategies and the development of achievement motivation for graduate students.

Study Objectives: -

The main objective of the study is to evaluation teaching and learning strategies in developing achievement motivation for graduate students.

From this, the following sub-objectives emerge:

- 1- To assess the effectiveness of the group discussion strategy in enhancing achievement motivation among graduate students
- 2- To determining the effectiveness of the cooperative learning strategy in fostering achievement motivation in graduate students
- 3- To evaluate the effectiveness of the brainstorming strategy in promoting achievement motivation for graduate students.

Study hypotheses: -

The main hypothesis of the study is: There is a positive statistically significant relationship between teaching and learning strategies and the development of achievement motivation for graduate students. From this, the following sub-hypotheses emerge:

- 1- There is a positive statistically significant relationship between the group discussion strategy and the enhancement of achievement motivation among graduate students.
- 2- There is a positive statistically significant relationship between the cooperative learning strategy and fostering achievement motivation in graduate students.
- 3- There is a positive statistically significant relationship between the brainstorming strategy and promoting achievement motivation for graduate students.

The study concepts are defined as follows:

The concept of teaching and learning strategies.

The strategy is defined as “the means used by individuals and organizations to achieve their goals” (Springer, 2021, p2),

Teaching and learning strategies are defined as “a well-structured and flexible plan through which all available capabilities and means are used in an appropriate manner to achieve high efficiency and include forms of interaction between the learner, the teacher, and the subject of knowledge (Qatami, 2012, p. 34)

In this study, teaching and learning strategies are defined as follows:

- 1- A set of procedures implemented by professors when teaching graduate students.
- 2- Demonstrated through the interaction and participation of students with one another.
- 3- Resulting in an increase in their motivation to achieve.

The teaching and learning strategies include: -

- Cooperative learning strategy: an approach where professors facilitate collaboration among graduate students in small teams (3-5 members) to achieve a specific common goal through interaction and teamwork.
- Brainstorming strategy: a technique aimed at stimulating creativity and free thinking among graduate students, enhancing the exchange of ideas, and leading to effective, positive solutions for achieving a shared objective.
- Group discussion strategy: an organized verbal dialogue led by the professor on a specific topic of interest to the students, promoting engagement and deeper understanding.

The concept of developing achievement motivation.

Development is defined as an intentional process that occurs through a person to achieve certain goals. (Rosalie et al, 2001)

Motivation is defined as “a feeling of desire to do an activity, especially when this activity requires effort or hard work” (Oxford, 2020, p. 1002)

Achievement motivation is defined as “the desire to excel in educational tasks that are associated with pride in achievements” (Seel, 2012, p. 47).

It is also defined as” what motivates the individual to perform the tasks assigned to him better than he accomplished before, efficiently, quickly and with less effort to achieve the best result” (Pieper, 2003, p. 8)

While developing achievement motivation within the framework of this study is defined as:

- 1- a process of intentional positive change in the cognitive behavior of graduate students.
- 2- This change enhances their ability to perform academic tasks efficiently and effectively.

This change can be assessed by measuring the dimensions of their achievement motivation, which are ambition, perseverance, and social responsibility.

Theoretical Guidelines of the Research:

The current study is based on social learning theory.

The theory posits that human behavior is learned behavior through observation, whereby individuals mimic the actions of those around them, influencing their own behavior. (Kratochwill, 2000). It emphasizes the understanding of social influences – specifically the surrounding environment and focuses on individual differences in the educational process (Jarvis & Russell, 2003). Additionally, it highlights the importance of reinforcement in its two forms. For reinforcement to be effective, individuals must engage some cognitive components such as memory and practice, within the educational context.

The researcher can benefit from this theory in this study as follows:

- 1- Explaining behavior: the learning theory provides insights into the behavior of graduate students within their educational environment, highlighting how students interact with each other and with their professors during lectures that utilize various teaching and learning strategies (e.g. cooperative learning, brainstorming and group discussion).
- 2- Impact on Achievement Motivation: The theory elucidates how different teaching impact of teaching and learning strategies influences the levels of achievement motivation – namely ambition, perseverance and social responsibility- among graduate students, which in turn affects their academic performance.
- 3- Conceptual Framework: it offers a framework that clarifies graduate students' behaviors in an educational context including reinforcement, –motivation, personality -and response, while also considering the individual differences among students.
- 4- Analyzing results: The theory aids in analyzing the results of the study, facilitating the development of proposals aimed at enhancing the relationship between teaching and learning strategies to foster achievement among graduate students.

Methodology

This study employs an evaluative approach. This study is particularly relevant to the subject at hand, as it employs the social survey method, utilizing a sampling approach as its scientific methodology.

Study tool

- The study relies on the questionnaire tool to address its hypotheses specifically focusing on evaluating teaching and learning strategies aimed at developing achievement motivation for graduate students. This approach is informed by previous research and studies related to the study variables.
- The study tool includes two dimensions which are:
 - 1- Data related to the independent variable involving teaching and learning strategies, cooperative learning strategy, discussion strategy, as well as the brainstorming strategy).
 - 2- Data related to the dependent variable including achievement motivation, perseverance, ambition, in addition to responsibility.
- The researchers have relied on content validity and presented the study tool to six professors of social service. Based on their feedback, some phrases have been modified or deleted. Consequently, the questionnaire has been finalized. To assess stability, the researchers have used the half-split method with five individuals from the research community. The Guttman test has yielded a reliability coefficient of 0.789, which is considered high and acceptable. Therefore, the results obtained from the tool can be relied upon.

Sample

- The total size of the study population is 290 individuals, then a deliberate sample of 128 individuals has been drawn according to the following **conditions**:
- A group of students encompassing both males and females who are registered in the master's stage (third level) at the Faculty of Social Service, Helwan University.
- The participants are required to be regular in their studies without interruption and to have succeeded in the previous two levels.

This ensures the homogeneity of the educational stage and confirms that they have benefited from the teaching and learning strategies used in those levels. Data has been collected from October 14, 2024, to November 5, 2024.

Statistical analysis methods: The level of the relationship between the teaching and learning strategies and the development of achievement motivation for graduate students has been assessed using the arithmetic mean. The three-point scale categories were as follows: "Yes" (three points), "Somewhat" (two points), and "No" (one point). The data has been coded and entered into the computer for analysis.

To determine the range of the three-point scale cells (lower and upper limits), the range was calculated as the difference between the largest and smallest values ($3 - 1 = 2$). This range was then divided by the number of scale cells to obtain the corrected cell length ($2 / 3 = 0.67$). This value was added to the lowest value in the scale (1) to determine the upper limit of the first cell.

Table (1) presents the arithmetic mean level for the phrases and dimensions of the questionnaire.

If the average value of the expression or dimension ranged between 1 - 1.67	low level
If the average value of the phrase or dimension ranges between more than 1.67 - 2.34	Average level
If the average value of the expression or dimension ranges between more than 2.34: 3	high level

The following statistical methods have been applied: frequencies and percentages, arithmetic mean, standard deviation, range, t-test, multiple regression analysis, simple regression analysis, Pearson's correlation coefficient R, and coefficient of determination R².

Study Results:

Table (2) Distribution of the study population (n=128)

No.	Gender	Frequency	%
1	Male	30	23.4
2	Female	98	76.6
No.	Age	Frequency	%
1	Less than 25	71	55.5
2	From 25 to less than 30	41	32.0
3	From 30 to less than 35	7	5.5
4	35 years and over	9	7.0
No.	Functional	Frequency	%
1	Works	55	43.0
2	Doesn't work	73	57.0
No.	marital status	Frequency	%
1	Single	105	82.0
2	Married	22	17.2
3	Divorced	1	.8

No.	Reason for joining postgraduate studies	Frequency	%
1	Job promotion requirement	24	18.8
2	To get a job	52	40.6
3	Develop the educational level	52	40.6

The previous table shows the description of the study community:

- As for gender, females represent the first place with a percentage of 76.6%, followed in second place by males with a percentage of 23.4%.
- Regarding age, less than 25 ranked first with a percentage of 55.5%, followed by the group "25 to less than 30" in the second place of 32% The group "30 to less than 35" has ranked last with a percentage of 5.5%.
- In terms of employment status, "not working" has ranked first place with a percentage of 57% while "working" has come in second place with a percentage of 43%.
- As for marital status, "single" has come first with a percentage of 82%, followed by "married" in the second place with a percentage of 17.2% The "divorced" category has ranked with a percentage of 0.8%.
- Regarding the reasons for joining postgraduate studies, the top reasons are "to obtain a job" and "to improve the educational level," each with a rate of 40.6%. At the bottom of the list there is "a requirement for a job promotion," with a rate of 18.8%.

Table (3) Level of study variables (n=128)

Variables		Mean	Std. Deviation	Level
Independent variable	Group discussion strategy	2.71	0.365	High
	Cooperative learning strategy	2.75	0.319	High
	Brainstorming strategy	2.80	0.303	High
	Teaching and learning strategies as a whole	2.75	0.281	High
Dependent variable	Taking responsibility	2.75	0.320	High
	Ambition	2.80	0.298	High
	Perseverance	2.81	0.333	High
	Achievement motivation as a whole	2.65	0.239	High

The previous table shows:

- The level of the independent variable (teaching and learning strategies) was high, reaching (2.75), and its indicators according to the arithmetic mean ranking: (brainstorming strategy) came in first place with an arithmetic mean (2.80), followed in second place by

(cooperative learning strategy) with a weighted mean (2.75), while at the end of the ranking was (group discussion strategy) with a weighted mean (2.71). - The level of the dependent variable (achievement motivation) was high, reaching (2.65), and its indicators according to the arithmetic mean ranking: (perseverance) came in first place with an arithmetic mean (2.81), followed in second place by (ambition) with a weighted mean (2.80), while at the end of the ranking was (taking responsibility) with a weighted mean (2.75).

Table (4) The relationship between teaching and learning strategies and the development of achievement motivation for graduate students
N =128

Achievement motivation / Teaching and learning strategies	Taking responsibility		Ambition		Perseverance		Achievement motivation as a whole	
	Pearson Correlation	Sig.	Pearson Correlation	Sig.	Pearson Correlation	Sig.	Pearson Correlation	Sig.
Group discussion strategy	0.659**	0.00	0.488**	0.00	0.231**	0.00	0.523**	0.00
Cooperative learning strategy	0.988**	0.00	0.598**	0.00	0.191**	0.03	0.642**	0.00
Brainstorming strategy	0.600**	0.00	0.990**	0.00	0.382**	0.00	0.741**	0.00
Teaching and learning strategies as a whole	0.875**	0.00	0.794**	0.00	0.310**	0.00	0.736**	0.00

The previous table shows that:

- The value of the correlation coefficient between the variable "teaching and learning strategies" and the variable "achievement motivation for graduate students" indicates that there is a direct relationship between the two variables at a significance level of 0.01. The correlation value has reached 0.736, which allows us to accept the main hypothesis of the study: a statistically significant positive relationship between teaching and learning strategies and the development of motivation for graduate students.
- Similarly, the value of the correlation coefficient between the variable "group discussion strategy" and the variable "achievement motivation for graduate students" indicates that there is a direct relationship between the two variables at a significance level of 0.01., The correlation value has reached 0.523, which allows us to accept the first sub-hypothesis of the study : there is a positive statistically significant relationship with between the group

discussion strategy and the development of achievement motivation for graduate students.

- The value of the correlation coefficient between the variable "Cooperative Learning Strategy" and the variable "Achievement Motivation for Postgraduate Students" indicates that there is a direct relationship between the two variables at a significance level of 0.01. The correlation value has reached 0.642, which allows us to accept the second sub-hypothesis of the study: there is a positive statistically significant relationship between the cooperative learning strategy and the development of achievement motivation for postgraduate students. The value of the correlation coefficient between the variable "Brainstorming Strategy" and the variable "Achievement Motivation for Postgraduate Students" indicates that there is a direct relationship between the two variables at a significance level of 0.01. The correlation value has reached 0.741, which allows us to accept the third sub-hypothesis of the study: there is a positive statistically significant relationship between the brainstorming strategy in the development of achievement motivation for postgraduate students.

Discussion

The researchers discuss the validity of the study hypotheses as follows: -

Discussion and analysis of the first sub-hypothesis of the study, which states that there is a positive statistically significant relationship between the group discussion strategy and the development of achievement motivation for graduate students. The results of the quantitative study have proved the validity of the first sub-hypothesis, which allows us to accept the first sub-hypothesis of the study. This is consistent with Muhammad 2001 who confirms that using the group discussion strategy helps students acquire effective communication skills, which increase their motivation in the educational process. Furthermore, Moxue (2013, p. 14) emphasizes that group discussion increases the opportunities for interaction and communication between students, leading to an increase in their cognitive and cultural level.

The discussion and analysis of the second sub-hypothesis of the study has elucidated that there is a positive statistically significant relationship between the cooperative learning strategy and the development of achievement motivation for graduate students. The results of the quantitative study have proved the validity of the second

sub-hypothesis, which allows us to accept the second sub-hypothesis of the study. Abu Al-Majd (2008) also shows the effect of the cooperative learning method on developing students' achievement motivation enhancing their awareness and comprehension of the huge amount of information available to them to be easily memorized and retrieved, utilizing Muhammad (2014) asserts the positive effect of using the cooperative learning strategy in developing both social responsibility and self-esteem among students.

The discussion and analysis of the third sub-hypothesis of the study maintains that there is a positive statistically significant relationship between the brainstorming strategy and developing the achievement motivation for graduate students. The results of the quantitative study have proved the validity of the third sub-hypothesis. Parthasathy (2009) proves the effectiveness of brainstorming in increasing students' academic performance, which contributes to helping them exchange and generate more ideas about the problems they face. Octarina (2021) emphasizes that the brainstorming strategy can improve students' speaking ability and intellectual fluency and help students use the scientific method in discussion.

The discussion and analysis of the main hypothesis of the study emphasizes that there is a positive statistically significant relationship between teaching and learning strategies and the development of achievement motivation for graduate students. The results of the quantitative study have proved the validity of the main hypothesis of the study. Abu Al-Maati (2005) highlights the importance of using learning methods that increase interaction and participation among students in all educational standards, which help to find motives for change and achievement. Mustafa (2016) concludes that the use of educational teaching methods affects the level of social service graduates stressing the importance of using modern learning methods in teaching to achieve high-quality results in teaching social service students.

Accordingly, the study presents a set of proposals to increase the effectiveness of teaching and learning strategies and develop achievement motivation for graduate students:

- a- Considering individual differences among graduate students.
- b- Conducting continuous training courses for faculty members to familiarize them with new strategies in teaching and learning.
- c- Designing classrooms effectively and providing resources and capabilities that facilitate the implementation of modern strategies.
- d- Providing both material and moral support to academically outstanding students to encourage them to continue their efforts.

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