

The Effects Of Academic Motivation Training On Academic Motivation, Grit And Academic Engagement Of High School Students

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Abstract

Objective: The present study aimed to investigate the effect of academic motivation training on increasing academic motivation, grit and academic engagement of high school students. For this purpose, 40 people from the ninth grade students were selected using a multi-stage random method and were replaced in two experimental and control groups (20 people in each group). The training group received 12 sessions of academic motivation training and the control group did not receive any intervention. Dependent variables were measured in pre-test and post-test stages. Vallerand, Blais, Briere and Pelletier Academic Motivation Scale, Duckworth Grit Scale, and Reeve and Tseng Academic Engagement Scale were used in this study. Data analysis using multivariate analysis of covariance showed that by controlling the effects of pre-test, the training method has a significant effect on academic motivation, grit, and academic engagement.

Keywords: Academic Motivation, Grit and Academic Engagement

INTRODUCTION

The first studies on motivation in education dates back to the 1940s. Young (Weiner, 1990) first conducted research on motivation in education. He addressed the effect of praise and blame, progress and failure, cooperation and competition. Academic motivation is the intrinsic and psychological motivation of students that affects different types of academic activities and also refers to the student's tendency to achieve academic goals (Wu, 2019). Considering the importance of motivation in education, research in this regard has increased over the past fifty years. Most of

them have been conducted based five main theories of academic motivation, including attribution theory, expectancy-value theory, social-cognitive theory, goal orientation theory, and self-determination theory. These theories focus on the beliefs, values, needs, and goals that students adopt as they progress, along with the background and implications of these processes (Eccles and Wigfield, 2002, quoted in Koenka, 2019). Weber (2003, quoted in Li, Ping, Lu, Liao, and Li, 2020) categorized motivation into intrinsic and extrinsic motivation. Intrinsic motivation arouses people to work with their own satisfaction.

However, extrinsic motivation is directed by the outcomes that this activity will bring such as reputation, grades, and recognition from peers, teachers, and parents (Li, Ping, Lu, Liao, & Li, 2020). Academic motivation is usually perceived through internal and external conceptualization of motivation. As Brophy (2004, quoted in Loes, 2022) points out, academic motivation is different from extrinsic and intrinsic motivation, but it may be related to either of these concepts. Students may be motivated to learn from a lesson or activity, whether they find the content or processes enjoyable or not. This conceptualization of motivation reflects the inherent satisfaction that one receives from a particular field of study (Loes, 2022). In the area of academic motivation, there are various theories, principles and models that refer to education and the formation of academic motivation. Martin's cyclical model of academic motivation is one of these models.

In his study, Martin (2008) investigated the effect of multidimensional interventional education of academic motivation on the cognitive and behavioral dimensions of motivation. The results showed the effect of this intervention on the cognitive and behavioral dimensions of motivation. Also, based on Pintrich motivational self-regulatory model, we can refer to Beyrami's research (2016), in which the effect of teaching motivational self-regulatory strategies on academic motivation was examined and the results showed that motivational self-regulatory strategy increases students' academic motivation. The academic motivation training package in the present study emphasizes the role of motivation and the impact of emotions, judgments, abilities, thoughts, choices and actions on academic success in an effort to improve students' academic motivation, grit, and academic engagement. At present, low educational motivation of students causes many problems in the educational systems of governments and

imposes many cultural, scientific and economic losses on families and educational systems of governments (Molavi, Rostami, Fadaei Naeini, Mohammad Nia and Rasoulzadeh, 2007).

Academic motivation training is one of the variables affecting students' grit and perseverance in relation to educational activities. The studies conducted by Rerarki, Celik, and Saricam (2015), Lio (2022) revealed a positive and significant relationship between academic motivation and grit. Grit is defined by Duckworth as the persistence, insistence, and desire to achieve long-term goals even after years of failure (Duckworth, Peterson, Matthews, & Kelly, 2007). Grit is associated with two components of perseverance of effort and consistency of interests. The first reflects the commitment and interest of the person in achieving goals and means that what has started must end and the second reflects attention to the set of important goals of the person (Silva, Eddington, Beaty, Kwapil, 2013, quoted by Hosseini, 2016). In their research, Karen, Suter, Hirt, and Maag Merki (2019) showed the indirect and positive effect of perseverance of effort (PE) on students' intrinsic motivation through hegemonic goals. The researchers also concluded that there is a significant negative relationship between the dimensions of grit dimensions (perseverance of effort and consistency in interests) and students' extrinsic motivation.

Academic motivation training also increases students' academic engagement (Salehi, 2018). Academic engagement refers to the quality of students' efforts through purposeful activities to achieve desirable educational outcomes (Richardson, Long, & Woodley, 2003). (Walker, Greene, Mansell, 2006) Students with intrinsic motivation have higher academic engagement and (Sepehri Shamloo and Cox, 2010) students with extrinsic motivation have lower academic engagement. Antik and Celik (2021) investigated the relationship between

academic motivation and academic engagement. In this study, learners' academic motivation had a positive and significant relationship with academic engagement. Given the studies reviewed, increasing academic motivation has a positive effect on academic motivation, grit and academic engagement. In this regard, various educational packages have been used to increase academic motivation. In this study, since academic motivation training package based on Norman Brier's book (2006) was used, the main question of the present study is whether academic motivation training can be effective in increasing students' academic motivation, grit and academic engagement?

Methods

The method of this study was field and experimental with a pre-test-post-test design with a control group. Population, sample and sampling method: The statistical population of the present study was all ninth grade high school male students in Districts 1 and 2 of Zahedan city in the academic year of 2020-2021. Multi-stage random sampling was used to select the sample. Accordingly, one of the two districts of Zahedan city was randomly selected. Then, 2 schools were selected from these districts and among nine grade schools in each school, one class was selected, and 20 students were randomly selected from each class as the sample. They were randomly assigned to experimental and control groups. The following questionnaires were used to collect data.

Academic Motivation Scale (AMS):

In the present study, to measure academic motivation, the 28-item academic motivation was used by Vallerand, Blais, Briere and Pelletier (1989). Subjects report their agreement or disagreement with each item on

a seven-point Likert scale from one (strongly disagree) to seven (strongly agree). The reliability of this scale has been reported by the developers using Cronbach's alpha method between 0.83 and 0.87 for subscales of academic motivation. In the present study, the reliability of the questionnaire was obtained at 0.83 by Cronbach's alpha method.

Grit Scale

This 12-item questionnaire was developed by Angela Duckworth et al. (2007) and has always been scored using the five-point Likert scale. Duckworth, Winkler, Elizabeth and Scott (2014) reported its Cronbach's alpha coefficient at 0.85. The reliability of this questionnaire in the present study was obtained at 0.84 using Cronbach's alpha coefficient.

Academic Engagement Scale (AES):

In the present study, a 22-item Reeve and Tseng (2011) questionnaire is used to assess academic engagement. Subjects report their agreement or disagreement with each item on a seven-point Likert scale from one (strongly disagree) to seven (strongly agree). The reliability of this questionnaire was obtained between 0.78 and 0.88 for its subscales by the developers of this scale using Cronbach's alpha method. To evaluate the validity of Reeve and Tseng (2011) academic engagement subscales, confirmatory factor analysis has been used. The indices obtained from confirmatory factor analysis indicate that the model fits well with the data. The reliability of this questionnaire in the present study was obtained at 0.85 using Cronbach's alpha coefficient. To analyze the data related to the main research question, multivariate analysis of covariance was used. All indices of analysis of covariance in the present study were desirable and statistically significant.

Results

Table 1: Multivariate analysis of covariance of the effects of academic motivation training method on academic motivation, academic engagement and grit

Effect	test	df1	df2	F	P	Eta
Method	Wilks Lambda	3	33	12.66	0.01	0.535

Data analysis

As Table (1) shows, academic motivation training has a significant effect on academic

motivation, academic engagement and grit, because the calculated f (12.66) at the alpha level of less than 0.01 is meaningful.

Table 2: Univariate analysis of covariance of the effect of academic motivation training method on dependent variables

Source of variation	dependent variables	SS	DF	MS	F	P	Eta
method	academic motivation	48.763	1	48.763	193.25	01.0	419.0
	Academic engagement	98.324	1	98.324	033.11	05.0	240.0
	grit	34.130	1	34.130	516.5	05.0	136.0

As Table (2) shows, by controlling the effects of pre-test, academic motivation training has a significant effect on academic motivation, academic engagement and grit of students, because the calculated f for academic motivation (25.193) at the alpha level of less than 0.01 is significant. Also, calculated f for academic engagement (11.033) and grit is also significant at the alpha level of less than 0.05. According to the means of the experimental and control groups, it can be concluded that the means of academic motivation, academic engagement and grit of the experimental group in the post-test stage are higher than the means of these variables in the control group and the difference in means is statistically significant. According to these results, it can be concluded that academic motivation training has an effect on academic motivation, academic engagement and grit.

Discussion and Conclusion

Data analysis showed that academic motivation training is effective in increasing academic motivation (consistent with the results of Golestaneh 2010 and Zamani and Talepasand, 2017), grit (consistent with the results of Lio (2022), Aulia, Takiuddin and Rahmatullah (2022), Reraki, Celik, Saricam 2015 and Karlen, Suter, Hirt and Maag Merki, 2019) and academic engagement (consistent with the results of Mutisya, Dinga and Kinai (2021), Hemmati, Noshadi and Nikdel, 2018; Salehi, 2018 and Walker, Greene and Mansell, 2006 and inconsistent with the results of Sepehri Shamloo and Cox, 2010).

In explaining these results, it can be said that motivational factors and especially academic motivation are among the most important and influential factors in the development of students' academic performance (Afzalzadeh, Maktabi, Behrozi and Haji Yakhchali, 2021). Academic motivation training promotes positive motivational beliefs and behaviors and reduces negative motivational beliefs and

thoughts. Highly motivated students will have a regular and active presence in the classroom, will do their homework with perseverance and seriousness, and will continue to strive for success despite failing in learning activities.

According to the results, academic motivation training increases students' grit. These results are in line with those of studies conducted by Aulia, Takiuddin and Rahmatullah (2022) who showed that there is a positive and significant relationship between grit and academic motivation. People who have perseverance and higher interests are stronger learners because they are less discouraged from failure and problem solving, more motivated to engage in strategic behavior, and maintain a focused effort to achieve success (Eskreis-Winkler, Gross, Duckworth, 2018). Regarding the effect of academic motivation on academic engagement, Hemmati, Noshadi and Nikdel (2018) and Mutisya, Dinga and Kinai (2021) in their research showed that there is a significant positive relationship between intrinsic motivation and students' academic motivation and academic engagement. In explaining this result, it can be said that learners with intrinsic motivation are motivated to do a particular task and regardless of external reward, doing the homework itself is valuable and satisfying for them (Lee, McInerney, Liem, & Ortiga, 2010). Results of the present study were obtained by conducting the study on high school students in Zahedan. Therefore, we should treat with caution in generalizing the results to other groups and students. Based on the results of this study, every organization needs to improve the motivation of its employees to progress. The results of this study can be used especially for schools and universities. The research results will also be useful for different educational, cultural and artistic environments for increasing the success and effort of students in these activities. This research has been conducted with the support of the Deputy for Research of the Shahid Chamran

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