

Cognitive Self-Regulation Correlated with Goals Achievement of the Students of University of Baghdad

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Abstract

Self-regulation is considered one of the significant factors which enable the student to overcome the educational hurdles through enhancing motivation and learning control for achievement, as it helps the student to sustain the factors that contribute to ongoing concentration on work details which in turn conduce the achievement of highly valued goals albeit their attraction. This enables the student to delay the immediate rewards and to head towards long-range goals which carry out the student psyche and position.

The current research aims at approaching the self-regulation of the students of the University of Baghdad and the correlation between self-regulation and goals achievement. The research is confined to 300 male and female students of the University of Baghdad. It has adopted the cognitive regulation measurement by Pintrich, (2000) and the goals achievement measurement by Al-Zuhairi, (2013).

The results have revealed that students practice the cognitive self-regulation and the goals achievement. There is a positive correlation between the cognitive self-regulation and goals achievement. As for the gender variable, the difference has no statistical significance.

Keywords: *Self-regulation, goals achievement, correlation*

I. Introduction

The preparation of man to life has become a social demand due to the problems he encounters in an age of intricate complications and change, in addition to renewing educational ,academicand living problems in various aspects of life. Undoubtedly, the university stage is the stage of important building up to prepare the youth to bear social and vocational responsibilities . Hence most of the countries in the world have shown great interest in building up the university students' personalities in a proper way. As the leaner has become the object of the educational process, and in the strategy of learning regulation and assistingthe learner to access the processes oriented towards the acquisition of information and experiences, and by corollary the concentration on the learner's self-efforts to acquire skills and experiences which in turn have made educators and researchers focus on the

personality of the learner who follows modes of learning and strategies which focus on the cognitive self-regulation (Bilge, et al, 2016:88) which enhances their attention, controls their thinking, orients them towards highly valued goals and subjects and adjusts the courses of achievement, so as he would become aware of his own mental processes of cognitive building which would enable him to carry out his aims in a better and accurate manner (Al-Azawi, 2009:27).

The cognitive self-regulation enables the student to attain the highest degree of accomplishment and the desire for creativity. It would give him certain capability to face hardships, have strong motivation and encourage him to make use of training. The cognitive self-regulation would help the student to regulate and direct cognitive processes, behaviour and motivation to achieve certain goals. Through regulation, the student tries to set up short-term and long-term goals for accomplishment, thus the cognitive self-regulation becomes the individual's capability to control his behavior (Radadi, 2004: 18).

The cognitive self-regulation represents the mobile capability of man's personality , because he exerts a regulated effort to control and direct his thoughts, emotions and actions to specify the goal. In the light of the individual's capability to control his behavior and his capability to discern the appropriate from the inappropriate behavior he chooses his actions (Zemmeran, 1989:48).

The process of the regulation of information and coping with it in such a way as to permit easy retrieval and dealing with the situation afterwards that requires certain response would achieve positive outcomes on the level of social interaction.

The cognitive self-regulation is also positively correlated with the best academic performance. The skills of regulation are important as they have an impact on a large group of activities and tasks performed by the students through which they accomplish positive outcomes (Arnsten, A.F., 2009:48).

Cognitive psychologists have indicated that children's regulation is accompanied by skills associated with memory, problems solution and mental representations, all of which help redirect attention to accomplish their goals (Grover, 2015:17). Likewise, Skraw and Moushhan maintain that children develop simple, constructive theories to regulate their performance (Banks, 2007:23).

Some specialists denote the correlation between executive tasks and a number of significant factors such as attention, thinking and behavior which the child starts to employ to achieve self-regulation. The cognitive self-regulation is also essential to reveal the constructive behavior and to control the negative behaviour in addition to conducting an increase of expectation of others' behavior(Klein, 1998:111).

Piaget maintains that regulation is a common tendency in all aspects of life in which the physiological and psychological structures complement each other to produce a system or makeup of high level (Al-Rafie, 2001:12). Likewise, Pandora avers that the cognitive self-regulation reveals the individual's capability to comprehend and absorb what he has learned , i.e., to possess the capability of developing knowledge and skills which facilitate the learning process (Arnsten, A.F., 2009:19). Banks (2007) denotes that the cognitive self-regulation can direct the individual and control his behavior, recognition, attention and emotion. (Banks, 2007: 67).

The skills of cognitive self-regulation develop the experiences and information by means cognitive structures in a better way than they did before in order to cope with sophisticated situations. The cognitive self-regulation has an impact on general behaviours especially the social ones through understanding and anticipating others' behaviours (Klein, 1998: 111). The regulation of goals is one of the important functions of delaying the academic gratification as it facilitates the preference between the immediate and available, yet little valued, goals and the academic long-range, highly valued goals (Bembenutty, 1999:253). The delay of the strategy of academic gratification enables students to regulate their academic progress, to set up the goals and to accomplish their academic tasks (Bembenutty, 204:41).

Mischel (1983) avers that the individual endeavours and is capable of curbing on little-valued rewards in order to accomplish highly valued, long-range goals. Academically, he denotes the student's capability to curb on the little-valued needs which require immediate and instant gratification to head towards long-range educational goals which conduce asocial and academic position or highly valued self-esteem (Kalifa, 2000:77). The acquisition of self-regulation strategies assist the student to achieve the academic goals, hence it requires the control of aspects of recognition to distinguish the goals (Reynolds & Schiffbanur, 2005:50).

The students who aim at achieving the task goals show interest in task challenges and they are pushed by an intrinsic motivation for it. They believe that the alternatives would enable them to accomplish long-range academic goals in addition to learning new things to get the pleasure of achievement. Thus, they consider these alternatives important and useful; they also prefer to delay the alternatives which secure their excellence and attain an academic achievement (Amer, 2000:28). The cognitive self-regulation motivates individuals to work hard to lessen the contradiction between their status-quo and what they desire to accomplish besides intensifying the students' motivation for participation in the achievement of activities (Davidof, 1983: 356).

Dweck (1986: 256) believes that proficiency requires personal development and mastery which bring about adaptable responses such as change of strategies, increase of efforts and persistence to face hardships, whereas performance orientation focuses on the interest in a high-standard performance and produces bad adaptable behaviours.

To achieve the mastery of goals, individuals head at regulating and developing new skills with an attempt to comprehend what they do and to improve the level of proficiency in addition to focusing on the how in learning (Omar, 1993: 26). Students tend to challenge the tasks, accomplish self-activity in the best possible way and possess high motivation. They are inclined to increase self-proficiency, exert efforts and persistence to memorize and show interest in positive trends towards the task and profound cognitive treatment of information. This has a positive impact on the positive learning outcomes especially achievement (Amer, 2005:268). Mischel (2004) affirms that the individual's planning to achieve one or several goals requires regulation and strong will in order to control his undesirable exuberance. The individual's capability to follow up and accomplish tasks is analogous to the challenge of the hardships of these tasks, hence he resorts to delay immediate gratification for sake of continuing his endeavor to accomplish long-range goals (Mischel & et al, 2011:119). The cognitive self-regulation helps students to delay their academic gratification and contributes to advance their study, to set up the goals, accomplish their tasks and ensure

a high level of academic achievement, which signify the extent of their task apprehension and information processing in a realistic manner and in proportion to their goals (Pintrich, 2000b:108).

Reynolds and Schiffbauer (2005:33) maintain that self-regulation enables individuals to define the goals and acquire academic skills, because the cognitive self-regulation helps the individual to specify the positive outcomes anticipated to be achieved especially when the goal is highly valued and in conformity with our expectations. Moreover it increases our impulse towards thwarting the low-valued, immediate little rewards and heading at the social, economic, academic and psychological highly valued goals for success and self-realization (Pintrich, 2000:458). The student then starts some sort of self-regulation which moulds the manner of dealing with his specified goals. The more the student is capable of resisting the immediate, little-valued attractions and of choosing highly valued goals which realize academically and socially his individuality the more motivated he becomes to accomplish success because the student who can reacquire self-regulated learning which makes him more capable of accomplishing the appropriate goals in future (Reynolds & Schiffbauer, 2005:35).

Students who are proficient and successful in accomplishing their goals often give up the attractive, easily achieved goals for accomplishing long-range distinguished outcomes as a result of the individual's choice of the mode of information processing . Afterwards, he identifies the manner of dealing with life and academic goals. The cognitive self-regulation is one of the essential determinants of scholastic achievement and it is associated with motivation for accomplishment and learning. Besides, it enables the student to enact the cognitive representations of the academic goals (Bembenutty, 1999:224).

Individuals who have a motivation for high accomplishment are distinguished from their mates in bearing the responsibility and in setting up highly valued, long-range, objective goals and in their persistence, challenge and self-reliance (Davidof.1983: 373).

Research Objectives

The current research aims at shedding light on:

1. Cognitive self-regulation of the students of University of Baghdad;
2. Achievement of goals of the students of the University of Baghdad;
3. Cognitive self-regulation correlated with goals achievement of the students of the University of Baghdad ;
4. Cognitive self-regulation of the students of the University of Baghdad according to gender variable;
5. Goals achievement of the students of the University of Baghdad according to gender variable.

II. Methodology and Procedures

The current research is based on the descriptive method which is accurate in structure and methodology and involves the description of the current phenomenon, data collection, analysis and interpretation in an objective, systematic and creditable manner in order to accomplish the research objectives.

Research Population

The research population is confined to the students of the University of Baghdad in the academic year 2019-2020 in the colleges of Education, Arts, Languages, Engineering and Law.

Research Sample

A random, class sample of 300 Baghdadi male and female of second and third grade has been chosen. They are divided into two groups: 150 male students and 150 female students of Al-Mustansriyah University. The randomly research sample has been chosen from the population in the colleges of Basic Education, Law, Engineering, Education, and Arts. 60 students of both genders have been taken from each college.

Research Instruments

The researcher has relied upon Bembenutty measurement for measuring the academic gratification delay in addition to Albort measurement for measuring personality traits after being adjusted to the research objectives.

III. Measurements

Procedures

The Cognitive Self-Regulation Measurement (Description of Measurement)

To achieve the research objectives, there must be an instrument or tool through which the cognitive self-regulation is fully understood. After having been acquainted with the previous literature, the researcher has relied upon the cognitive self-regulation measurement modified by Pintrich (2000) translated and adapted to the local environment, particularly the university students in such a way as to divide the paragraphs into three spheres : planning & goal setting, self-monitoring and self-evaluation, allocating 16 paragraphs for each sphere so that the sum total of all paragraphs is 48. It is noteworthy to mention that the answers are as follows: (always, often, sometimes, rarely , never). The highest mark obtained by the student in the whole test is 240, the lowest mark is 48 and the theoretical mean of the measurement is 144.

Measurement Validity

At the concluding the survey study, the researcher has offered the attitudes to a number of experts and specialists in the domain of education and psychology to confirm its adequacy for what it sets to measure . 80% of the opinions of the experts and specialists are in conformity with the validity of the attitudes in terms of accuracy

and measurement. All paragraphs have scored a percentage higher than 80% after some modifications proposed by some experts, and hence the measurement has become ready for application.

Measurement Consistency

After the validity process, the researcher has conducted the measurement consistency via retest by taking a sample of 100 male and female students, 50 students of each of them . Then he has applied the test to the sample. Two weeks later, he reapplied the test on the same sample.

By employing Pearson's equation for consistency , the consistency coefficient between the first and the second application is 0.79, which considered a good consistency coefficient.

IV. The Final Form of the Measurement

The Discriminatory Power of Paragraphs

To secure the discriminatory power of paragraphs, the measurement has been applied to statistical analysis for a sample of 200 students, then the sum total results of each questionnaire and categorized in a scale from the highest to the lowest mark; 27% of the group consisting of54 students of the highest marks and 27% of the lowest. The researcher has employed T-Test on two independent samples to diagnose the discriminatory power of paragraphsand considered the paragraphs distinguished when the T-calculated value is greater thanT-table value.

The statistical analysis shows that the highest calculated T- value is 7.535 whereas the lowest is 0.134, and it illustrates that the calculated T-values have statistical significance compared to the T-Table values of 1.98. This means that all the paragraphs of the two groups are discriminated by extreme marks.

The Paragraph Mark Correlated with the Full Measurement Mark

The statistical analysis shows that the value of the correlation coefficient fluctuates between 8.832 the highest value and 0.267 the lowest, all of which have statistical significance compared to 0.139 the correlation coefficient except the paragraphs of the sequence 30 wherein the calculated T-value is less than T-table, hence it has been deleted from the measurement.

The Paragraph Mark Correlated with the Full Mark of the Pertinent Domain.

To verify the above, the researcher has employed Pearson correlation coefficient to calculate the correlation between the paragraph mark and the full mark of the pertinent dimension. The highest correlation coefficient value is 0.456 while the lowest coefficient is 0.037 , which has statistical significance compared to the value of the correlation coefficient.

V. Goal Achievement Measurement

Measurement Description

To accomplish the research objectives, there must be an available instrument through which the goals achievement is known. After having surveyed the previous literature, the researcher has found Al-Zuhauri (2013) measurement for measuring the orientations of goals achievement an appropriate instrument for the current research.

Description of the Goals Achievement Measurement

The measurement comprises 32 paragraphs, 8 paragraphs measure the mastery goals orientations – undertaking; 8 paragraphs measure the mastery goals orientations–reluctance; 8 paragraphs measure the performance goals whereas 8 paragraphs measure the performance-reluctance goals orientations. The paragraphs have been divided into 16 positive paragraphs and 16 negative paragraphs. The available alternatives are 4 (which apply to *always, often, sometimes* and *non-applicable*). The correction of the answers is conducted by assigning alternative answers (1,2,3,4,) successively for the positive paragraphs and conversely for the negative paragraphs. The lowest mark is 32 whereas the highest mark on the measurement is 128 and the hypothetical mean is 80.

The Paragraph Mark Correlated with the Full Measurement Mark

The statistical analysis shows that the value of the correlative coefficient fluctuates between the highest value: 0.449 and the lowest: 0.229, all of which have statistical significance compared to 0.139 the correlation coefficient except the paragraph of the sequence 30 wherein the calculated value is less than the critical correlation coefficient.

The Paragraph Mark Correlated with the Full Mark of the Pertinent Domain

To verify the above, the researcher has employed Pearson correlation coefficient to calculate the correlation between the paragraph mark and the full mark of the pertinent dimension. The highest correlation coefficient value is 0.555 while the lowest coefficient is 0.099 , which has statistical significance compared to the value of the correlation coefficient.

Statistics Instruments

In the current research, the researcher has adopted the statistical package of social sciences to analyze the data among which are the t-test for one sample and the t-test for two separate samples in addition to Pearson correlation coefficient.

VI. The Results

Presentation and Discussion of Results

First:Acquaintance with the Cognitive Self-Regulation of the Students of the University of Baghdad

The mean mark of the cognitive self-regulation of the students of the University of Baghdad is (167.326) with the standard deviation (12.763) which is greater than the theoretical mean of (144). By knowing the significance of the difference between the two means and by employing the second T-Test for one sample, it has become explicit that the difference has a statistical significance at the level of (0.005) if the second calculated value which is (31.254) is greater than the second scheduled value as illustrated in (Table 1). This result indicates that there is a difference with statistical significance at the level of 0.05 between the competitive mean and the theoretical mean..

Table 1

The Cognitive Self-Regulation of the Students of the University of Baghdad

Level of Significance	T-Value		Theoretical Mean	Standard Deviation	Arithmetic Mean	Sample Size	The Sample
	Scheduled	Calculated					
0.005	1,65	31.254	144	12.763	167.326	300	Male Female

Second: Acquaintance with the Achievement Goals Aof the Students of the University of Baghdad

The mean mark of the students of the University of Baghdad is (96.237) with the standard deviation (13.763) which is greater than the theoretical mean of (88). By knowing the significance of the difference between the two means and by employing the second T-Test for one sample, it has become explicit that the difference has a statistical significance at the level of (0.05) if the second calculated value which is (20.123) is greater than the second scheduled value as illustrated in (Table 2). This result denotes that there is a difference with statistical significance at the level of 0.05 between the achievement goals mean of the students of the University of Baghdad and the theoretical mean for this behaviour.

Table 2

Achievement Goals of the Students of the University of Baghdad

Level of Significance	T- Value		Theoretical	Standard Deviation	Arithmetic Mean	Sample Size	The Sample
	Scheduled	Calculated	Mean				

0.005	1,65	20.151	88	13.763	96.237	300	Male Female
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Third: The Correlation between Cognitive Self-Regulation Delay and Achievement Goals of the Students of the University of Baghdad

To know the correlation between the research variables, Pearson correlation coefficient has been employed; it shows that the correlation coefficient is (0.38) at the significance level: (0.05) as is clarified by Table 3 below.

Table 3

The Correlation between the Cognitive Self-Regulation and the Achievement Goals of the Students of the University of Baghdad

The Significance	Significance Level	Value of Scheduled Correlative Coefficient	Pearson Correlative Coefficient	The Sample
Statistically Significant	0.05	0.19	0.38	100

The above table shows that the correlation coefficient is 0.38 which is greater than the scheduled value 0.19 and which denotes a correlation between the cognitive self-regulation and the achievement goals of the students of the University of Baghdad.

Fourth: The Cognitive Self-Regulation according to Gender Variable

It has become explicit that by employing the second test (T-Test) of two separate samples the difference has statistical significance at the level (0.05).

The average mark of the male students on the achievement goals measurement is(98.345) with a standard deviation (12.725), whereas the average mark of the female students on the self-regulation measurement is (95.756) with a standard deviation (12.442). The second calculated value is (1.343) which is less than the scheduled value(1.96), as illustrated by Table 4 below.

Table 4

Mean, Standard Deviation, and the Second Calculated and Scheduled Value of the Cognitive Self-Regulation according to Gender Variable

The Second Mark	Freedom Mark	Standard Deviation	Arithmetic Mean	Sample Size	Sample Kind	M
Scheduled Calculated						
	1.343	298	12.725	98.345	150	Male 1
	1.343	298	12.442	95.756	150	Female 2

Fifth: The Achievement Goals according to Gender Variable

It has become explicit that by employing the second test (T-Test) of two separate samples the difference has statistical significance at the level 0.05. The average mark of the male students on the achievement goals measurement is (98.322) with a standard deviation (11.287), whereas the average mark of the female students on the achievement goals measurement is (95.687) with a standard deviation (12.675). The second calculated value is(1.606) which is greater than the scheduled value (1.96)

Table 5
The Mean, Standard Deviation, and the Second Calculated and Scheduled Value of the Achievement Goals
according to Gender Variable

The Second Mark	Freedom Mark	Standard Deviation	Arithmetic Mean	Sample Size	Sample Kind	M
Scheduled Calculated						
1,96 1,606	298	11.287	98.322	150	Male	1
1,961,606	298	12.675	95.675	150	Female	2

VII. Discussion of Results

In the first objective, the current study has explicated that the research sample shows students have the capability of cognitive self-regulation which is in conformity with the results of the study conducted by Bombenutty (1999). The current study has also shown that there is a positive correlation between the cognitive self-regulation and a number psychological variables among which is the goal orientation. Some studies have pointed out that those who possess the cognitive self-regulation have positive correlation with the achievement goals, which enable them to accomplish long-range academic goals besides the interest in the alternatives that secure excellence and high academic achievement.

The results of a study by Fatima Madhat Ibrahim have indicated that there is a positive correlation between the cognitive self-regulation and goal achievement. A study by Hasan (2008) has also denoted the positive correlation between the cognitive self-regulation and students' scholastic accomplishment because the students who practice the cognitive self-regulation focus on their academic tasks and avert whatever distract their attention which prevent them from accomplishing their tasks. They are inclined to exert greater efforts to perform their duties and give up immediate gratification so as to achieve their academic goals and score high marks. Likewise, a study by Ababna (1999) has confirmed the positive correlation between the cognitive self-regulation and students' motivation for achievement.

Despite the variance on in the results of the previous studies due to goals variance, they confirm the correlation between the cognitive self-regulation and achievement motivation.

Through the fourth objective, i.e., the cognitive self-regulation according to gender variable, the current study has shown that there is no statistically significant discrepancy between males and females, contrary to the study by Witt (1990a & 1990b) which denotes a statistically significant difference in the cognitive self-regulation between males and females in favour of the females (Witt, 1990 : 549). On the other hand, the study by Bombenutty & Karabeinck (1998a) has made it clear that there is a difference between males and females in the general gratification delay.

Scovill & Chambliss (1944) have asserted that there is no difference between males and females in the cognitive self-regulation. The current study is in conformity with a number of studies with respect to the results, as is manifested in the study by Bombenutty & Karabeinck (1998) as well as the study by Scovill & Chambliss (1998), whereas the study by Witt (1998) has denoted a difference according to the gender variable.

From what has been stated above, male and female students both have the capability of cognitive self-regulation, but in the second objective (achievement goals) students have high achievement goals. As for the third objective which is 'The Correlation between the Cognitive Self-Regulation and the Achievement Goals' the results have indicated a positive correlation because students enjoy the cognitive self-regulation in addition to their capability of identifying their goals.

The fourth and fifth objectives of the current study have demonstrated that the results have shown no statistically significant differences according to the gender variable.

VIII. Recommendations

Based on the previous results and conclusions, the researcher presents the following recommendations:

1. Students' academic gratification is attributed to the positive aspects of achievement.
2. The interest in the moderate competitive anxiety to stir the student's motivation for learning.
3. Urging the teachers and parents to look for programmes that enhance the student's personality.
4. Acquainting with the student's personality traits to set up programmes which contribute to developing and preparing him to face the future.

IX. Suggestions

The researcher proposes conducting follow-up studies such as;

1. Correlation between the cognitive regulation and the motivation achievement of the students at secondary stage.
2. Comparison in the cognitive self-regulation of different scholastic stages .

3. Developing the cognitive self-regulation through various ages.
4. Correlation between the cognitive self-regulation and the achievement goals at the secondary stage.

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