

# Investigating The Relationship Between Learning Styles with Students' Academic Procrastination

Hamid Masoumi<sup>1</sup>

1. Educational science expert and master of educational psychology, Master's degree in Educational Psychology, Kavian Institute of Higher Education, Mashhad, Iran

## ARTICLE INFO

### **Keywords:**

*Students,  
Academic  
procrastination  
, Learning style*

## ABSTRACT

This study aimed to investigate the relationship between learning styles with students' academic procrastination. The statistical population of this study was all graduate students studying in universities of higher education institutions in Mashhad from 1400-1399. Among the senior students studying psychology in higher education institutions in Mashhad, which were about 8796 people, according to Krejcie and Morgan's table and the total number of these people in higher education institutions in Mashhad, a random sample of 245 people. It was selected that due to the fall, 200 people finally completed the questionnaires. In this study, Club learning styles (1985), and Tuckman et al.'s (2001) academic procrastination questionnaire, were used. In this study, Club learning styles (1985), and Tuckman et al.'s (2001) academic procrastination questionnaire were used.

The results showed that there was a significant relationship between different learning styles with students' academic procrastination ( $p < 0.05$ ).

## **Introduction**

The term learning styles is defined in different ways and has different definitions, but mostly all definitions emphasize that learning styles include beliefs, convictions, preferences and behaviours that people use in a situation to help their learning. Learning styles include three areas: cognitive, physiological, and emotional (Guroshit, 2018).

The meaning of cognitive learning style is how a person understands, learns and solves problems. Physiological style means that the learner prefers to work with others or alone (Hahn, 1995). Learning style is a term used to describe factors affecting all learning aspects. Students need to be aware of their learning style, and learning a successful learning method regardless of the task or subject learned is an important determining factor for successful learning. Of course, when a learning method is chosen, it does not mean that other learning methods cannot be used. Kolb argues that no method is better or worse than another and further says that effective learning means that a person can adapt himself to a method (Homan, 1995; quoted by Homayouni et al. 2013).

Learning styles are divided into three categories: cognitive, emotional, and physiological. Meanwhile, cognitive style refers to the concept of how the learner understands the material and remembers how he thinks and analyzes the issues. Cognitive learning styles also have different classifications, including context-dependent and context-independent styles, impulsive and reflective styles, and learning styles based on Kolb's experiential learning model (Kolbasi, 2008). According to Kolb, a learning model is created based on a four-stage cycle. In the objective experience stage, people rely more on their feelings and abilities rather than a regular approach to solving problems and situations. People through feeling, Special experiences, learn to relate to others and are sensitive to their own and other people's feelings. In the reflective observation stage, a person relies on patience, objectivity and accurate judgment, but does not necessarily take action. People refer to thoughts and theories to form their opinions. They usually learn by listening and seeing, carefully observing before prejudging, seeing things from different angles and searching to find the meanings of things. In the stage of abstract conceptualization, more logic and thought are used to understand issues and situations than feelings, and finally, in the fourth stage, when the experimental method is active, learning by doing things, that is, in the form of experiencing by influencing and changing the situation. It takes place (Homayoni, 2003).

Keefe (2011) considers learning style as a person's way of emphasizing some learning abilities over other learning abilities. He believes that people's awareness of the consequences of their learning styles and other available learning methods have advantages for learners (Grigorenko and Sternberg, 1995). Students have many individual differences and have various learning methods, knowing the learning styles of learners can play an important role in their learning and academic success. The advantage of learning style identification is that it provides information about learning strategies and teaching methods appropriate to these styles (Ku, 2008; Ling and Hsiu, 2010).

Knowing the variables that lead to academic procrastination, on the one hand, increases the prevention of the consequences of failure in university and the creation of a pleasant environment for learning, and on the other hand, it can help in finding appropriate methods and relying on practical priorities. Students as a part of the educational system have certain demographic and psychological characteristics.

Procrastination is one of the important discussions that has attracted the attention of many researchers in recent years, and it has been mentioned as a bad habit (Chase, 2005) and a behavioural problem that many adults experience in their daily work. Especially in tasks that should be done routinely (Johnson and Carton, 1999). Procrastination is equivalent to negligence and procrastination (Ellis and Nass, 1977, translation of Farjad, 2012). The term procrastination comes from the two parts "pro" which means "in front of", "in front of" and "in support of" and "castings" which means "tomorrow" and "tomorrow" (Steel, 2007). This term is derived from the Latin word "Procrastinate" which means to delay, to delay, to delay, to stop moving, or postpone the performance of a task (Rosario, Costa, Nunez, Gonzalez, Pineda, Solano, and Valle, 2009). Milligram, Mittal, and Levinson (1998) write definition of procrastination; Procrastination is a characteristic or defect of behaviour that manifests itself in the form of delaying a task or a decision (quoted from Sawari, 2011). Academic procrastination has been defined as the constant desire of

students to postpone academic activities, which is almost always accompanied by anxiety (Guroshit, 2018).

Although procrastination can occur in any field; its prominent type is academic procrastination, which means an unnecessary desire to delay starting or completing an assignment. Although the student intends to complete a task, he cannot create enough motivation to do it and gets busy with unnecessary activities and fleeting pleasures (Nuri Imamzadei and Nilfroshan, 2015). The rate of procrastination among university students ranges from 46% to 95%. In Iran, Karmi (2018) reported 61% procrastination.

Wolfek (2004 quoted from Saif, 2017) defines learning style as follows: one's preferred ways to study and learn, such as using pictures instead of books, working with others instead of working alone, learning structured situations Against unstructured and...

By becoming aware of their learning styles, students become familiar with their abilities which enables them to achieve appropriate academic progress and be dynamic, avoid procrastination, and be more successful in achieving their goals. It can be said with confidence that everyone works differently in learning and no two students are the same in characteristics and preferences. When they grow up, they deal with experiences that are different from the experiences of other students, so if we want to treat students successfully, we must pay attention to individual differences and different learning styles. Pay special attention. Recognizing the strengths causes immediate interest and eagerness to replace procrastination, therefore, investigation and research in this field are considered necessary and important.

#### Research Methodology

This research is descriptive and correlational. Considering that the subject under investigation is in the field of educational sciences and its main goal is to generalize the results of the sample to the society, to obtain information about the attitudes, opinions and beliefs of the sample in question about the subject of the research, and to discover and anticipate It is the analysis of the relationship between the desired variables. The research plan is due to the objective, real and regular description of the desired subject and accordingly inferring and obtaining concrete results, from the descriptive method (situation) and the type of study to investigate the nature and extent of Correlation used for the relationship between variables.

The statistical population of this research included all the students studying for master's degrees in psychology in the higher education institutions of Mashhad in the academic year of 2014-2016. The sample was randomly selected from among all the students, which were about 8796 people, according to the table of Karajesi and Morgan and the total volume of these people in the higher education institutions of Mashhad, 245 people were randomly selected, which was 200 people due to the attrition. Finally, they completed the questionnaires.

Data collection tools in this research include:

#### Learning styles questionnaire

Kolb's (1995) learning styles questionnaire is used to measure students' learning styles. This questionnaire has twelve items. Each question has 4 options: objective experience (CE), reflective observation (RO), abstract conceptualization (AC) and active experimentation (AE). By adding up the points of each of these 4 options, 4 points are obtained in the 12 sentences of the questionnaire, which are learning methods. It shows the person. Two scores are obtained by subtracting abstract conceptualization from objective experience (CE-AC) and active experimentation from reflective observation (RO-AE).

- Active experimentation - abstract conceptualization = convergent learning style

Objective experience + reflective observation = divergent learning style

-abstract conceptualization - reflective observation = absorbing learning style

-Objective experience + active experimentation = adaptive learning style

Since to evaluate the value of research, the most important feature of the validity research tool is the tool, first the validity of the test will be examined. have confirmed Also, Pinto (1992) confirms the construct validity of Kolb's questionnaire according to the statistical calculations and factor load estimation (same source). In 1985, Kolb reported the reliability coefficient of his questionnaire using Cronbach's alpha as follows. Active experimentation 0.78, abstract conceptualization 0.83,

reflective observation 0.73, objective experience 0.82 to check and improve the validity of the research tool, 30 students from one of the high schools of Euclid City were selected completely randomly and completed the research questionnaire. In the next step, the reliability was checked using Cronbach's formula and alpha coefficient (AE) 0.72 (AC) 0.73, (RO) 0.71, and (CE) 0.76 was estimated, thus the validity of the questionnaire in each It was approved out of 4 cases.

The reliability of the above tool in this study was 2.616, which is a relatively favourable level. The validity of the tool was also measured with the help of confirmatory factor analysis, confirmatory factor analysis shows that 39% of the variance of learning styles can be explained by this questionnaire. Tables related to confirmatory factor analysis (not exploratory) are included in the appendix.

#### Academic procrastination questionnaire

Tuckman's standard questionnaire (1991) is used to test procrastination and procrastination. This questionnaire is a 16-item self-report scale designed based on the Likert scale. Getting a high score on this scale is a sign of high procrastination. Takman reported the reliability of this questionnaire as 0.86. In the research of Seime Kazemi and colleagues (2009), the value of Cronbach's alpha was 0.71, which indicates the high reliability of the questionnaire. Since no standard questionnaire was found to measure the factors affecting procrastination, the same researchers, after studying previous research and documents in the field of procrastination, as well as preliminary interviews and surveys of experts and professors, identified the factors affecting academic procrastination and identified them in the form of 40 factors. They sorted it out. Then these factors were given to 15 professors and experts, and after a consensus among them, finally, in the form of 20 sub-factors and three classes of individual factors (questions 1 to 7), organizational (questions 8 to 15) and environmental (questions 16 to 20) were categorized and specified and measured with a Likert scale. To ensure the accuracy of the designed questionnaire, factor analysis was done. The results of exploratory factor analysis (factorial rotated matrix with Varimax method) show that considering that Keyser-Mayorulkin is greater than 0.85 and the significant number with Ratlet (0) is less than 0.05, the data meet the required conditions. They have a factor for analysis. Among the other findings is the exploratory factor table that the three individual, organizational and environmental factors explain a total of 63.25% of the variance of procrastination and the questions related to each component are correctly indicative of the presented classification.

The validity of the questionnaire was confirmed by asking the opinions of experts and professors, and Cronbach's alpha coefficient was used to confirm its reliability. The value of Cronbach's alpha was 0.78, which indicates the high and favourable reliability of the questionnaire.

This research was done using two statistical methods, descriptive statistics and inferential statistics. In descriptive statistics using mean and standard deviation and in inferential statistics using Pearson correlation coefficient, the data were analyzed.

### Findings

It is worth mentioning that the demographic findings of the present study include 66% single and 34% married, including 22% female students and 78% male students. Also, to express the inferential findings, Pearson's correlation test was used to check the correlation between the variables. took

#### **There is a significant relationship between convergent learning styles and students' academic procrastination.**

**Table 1 Convergent learning style with academic procrastination**

Academic procrastination			
-0.45	The correlation coefficient	Convergent style	Pearson correlation
0.02	The significance level		
200	Number		

**According to the results of Table 1, there is a negative and significant relationship between convergent learning style and academic procrastination.**

**There is a significant relationship between divergent learning styles and students' academic procrastination.**

**Table 2. Divergent learning style with academic procrastination**

Academic procrastination			
-0.43	The correlation coefficient	divergent style	Pearson correlation
0.001	The significance level		
200	Number		

According to the results of Table 2, there is a negative and significant relationship between divergent learning styles and academic procrastination.

**There is a significant relationship between engaging learning style and students' academic procrastination.**

**Table 3. Absorbing learning style with academic procrastination**

Academic procrastination			
-0.76	The correlation coefficient	Engaging learning style	Pearson correlation
0.004	The significance level		
200	Number		

According to the results of Table 3, there is a negative and significant relationship between absorbing learning style and academic procrastination.

**There is a significant relationship between adaptive learning style and students' academic procrastination**

**Table 4. Adaptive learning style with academic procrastination**

Academic procrastination			
-0.32	The correlation coefficient	Adaptive style	Pearson correlation
0.02	The significance level		
200	Number		

According to the results of Table 4, there is a negative and significant relationship between adaptive learning style and academic procrastination.

## **Discussion**

In the past, it was thought that the factors related to the learner cannot be controlled and changed from the outside, and they focused on environmental factors to improve and embed learning and education. But today, significant parts of the factors related to the individual can be planned, predicted and changed to align with the flow of learning and education. Such research in different fields has clarified a corner of education. In explaining the findings of the research, it should be said that in general, the method of learning and solving problems depends on the relatively irregular relationship between personality and cognition; When cognitive styles are specifically related to an educational context, that is, when emotional and psychological factors such as students' academic procrastination are integrated. These styles are called learning styles. Also, the learning styles of that child are unconsciously formed under the influence of the individual's biological preparation and environmental factors, people learn differently in the same situation, which may be the most important reason for their different learning styles. These styles determine how long, what and to what extent a person can pay attention to a situation.

Surveys have shown that students use different methods to study and learn their lessons, these methods are formed to some extent under the influence of learning styles and to some extent under the influence of the content of the lessons. Marton (1988) has divided the issues related to the learning process into two parts: different approaches have been proposed to answer the second question; including theories related to (learning styles) and (cognitive styles). Learning styles refer to the stimuli in the learning situation. Investigating learning styles helps to understand how to learn a second language. The prevailing and recent opinion about the effective factors in learning a second language points to the point that factors such as personality and intelligence are of secondary importance due to their generality and what are important and other factors such as personality deal with interaction with the environment and the way of exploiting mental facilities, these are the learning styles.

The main goal of learning styles is to obtain principles that enable educational designers to develop a learning environment suitable for a specific inclusive style. Also, the research conducted on learning styles has shown that if people are taught according to their preferences and appropriate styles, their academic progress will significantly increase. It is necessary to explain that internal and external research has not been found exactly with these variables and according to the research findings, there is a negative and significant relationship between learning styles and academic procrastination. The findings of this research are similar to those of Amiri et al. (2018), Shahri et al. (2017), and Mansoorinia et al. Malkok et al. (2018) is consistent. According to Kolb's theory (1999), a person with an abstract conceptualization style emphasizes logical analysis of ideas, uses systematic planning in his work, and acts according to thoughtful understanding and understanding of things. Motivation for progress is a person's tendency to overcome obstacles, try to achieve excellence and maintain high-level standards. Those with high achievement motivation want to complete and improve their performance. They are conscientious and prefer to do things that are challenging and do things where their progress can be evaluated (whether compared to others' progress or based on other criteria). These people have self-esteem, prefer individual responsibility and like to be concretely aware of the results of their work.

## **References**

1. Seif, Ali Akbar (2009), Learning and Study Methods, Tehran, Doran Publishing House
2. Rezaei, Leila, Ahadi, Hassan, Asadzadeh, Hassan. (2014). Prediction of progress motivation based on club learning styles in high school students in Tehran. Knowledge and research in applied psychology, 16(3), 34-41.
3. Homayoni, Alireza; Abdulahi, Mohammad Hossein (2012), investigating the relationship between learning styles and cognitive styles and its role in students' academic success, Journal of Psychology, 178-197, 2.
4. Seif, Ali Akbar (1376), Learning and Study Methods, First Edition, Tehran, Aghat Publications
5. Shah Bey, Morteza, Agha Hosseini, Taghi, Kolbasi, Afsana. (2019). Feasibility of using students' blended learning method from the point of view of primary school administrators and teachers. Research in elementary education, 2(3), 36-49.
6. Seif, Ali Akbar (2010), Educational Psychology, Psychology of Learning and Education 5, Tehran, Aghat Publications.
7. Sawari, Karim; Falahi, Maryam; Khalifah, Ghodrat Elah (2019), Effects of psychological stress on academic procrastination through the mediation of academic motivation and Internet addiction, scientific-research bimonthly educational strategies in medical sciences. 13 (6):553-560
8. Malkoç, A., & Kesen Mutlu, A. (2018). Academic self-efficacy and academic procrastination: Exploring the mediating role of academic motivation in Turkish university students.  
a.
9. Aragon, S. R, Johnson, S. D. & Shaik, N. (2001). A preliminary analysis of the Influence of learning style preference on student success in online Vs face environments. In B. cope & M. Kalantzis (eds). Proceedings of the Learning Conference. Available in:<<http://hre.uiuc.edu/online/comparison.pdf>>.
10. Hohn, R. I. , (1995). Classroom learning and teaching. USA: Longman

11. Kolb. D. A., Kolb. S.A; *Experiential Learning experience as a source of learning and development*, 2017, NJ: Prentice Hall.
12. Smith, Z. R., Langberg, J. M., Cusick, C. N., Green, C. D., & Becker, S. P. Academic motivation deficits in adolescents with ADHD and associations with academic functioning.2020, *Journal of abnormal child psychology*, 48(2), 237-249.