



# Studying the Effect of Time Management Strategies on Students' Academic Procrastination

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**Abstract:** *Time management is one of the applied skills influencing academic process of students at all levels. The present research aimed to study the effect of time management skill on academic procrastination of students. The research method was pretest-posttest with control and test groups. The statistical population included all high school students in Borazjan, Bushehr Province, 33 of whom were randomly selected as the sample and divided into two groups of test (17) and control (16). Solomon & Rothblum's Procrastination Assessment Scale for Student was filled out for all subjects. Then, subjects of test group participated in a time management training program for 8 sessions, while those in the control received no intervention. At the end of the training program, the questionnaire was again filled out by all subjects and the obtained data were analyzed using the univariate and multivariate analysis of covariance. The results showed that training of time management skills has a significant negative effect on components of academic procrastination of students. Given that time is a limited and irreparable resource, training of time management skills is of great importance, especially in educational environments and to high school students who are ready to enter higher education.*

**Keywords:** *Time management; Academic procrastination; Students*

## INTRODUCTION

As a fundamental pillar of the educational system, students have a special role and position in achieving education goals. Educationally, paying attention to this group can be followed by efflorescence of the education system and thereby multilateral development of society. One of the very important factors in the overall growth of students is their psychological status and personality traits. Procrastination is one of these important personality traits that can create stressful conditions and cause serious problems in education. Procrastination is not a new phenomenon, as William James identified psychological costs of procrastination about 120 years ago (Klassen, Krawchuk & Rajani, 2008).

The issue of procrastination, in particular in the field of psychology, goes back about 40 years ago (Ellis & Knall), but it has been taken into account in detail in academic studies only in the last twenty years (Milgram, Mittal & Levinson, 1998). However, it has long been considered under other titles and always condemned as an indecent, humiliating, and harmful feature. The important point is that this habit is common in many societies and its prevalence is increasing, as Eliss and Knall (2003) call it a condition that 95% of people are afflicted by.

Howell and Watson (2007). showed that procrastination is associated with lack of organization and none use of cognitive and metacognitive strategies. By organizing the tasks and goals (one of the time management skills), the necessary skills and tasks for achieving the objectives will clearly appear to individuals and this clarity is one of the factors reducing procrastination and preventing anxiety, a subset of negative emotions.

According to Solomon and Rothblum (1984), in academic procrastination, studying the lessons is postponed to the last moments remaining to the exam and the studying hours are less than what planned.

Given the complexity and its cognitive, emotional, and behavioral components, procrastination includes various aspects such as academic procrastination, decision-making procrastination, neurotic procrastination, and obsessive procrastination (Rajabpour, Farmani, and Amani, 2012).

The situation in which students postpone their academic tasks include procrastination in homework preparation and presentation, project completion, doing homework, and even preparing for the exam (Hossein & Sultan, 2010).

In fact, procrastination is defined as delaying or postponing an action one was expected to do. In this case, since he/she has not done it and is committed to do it, he/she experiences a level of anxiety caused by procrastination Rohrbaugh (2006).

Rosario, Costa, and Nunez (2009) state that although procrastination may occur in all activities of daily living, its frequency in doing homework is higher.

Procrastination is influenced by different factors such as low self-confidence, lack of planning, inability in time management, fear of failure, sense of humiliation, having difficulty in starting the works, anxiety, and depression. In addition, although overeating, physical inactivity, and smoking have pervasive aspects and people are aware of their harms, they do not care about them (Farjad, 1996).

Procrastination behaviors among learners make them unable to show their real capabilities in the learning process. Therefore, understanding procrastination behaviors can facilitate the application of necessary skills for dealing with such behaviors (Kagan, Cakir, & Kandermir, 2010).

In other words, procrastination behavior may be the result of motivational factors, and the motivation of evading responsibility is considered an emotional strategy to cope with some situations. The main reason for procrastinators is often trying to evade responsibility (Ellis & Knall, translated by Farjad, 2011).

Procrastination is one of the possible variables impeding academic achievement of students, which has been accepted in the absence of self-regulation function and behavioral tendency to delay what is necessary to achieve the goal (Ellis & Knall, quoted in Hosseinin & Khayyer, 2009).

Proper time management is a key factor in the success of any purposeful activity, what much attention has not been paid to. Time management is something more than running activities over time. Time management is some sort of self-management and includes skills such as planning, organization, execution, and control (Javaherizadeh, 2005).

Time management, in fact, is life management, personal management, and self-management. Individuals who value themselves act carefully in allocation of time to their works and think about it many times. The better the time management they apply, the more value they consider for themselves and their lives. Time management means self-management and taking time and not allowing the affairs and events to steer you. Time Management shows that how works should be done more effectively and consciously not harder or longer (Veechio, 2000).

A common feature among the definitions of time management is behavioral planning for decision-making about doing works, prioritization of tasks, and effective management of potential interruptions (Claessens, Van Eerde, Rutte, & Roe, 2004-2007). As one of the most important skills of each student to achieve academic success and achievement (Collins and Donald, 2010), time management means taking control of your time and work instead of being guided by incidents and affairs. Prioritization of works is of special importance in time management (Faerner, 1995). One of the principles of this training is the principle of 20/80. This means that 20% of time should be used for doing 80% of works. Success in proper time management depends on recognizing the important works (Tracy, 2000). Given that time is a limited and irreparable resource, training of time management skills is of great importance, especially in educational environments, because time management affects students' activities. It seems that optimal use of time in learning, influenced by selection of managerial practices, motivate students to present better performance (Baldrige, 2007).

Alec Mackenzie, in an article titled "Time Management from the Original", talks about principles of management in general and time management in particular. He states that most managers and students do not know the basics of time management. An important principle that should be taken into account not only in time management but also in management is to avoid realism and absolutism. No matter how carefully people do their works, a perfect result will not be achieved. Therefore, managers, instead of obsession, should fulfil their responsibilities in a standard level. In fact, the quintessence of time management is to spend the best times on doing the most important works in order to achieve the most favorable results (Mackenzie, 2006, quoted in Hashemi, 2011).

Perrin et al. (2011), quoted in Sobhi et al. (2014), showed that frequent deadlines can significantly reduce academic procrastination among students, because frequent deadlines put students under slight pressure

to get things done on time and this causes an increase in arousal which directs individuals towards completion of works and fulfilment of tasks in a specified time. When a deadline is determined to a work, it creates motivation and commitment in someone to finish a task at the expected time.

The high percentage of academic failure among students, huge annual spending on repeating the previously selected courses, psychosocial vulnerability of students, non-highlighting the role of these variables in students' academic procrastination, and some strong and significant findings of studies reveal the importance and necessity of the present research. Although procrastination is one of the serious problems of students and other learners in educational environments, it has not been explained as a fact and, as a result, challenges researchers of behavioral sciences.

Jale , Aynur, and Phillies (2010), in a study titled "Effect of time management on improving the mental state of student teachers", found that there is a positive relationship between planning (one of the components of time management) and improvement of mental state of student teachers.

Goal setting and planning are other skills of time management. One of the most important problems and issues that direct individuals towards procrastination is the inability to abstain from immediate pleasures. There are pieces of evidence indicating that postponement of immediate pleasures is associated with the use of self-regulation, voluntary strategies, and other ways that students apply to continue their efforts to achieve their ends (Zhang, Karabenick, and Maruno, 2011).

Since students do not correctly use their time in learning process and face problems in academic timing and also as academic success is one of the essential components ensuring their progress in life, time management is a preventive approach which brings self-regulation and progress for learners through a series of processes. In addition, it is some sort of functional result which helps students regulate their current and future learnings and academic performance (Weinstein, 1994).

Time management provides us with new methods to view interrelated and prioritized works with a different perspective. It also creates more opportunities to be creative and allows us to do work without the pressure of time shortage and hurry, so that we will have more leisure time and can spend more time on items that provide physical and mental health such as being with our family, hiking, and so on. In this case, we can regularly achieve our goals with greater stability and consistency and our life will find its genuine meaning (Khaki, 2007).

With a review of the published studies in this field, it can be found that there are few studies on the effectiveness of time management trainings. Specifically, in some limited studies conducted in the field of time management training, no comprehensive and multidimensional research has been carried out on high school students. Hence, the present research aims to study the effect of time management on academic procrastination of high school students. The main research hypothesis is as follows:

- Time management training affects academic procrastination of high school students.

## **Methodology**

### **Research design and method:**

The research method was pretest-posttest with control and test groups. The statistical population included all high school students of Borazjan, Bushehr Province in academic year 2015-2016. In this study, multi-stage random sampling and then random sampling methods were used. For this purpose, all districts of education were listed and then one of the districts, one high school in that district, one class in that school, and some of the students out of the class were randomly selected. Subjects were randomly divided into two groups of test and control. Both groups participated in the pretest including Solomon & Rothblum's Procrastination Assessment Scale for Student. Then, subjects of test group participated in a time management training program for 8 sessions, while those in the control received no intervention. At the end of the training program, the questionnaire was again filled out by all subjects as the posttest.

Table 1: Diagram of experimental design

Posttest	Time management
Independent variable	Test group
Pretest	Control group
Groups	

**Statistical population, sample, sampling method, and sample size:**

The statistical population in this group included all high school students of Borazjan, Bushehr Province in academic year 2015-2016 (3262). The sample included 33 female high schools who were randomly selected and divided into two groups of test (17) and control (16). Due to displacement and absence on the posttest day, 2 subjects were excluded from the control group.

**Measurement tool:**

The tool used in this study for data collection was Solomon & Rothblum’s Procrastination Assessment Scale for Student. This scale measures procrastination in three areas of preparation for exam in 8 items, preparation for homework in 11 items, and preparation for the end-of-term report in 8 items. This scale consists of 21 items and 6 other items were added for measuring two features of discomfort of procrastination and desire to change the habit of procrastination. Therefore, the final questionnaire used in this study consisted of 27 items. The respondents expressed their agreement or disagreement with each item by choosing one of the choices of rarely (1), sometimes (2), often (3), and always (4). In addition, items 2, 4, 6, 11, 15, 16, 21, 23, and 25 were scored inversely. Cronbach’ alpha coefficient was obtained 0.86 for this scale. Cronbach’s alpha coefficient for three areas of this scale was obtained 0.84, 0.85, and 0.76, respectively, by (unknown) (2004). It is noteworthy that, at the proposal of the scale developer, the last six items related to discomfort of procrastination and desire to change the habit of procrastination were excluded from the assessment of validity and reliability. However, in order to confirm the validity of the first 21 items, factor analysis and item-total score correlation methods were used. In the preliminary study for factor analysis, values of KMO and chi-square in Bartlett's test of sphericity were obtained 0.88 and 2158.384 which are significant at a level of 0.0001. This indicates the adequacy of the sample and variables selected for factor analysis. Finally, the reliability of this scale was studied by Dehghan (2008), quoted in Alimadad (2009), and its Cronbach’s alpha coefficient was obtained equal to 0.79. This shows that the reliability of this scale is at an acceptable level.

**Research method**

Table 2: Educational content of time management used in this study derived from practical and effective implications of group practice of time management is as follows

Session	Content of activity
1	Meeting the group members and a semi-formal introduction, Establishment of good relationships asking the ideas of members for changing the class arrangement, Preparation and admission for pretest, Conducting the pretest for both groups
2	Description of the rules (only for the test group), Explanation about process of sessions and general trend of content, Description of the importance of time management, A brief description of the uses of this ability, External manifestation of individuals with this ability, Definition and importance of the objective
3	Review of previous content, Training of focus on target, Training of addressing the target of the same priority, Practical execution of urgent and prioritized targets, Identification of valueless targets

4	Review of types of targets, Creating motivation for planning and nature of useful programs, Definition of Pareto principle (80/20), Training in the use of the Pareto principle, Practical assignment on the Pareto principle
5	Checking assignments on the Pareto principle, Training on long-term, mid-term, and short-term planning, Practical execution of various types of planning as a trial
6	Review of various types of planning, Definition of positive thinking, Training on practices of positive thinking, Definition of vision of success, Practical training of perceived vision of success
7	Review of training contents taught in previous sessions, Definition of discipline and its various types, Definition of environmental and mental discipline, Definition and training on controlling time wasters
8	Conclusion of the training sessions and review of contents, Conducting the posttest for both groups

**RESULT**

Research hypothesis: Time management training affects academic procrastination of high school students.

In order to test this hypothesis, analysis of covariance was used. The results showed that after adjusting the effect of pretest, the effect of time management training on procrastination was significant. Eta coefficient indicates that 18.6% of variance of procrastination is explained by time management training. Parameter estimation also suggests that the effect size of time management on procrastination is significant, as time management causes an increase in procrastination by 2.04 to 16.41 units.

Table 3: Comparison of test and control groups in terms of procrastination

Group (I)	Standard error
Statistic	Significance level
Group (J)	Test group
Mean difference	Control group

Comparison between the groups shows that there is a significant difference between them in procrastination at a level of  $P < 0.01$ .

Table 5: Adjusted mean values of procrastination

Statistic	Minimum
Group	Maximum
Mean	Test group
Standard error	Control group
Confidence level (95%)	

Adjusted mean values also indicate that mean value of procrastination in test group is equal to 75.29. At a confidence level of 95%, it can be stated that mean procrastination of students in test group ranges between 70.30 and 80.27. In addition, mean value of procrastination in control group is equal to 84.51. At a confidence level of 95%, it can be stated that mean procrastination of students in control group ranges between 79.37 and 89.65.

## Discussion and conclusion

According to statistical findings, procrastination of students may be reduced by 2.04-16.41 units with the help of time management training. In addition, according to tables 4 and 5, mean value of procrastination in test and control groups was 75.29 and 84.51, respectively, and the difference between them was obtained -9.22. Comparison between the groups suggests that the effect of time management training on reduction of procrastination is significant at a level of  $P < 0.01$ .

The findings of Perrin et al. (2011) and Gharamaleki et al. (2014) showed that there is a significant negative association between time management training and procrastination among students, which is consistent with the results of the present study. As an explanation to this hypothesis, it can be stated that procrastinating students are not able to correctly manage and appropriately control time and spend their time on unnecessary activities or activities with early and short-term results. Therefore, these problems exactly reveal the lack of time management solutions including timing for each activity in each target. Perfectionism is another reason for procrastination. This group of people follow a behavioral pattern of "do's and don'ts". As they doubt their abilities for taking responsibilities, setting deadlines is a way of solving this problem. The findings show that students can achieve theoretical and practical awareness about how to control and reduce the dysfunctional behavior of procrastination through acquiring the time management skills. This learning firstly begins with discovering the problem of procrastination. Then, one accepts his/her inappropriate behavior and starts to run management skills. After experiencing success in reducing procrastination, this process accelerates.

## Recommendations

Considering the role and positive impact of time management training on procrastination and acceptable level in reduction of procrastination components, it is recommended that such training programs to be continuously run in elementary schools. In the field of management excellence, as a comprehensive program for advancement of the Sixth Development Program in schools, time management training can be institutionalized in objectives of this program. With training and remembering the symptoms and complications of procrastination to teachers of elementary schools before the start of the school year, they can transfer the points to students in short sentences and brief phrases at the beginning and end of the classroom. It is also recommended that the methods of goal setting for the start of planning to be provided in brief sentences at the beginning of high school textbooks, so that students can consistently review the entries. Given the prevalence of procrastination and significant impact of time management on this variable, it is recommended that parents of students to be trained on ways of knowing and controlling procrastination in weekly sessions. To learn more about time management in the process of teaching and learning, it is also recommended that on-the-job training courses to be held for teachers of all educational levels. In addition, regional seminars and qualitative and quantitative understanding of research findings can be beneficial in line with the improvement of the education system.

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