Examining the Relationship between Self-Training and Self-Regulation with Academic Achievement of High School Students

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The study aimed to examine the relationship between self-training and self-regulation with academic achievement of high school students in Bandar Abbas. Hypotheses of the research are: 1. There is a relationship between self-training and academic achievement of high school students in Bandar Abbas 2. There is a relationship between self-regulation and academic achievement of high school students in Bandar Abbas. The present research is descriptive and correlation-based. The statistical population of the study is all male and female high school students in Bandar Abbas as 700 people. 200 of them have been chosen by simple random sampling method and Cochran formula as the sample. The data collection method in this research is field and questionnaire type. The following questionnaire was used in this study: learning self-regulation questionnaire (SRQ-L) designed by Black and Deci (2000) as well as the Self-training questionnaire quality at school made by Negvar and Vamokoro (2006). Cronbach's alpha test was used to determine the reliability of the questionnaires that the reliability of self-regulation questionnaire was 0.89 and for the self-training questionnaire was 0.96. Academic achievement in this study means the average of the previous semester courses. Pearson correlation coefficient test results showed positive significant relationship between self-training and self-regulation with academic achievement of students.

Keywords: Self-Training, Self-Regulation, Academic Achievement, High School Students.

INTRODUCTION

Self-training is the most important concept of educational systems theory and shows the ability of the individual in separating rational and emotional processes from one another. In other words, it is a degree of emotional independence in which a person can decide in emotional positions without drowning in the emotional atmosphere of those situations as autonomously and rationally[1]. The sub-process of self-training (self-observing, self-judgment and self-reaction) does not operate in isolation, but it mutually interacts in the service of the followed goals. Self-observing gives students the opportunity to see whether the objectives

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have been achieved and what has been done. Self-judgment acts as a reference point to see whether the progress is towards goals or not. Self-reaction also plays an important role in the process of self-regulation[2, 3].

The self-regulation learning theory is raised by Pintrich and De Groot. They considered self-efficacy, internal valuation and test anxiety as motivational beliefs and introduced cognitive and ultra-cognitive strategies, efforts and plan of students as self-regulatory learning. Socio-cognitive theory introduces four sub-processes in the self-training: goal setting, self-observing, self-judgment and self-reaction. Goal setting is essential to self-training. Self-regulation processes include target-driven cognitive activities which stimulate, reinforce and alter the students (Zimmerman, 2003). Self-regulation has valuable consequences in the learning and teaching process and even life success and is one of the important topics in contemporary education. The main framework of self-regulation learning theory is based on this belief that how individuals organize their learning in terms of ultra-cognitive, motivational and behavioral beliefs [1].

Academic achievement has a display of the student's educational position. This display may represent a score for an average in a period related to a subject or may be an average of different periods. Different criteria may be considered for the academic achievement the most famous of which is the class scores average (Myer, 2000). In this study, researchers sought to examine the relationship between self-training and self-regulation with the academic achievement of high school students in Bandar Abbas (Iran).

METHODOLOGY

This study is a correlation study because it examines the relationship between self-training and self-regulation with academic achievement in high school students in Bandar Abbas. Correlation study that is a subset of descriptive research (non-experimental) is aimed to show the relationship between variables.

The statistical population of the study is all male and female high school students in Bandar Abbas as 700 people. 200 of them have been chosen by simple random sampling method and Cochran formula as the sample.

$$n = \frac{\frac{t^2 pq}{d^2}}{1 + \frac{1}{N}\left[\frac{t^2 pq}{d^2} - 1\right]}$$

The data collection method in this research is field and questionnaire type.

The following questionnaire was used in this study: Learning Self-regulation Questionnaire of Black and Deci (SRQ-L): Learning Self-regulation Questionnaire of Black and Deci (2000) includes three questions showing why people engage in behaviors related to learning. The questionnaire is set with 47 items in two parts of motivational beliefs and self-regulatory learning strategies (cognitive and ultra-

cognitive strategies). The sub-scale of self-regulation learning strategies includes 22 phrases and measures three aspects of academic self-regulation meaning: cognitive strategies, ultra-cognitive strategies and resource management. Cognitive strategies have allocated 13 scale phrases as follows: repetition and review including phrase numbers of 29, 37 and 44; expansion of the notes including phrase number of 34, summarizing the statements including phrase numbers of 31and 45; organizing including phrase numbers of 26, 27, 39, 42 and 47; and reading comprehension including phrase numbers of 32 and 33.

Ultra cognitive strategies and resource management include 9 scale phrases as follows: planning includes statements number38 and 46; supervision and control including statements 28, 35, 41 and 43; organizing including effort and perseverance including phrases number 30 and 36; and regulation activity including phrase number 40.

Motivational beliefs include 25 scale phrases and four components of self-efficacy, goal orientation, internal valuation and test anxiety as follows: self-efficacy includes expression numbers 2, 6, 9, 10, 12, 14, 19, 21 and 22; goal orientation includes expression numbers 1, 4, 11, 16 and 24; internal valuation includes expression numbers 5, 8, 17 and 20; and test anxiety includes phrases numbers 3, 7, 13, 15, 18, 23 and 25.

Content and form validity methods were used to determine the validity of the questionnaire and Cronbach's Alpha test was used to determine its reliability. Cronbach's alpha coefficient was 0.89 in the evaluation of the questionnaire.

Self-training questionnaire: quality at school Self-training Questionnaire made by Negvar and Vamokoro (2006) is in fact a translation of an English language tool that has not been implemented in Iran yet. The questionnaire consists of 9 items which examines the role of school in providing useful methods to assess the quality of students and staff. Scoring of the questionnaire is based on Likert scale and 5 options of: 5 Completely Agree, 4 Agree, 3 Neither agree nor disagree, 2 Disagree and 1 Totally disagree are been considered for each item. In this questionnaire, the aim is to evaluate the attention to strategic planning of quality at school. The score of 27 or higher indicates the school's attention to strategic planning of quality. Reliability or validity of an instrument includes the degree of its stability in measuring whatever it measures meaning that how much the same sizes are given by the measurement devices in the same condition. Content and form validity methods were used to determine the validity of the questionnaire and Cronbach's Alpha was used to determine its reliability. Cronbach's alpha coefficient was 0.96 in the evaluation of the questionnaire. The previous semester's average of courses was used to evaluate the academic achievement of students. The data of the present study are analyzed in both descriptive and inferential statistics. In the descriptive level, statistical values such as frequency, standard deviation and mean are used and in the inferential level, simple and stepwise

statistical regression tests and Pearson correlation coefficients are used. The data is analyzed by the SPSS statistical software.

RESULTS

The research findings are stated in both the descriptive and inferential statistics (test hypotheses) the results of which are as follows: Descriptive information of the research including the results of the descriptive findings of the research variables. This information is shown in the table below:

Table 1. Mean and standard deviation of variables

Variable	Number	Mean	Standard deviation	Maximum	Minimum
Self-regulation	200	42.89	9.318	61	**10**
Self-training	200	38.62	8.179	56	**10**
Academic achievement	200	16.41	4.255	20	**1**

Evaluating the descriptive results of the research variables according to the above table shows that the self-regulation average is equal to 42.89 (SD = 9.318), self-training average is equal to 38.62 (SD = 8.179) and the academic achievement of students' average is 39.16 (SD= 0.899).

Pearson correlation coefficient was used to evaluate the first hypothesis and the results are presented in the following table:

Table2. Correlation matrix of self-regulation with academic achievement

Variable	Number	Correlation coefficient	Level of significance
Academic achievement	200	0.509	**0.0001**
Self-regulation			

As it can be seen from the above table (p = 0.0001, n = 200, r= 0.509), zero hypothesis is rejected and the research hypothesis is confirmed. In other words, there is a significant relationship between self-regulation and academic achievement of high school students in Bandar Abbas.

Pearson correlation coefficient was also used to evaluate the second hypothesis and the results are presented in the following table:

Table3. Correlation matrix of self-training with academic achievement

Variable	Number	Correlation coefficient	Level of significance
Academic achievement	200	0.601	**0.0001**
Self-training			

As it can be seen from the above table (p = 0.0001, n = 200, r= 0.601), zero hypothesis is rejected and the research hypothesis is confirmed. In other words, there is a significant relationship between self-training and academic achievement of high school students in Bandar Abbas.

CONCLUSION

This study aimed to investigate the relationship between self-regulation and self-training with academic achievement of high school students in city of Bandar Abbas. In the findings' explanation, it can be said that the concept of "self-regulation" has had an important role in integrating human performance. He believes that keeping their perceived self is the motivation of all behaviors. Everyone is trying to behave as it is based on his understanding and interpretation of the self-meaning that people always try to behave in the same style and way that they see. Self-regulation is the comprehensive view of an individual about himself which is shaped and transformed by the person's experience and other's interpretation of this experience. In Landin's view (1968), the problems that people experience in a school setting are the results of interpersonal and intrapersonal processes. The more this relationship is sober and agreed with the emotional atmosphere of the school, it more helps the students with their behavior and personality evolution.

The second hypothesis test results showed that there is a significant relationship between self-training and academic achievement of students. The findings indicate that students' belief on the variability is the best predictor of academic achievement and the consolidation of confidence in the minds of students guides their academic achievement and makes the predictability of achievement possible for others. Bloom (1964) states: "self-centered learning patterns are semantic systems that are cornerstones of the person's individual life about the self, the world and the people living in it." Self-exercising effects on how the person interprets his failures and successes on the one hand and on internalizing the success goals on the other hand. This is why many research results emphasize the relationship between self-training and academic achievement of students[2, 5, and 6].

Also, it can be said in the results explanation that the atmosphere makers in the classroom are teachers and students that their main purpose is teaching and learning. Therefore, an appropriate and favorable atmosphere in the classroom is needed for teaching and learning. The emotional behavior of the teacher with student affects the learning and leads to a sense of self-esteem in the student and friendly relationships in the classroom and school. Self-concept is the person's comprehensive view of himself which is shaped and transformed by the person's experience and other's interpretation of this experience. Students who study with the perception of their intellectual beliefs have a continuum of the objectives upon which they show varying degrees of internal control, skillfulness and also competence with peers in the line of academic achievement.

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