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The relationship between personality traits and self-regulated learning with academic performance of high school students in Eghlid

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Abstract

Introduction: This study aims at examining the relationship between personality traits and self-regulated learning strategies with academic performance of second grade high school students in Eghlid.

Materials and Methods: The statistical community of this objective-correlational study consisted of the whole second grade high school students in Eghlid in the academic year 2014-15 and via multistage random cluster sampling eight schools were chosen in Eghlid and one class was randomly selected in every school and all the students of the class were directed to take part in the presented paper as a statistical population. In order to collect data we used NEO Personality features Inventory (1992), self-regulated learning questionnaire by Pintrich and Degroot (1990) and academic performance inventory by Pham and Taylor (1990). In order to analyze the data Pearson correlation coefficient test and multiple regression were applied simultaneously.

Results: The research findings indicated that there was a significant inverse relationship between neurotic personality traits and academic performance and there was a significant positive correlation between agreeableness and conscientiousness with academic performance. The aspects of neuroticism inversely and conscientiousness directly are able to predict students' academic performance.

Conclusion: It seems that the metacognitive strategy can predict students' academic performance directly.

Keywords: Academic performance, Personality traits, Self-regulated learning

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Introduction

Education is one of the most important concerns of any educational system in all societies. The success and academic performance of the

students of each society shows the success of the educational system in terms of targeting and paying attention to meeting individual needs. Therefore, the educational system can be

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considered effective and successful when the educational progress of its students is the highest at different levels (1).

Atkinson considers academic performance to be the ability learned or acquired from the courses offered, or in other words, the ability learned or acquired by a person in school subjects, which is measured by standardized tests (2).

Academic performance depends on various factors, each of which can affect a person's performance in the educational environment under certain conditions. Among these factors, we can mention contextual-individual factors, socio-cultural factors and personal characteristics. Among the personal characteristics, personality variables are one of the factors that affect learning. Researches show that personality factors predict the academic progress of students (3).

Personality is defined as the internal organization of a person's emotional, emotional, cognitive, and conceptual systems, which determines the unique reactions of humans to the environment (4). Personality is a dynamic organization within a person that is made up of psychological and physical systems, and these systems create characteristic patterns of a person's behavior, thoughts, and feelings (5).

One of the theories related to personality dimensions is the five-factor personality model of Robert McCreary and Paul Costa. The five-factor personality model divides people into five dimensions of neuroticism, extroversion, conscientiousness, agreeableness, and flexibility (6). Neurotic people are upset, angry, sad and prone to depression (7). Extroverts tend to physical and verbal activities. Extroverted people are adventurous, active, frank, social and talkative (8).

Dutiful, efficient, orderly, responsible and disciplined people have a lot of discipline and accuracy in their affairs and adhere to their moral obligations (9). The agreeable factor is defined by self-sacrifice. Agreeable people are humble, warm and empathetic, kind, polite and logical, and they are flexible and flexible when facing life events (7). People who are open to experience are known with characteristics such as curiosity, creativity, imagination, artistry and innovation (10). According to this model, each person can have a special attitude and tendency towards

education and learning according to their personality characteristics (6).

Another factor that can affect students' academic performance is self-regulated learning (1). Self-regulation is planning based on self-observation that continuously monitors behavior to achieve desired goals. Self-regulated learning refers to an individual's active participation in learning. A self-regulated learner, without the need for supervision, personally strives for learning, directs it, and monitors and evaluates his learning (11). Self-regulated learning is an important issue for human learning, and educational psychologists emphasize the active participation of the learner in the learning process instead of passive learning experience (12). The theory of self-regulated learning was proposed by Pentrich and DeGroot (13). They considered self-efficacy, internal evaluation, and test anxiety as motivational beliefs and introduced cognitive, metacognitive, and effort strategies of students under the title of self-regulated learning.

In our educational system, students usually face problems in learning lessons and do not show proper performance, and part of this inefficiency is due to the lack of accurate and deep knowledge of the correct methods of learning and early disappointment when facing problems. It arises and part of it is due to the individual characteristics of the students (14). Therefore, paying attention to the factors that increase academic performance and reduce tension and fear in students can be a solution to the bottlenecks of the educational system. In this regard, this research aims to address the issue of whether there is a meaningful relationship between personality traits and self-regulated learning with students' academic performance.

Materials and Methods

This research is of an applied type and the descriptive-correlation method was used for its implementation. The statistical population of this research included all the students of the second year of high school in Euclid city in the academic year 93-94. In this research, using the multi-stage cluster random sampling method, 8 schools were randomly selected from the secondary schools of Euclid city, and one class was randomly selected from each school, and all the students of those classes were used as a statistical sample.

Research instruments

A) *Five-factor Neo Personality Questionnaire (short form)*: This questionnaire is a short form of the Neo Personality Questionnaire, which was prepared for quick measurement of only five main personality factors of adults. This questionnaire has 60 items, the purpose of which is to measure five personality traits, including neuroticism, extroversion, flexibility, agreeableness, responsibility, and conscientiousness. Each of these factors is measured by twelve questions. The examinee provides the desired answer for each statement in a five-point scale (from completely disagree to completely agree) (5).

B) *Self-regulation Learning Questionnaire*: The self-regulation learning questionnaire has two scales of motivational beliefs and self-regulation strategies, which were created by Pentrich and De Groot. The motivational beliefs scale includes three sub-tests of self-efficacy, internal valuation and test anxiety, and the self-regulated learning scale has two sub-tests of using cognitive and meta-cognitive strategies. is incorrect). The mentioned questionnaire has 44 items, which are 9 items for self-efficacy, 9 items for task value, 5 items for exam anxiety, 12 items for cognitive strategies, and 9 items for metacognitive strategies (15).

C) *Academic Performance Questionnaire*: This questionnaire was created by Pham and Taylor (1990) and it contains 48 items. In the scoring method, each item has 5 answers, in the categories of none, a score of 1; low, score 2; partially, score 3; A lot is given a score of 4 and very much is given a score of 5, and in 11 questions (6, 7, 8, 9, 13, 14, 15, 16, 17, 18, 20) which are negative, the scoring method is the opposite (16).

The analysis of the data obtained from the questionnaire was done at two levels of descriptive and inferential statistics. At the level of descriptive statistics, statistics such as frequency, percentage, mean, and standard deviation were used, and at the level of inferential statistics, Kolmogorov Smirnov test was used to determine the normality of the data distribution, and then Pearson's correlation coefficient tests were used to determine the relationship between the variables. Multiple regression was used simultaneously to predict the variables.

Results

To test this hypothesis, Pearson's correlation coefficient was used, the result of which can be seen in Table 1.

Table 1. Correlation coefficients of personality traits variable with the academic performance of students

Variables	Neuroticism	Extroversion	Agreeableness	Openness	Conscientiousness
Academic performance	-0.343*	0.184	0.355**	0.193	0.482**

As can be seen in Table 1, there is a significant inverse relationship between neuroticism and academic performance at a level of less than 0.05 and a significant direct relationship between agreeableness and conscientiousness with

academic performance of students at a level of less than 0.01.

To test this hypothesis, multiple regression was used, the result of which can be seen in Table 2.

Table 2. Prediction of academic performance through personality traits

Variables	B	T	P	R	R ²	F	P
Neuroticism	-0.234	-1.94	-0.05	0.547	0.299	4.612	0.001
Extroversion	0.052	0.42	0.676				
Agreeableness	0.118	0.86	0.389				
Openness to experience	0.065	0.53	0.598				
conscientiousness	0.321	2.10	0.04				

According to Table 2, it can be seen that the F ratio and its significance level indicate the

significant effect of the variables in the regression equation. The regression effect (F=4.612) was

obtained, which is significant at the level of (0.001) and the coefficient of determination calculated based on the variables is (0.299), that is, these variables predict 29% of the variance of the academic performance variable. And on the other hand, according to the beta value and the significance level of T value, we find that the

dimensions of neuroticism are inversely and conscientiousness directly able to predict the academic performance of students.

To test this hypothesis, Pearson's correlation coefficient was used, the result of which can be seen in Table 3.

Table 3. Correlation coefficient of self-regulated learning and its dimensions with academic performance

Variables	Self-efficacy	Assignment valuation	Test anxiety	Cognitive strategies	Meta-cognitive strategies	Self-regulated learning
Academic performance	0.235	0.325*	0.082	0.293*	0.465**	0.364**

As can be seen in Table 3, there is a significant direct relationship between self-regulated learning and metacognitive strategies with students' academic performance at a level of less than 0.01, and a direct relationship between the

value of the task and cognitive strategies with students' academic performance at a level of less than 0.05 There is significant.

To test this hypothesis, multiple regression was used, the result of which can be seen in Table 4.

Table 4. Prediction of academic performance through the dimensions of self-regulated learning

Variables	B	T	P	R	R ²	F	P
Self-efficacy	-0.201	-0.836	0.407	0.492	0.242	3.44	0.009
Assignment valuation	0.314	1.307	0.197				
Test anxiety	0.029	0.226	0.822				
cognitive strategies	0.027	-0.162	0.872				
Meta-cognitive strategies	0.415	2.66	0.01				

Discussion

Based on the results, there is a significant inverse relationship between neuroticism and academic performance and a significant direct relationship between agreeableness and conscientiousness with students' academic performance. This finding is in line with the findings of the research that showed that there is a negative and significant relationship between neuroticism and academic performance and a positive and significant relationship between extroversion, agreeableness, experientiality and duty-orientedness with academic performance (17-22). Also, based on studies, there is a significant relationship between personality type and academic performance. People with neurotic personality type showed low academic performance, and people with extroverted and agreeable personality type showed high academic performance (23).

In explaining the negative relationship between the trait of neuroticism and academic performance, it can be said that neuroticism includes

characteristics such as a person's tendency to experience anxiety, tension, narcissism, hostility, impulsivity, shyness, depression, and low self-esteem. It turns out that these characteristics lead to the inability to control negative emotions and stable positive relationships. So that Johnson et al. (24) determined that low levels of positive affect and high levels of negative skills lead to rapid deterioration of relationships. According to Coughlin, Huston and Hutts (25), the higher the level of psychopathy, the more negative behaviors a person shows towards others. Therefore, it is natural that neurotic personalities do not have the ability to provoke close responses in others and the desire for proper communication in the classroom, and also these people experience more test anxiety and tension, which affects their performance in He lowers the class and exam session. In explaining the positive relationship between agreeableness and academic performance, it can be said that agreeableness (pleasantness) consists of aspects

(trust, honesty and openness, friendliness, obedience, moderation and humility) (26). It creates a spirit of talkativeness and intimacy in students, which is a good behavioral model for learning. Also, this behavioral pattern is associated with characteristics such as being sociable, lively and sensual, and being a good drinker in a way, which can have a positive effect on performance. It has been confirmed that sociability and cheerfulness can help to solve the learning problem (27). Another explanation that can be pointed to the role of agreeableness in improving students' learning is that people with agreeableness are resistant to academic stress since they have higher vitality and endurance. This is a barrier against reducing the academic performance of students and helps students to perform well. In explaining the positive relationship between conscientiousness and academic performance, it can be said that conscientiousness is the strongest predictor of academic performance in many findings. This positive and strong relationship is actually expected based on the characteristics of conscientious people. These people do their homework carefully and try to improve their performance and ultimately their academic progress, they have a high sense of responsibility and are progressive. In explaining this finding, it can also be said that conscientiousness is composed of aspects (adequacy, order, progressiveness, self-restraint, and reflection) (28), which promotes commitment and perseverance in students. And as we know, the more effort and perseverance in learning, the better the understanding of the material and the efficiency, and the students show better performance. Based on the results, the dimension of neuroticism inversely and conscientiousness directly can predict the academic performance of students. This finding is consistent with the research findings of Jafari (7) and Rezaei et al. (9). Rezaei et al. (9) showed that the motivational belief of self-efficacy in the academic performance of humanities students and personality traits, agreeableness and responsibility or conscientiousness contribute the most to the academic performance of students in basic sciences. Jafari (7) investigated the relationship between personality traits and study methods with academic progress in undergraduate students of Allameh Tabatabai University in Tehran. The

results of multivariate regression indicated that deep and superficial study methods and personality traits of conscientiousness, neuroticism and extroversion have the ability to predict academic progress.

There is a significant direct relationship between self-regulation learning and students' academic performance, and among the subscales of self-regulation learning, there is a significant direct relationship between task value, cognitive and metacognitive strategies, and students' academic performance.

This finding is consistent with the findings of the conducted researches (2,10,17,20,23).

The research findings show a positive relationship between the value of homework and academic performance. It can be said about the positive relationship between homework evaluation and academic performance; Assignment valuation refers to the importance a student gives to a particular assignment or lesson, the belief he has in that assignment, and the goal he pursues from studying it. Research shows that students who are motivated to overcome work and assignments use more cognitive and metacognitive strategies, which leads to a better use of mental powers and makes the student active in the learning process, so the value Assignment has an effect on academic success. As al-Barazi and Samani (4) believe, homework evaluation affects academic performance through the role it has in the use of cognitive strategies or self-efficacy. In explaining the positive relationship between cognitive and metacognitive strategies with academic progress, it can be said that cognitive and metacognitive strategies include mental review, development strategies, organizing strategies, strategies for monitoring understanding and emotional strategies, planning and monitoring individual learning. It can be Therefore, it can be said that these strategies cause the student to learn actively and provide the basis for the formation of a person's positive attitude towards himself and his abilities, and make students succeed in learning better than show yourself

According to the findings, only the metacognitive dimension is able to directly predict the academic performance of students.

This finding is consistent with the research findings of Amini (2), Bombuti (23), Peng (29). Amini (2) showed that all components of self-

regulated learning have the ability to predict academic progress. Bombuti (23) showed that self-regulated learning predicts academic performance. Peng (29) conducted a research on the role of self-regulated learning behavior in students' academic progress. The findings showed that self-regulated learning strategies play a positive and meaningful role in students' academic progress.

In explaining this finding, it can be said that metacognitive strategies are any thought, behavior or action that the learner uses while learning. The purpose of this strategy is to help in learning, organizing and storing knowledge, skills, and ease of using them in the future (10), so a person who uses this strategy when retrieving the materials He will perform better and have more self-confidence and perform better in exams. Metacognitive strategies are used to plan - review - improve cognitive activities (13). Planning includes a range of activities such as setting the goal, choosing the appropriate strategy, allocating time, determining the method of monitoring the implementation, determining the evaluation criteria and choosing the corrective strategy. Monitoring or controlling (regulating) cognitive processes allows a person to continuously monitor and monitor his cognitive processes and identify and correct existing problems in order to reach the goal. Therefore, the self-regulating learner, without the need of supervision by others, personally tries to learn, gives his direction and evaluates his learning, in this case, the learner learns the material better and will go to the exam session with more preparation. At the beginning of the exam, he remembers more coherently, in this case, the student will perform better. As the findings of Bombuti's research (23) showed, many learners who can regulate and control the cognitive, motivational, and behavioral aspects of their academic performance will be very successful as a learner and will have better

academic performance. Based on the material raised, the following practical suggestions can be made to the authorities and those involved in order to improve academic performance:

It is suggested to include the concepts of self-regulation and the techniques of its creation in life skills training programs and optional educational courses for students. In order to help teachers to develop positive personality traits and learn self-regulation, it is suggested that teachers should be given the necessary training in this field by holding workshops and training courses so that teachers with more abilities can develop knowledge personality. -Help students and self-regulate their load.

Conclusion

The findings of the research showed that there is a significant relationship between personality traits and academic performance of students. In the same context, considering that attention to the stable traits of personality and learning when entering different educational courses can help the effectiveness of the educational performance of learners. Identifying the personality structure of learners and adopting educational models and corresponding to it for the promotion and development of educational and educational goals is of great importance in educational planning, in such a way that it is possible to provide ways to He suggested effective curricula. The findings of the research showed that self-regulated learning strategies have a positive role in the academic progress of mathematics. Therefore, it is suggested that classes be created in schools to teach self-regulated learning strategies to students, and the concepts of self-regulated learning and its creation techniques should be considered in educational programs and school books.

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