



The Effectiveness of Successful Intelligence Training on Academic Engagement and Academic Resilience in High School Students

Zeinab Bazzi¹ and Gholamhasan Panahi^{2*}

1. Teacher of District 2 of Zahedan Education Department, Zahedan, Iran

2. Department of Educational Sciences, Farhangian University, Tehran, Iran

* Corresponding author's Email: gh.panahi@cfu.ac.ir

Abstract: The present study aimed to examine the effectiveness of successful intelligence training on the academic engagement and academic resilience in high school students. The current research is a pretest-posttest semi experimental design with a control group. The statistical population included all female high school students of Zahedan city (Iran) in 2022. Participants were 30 female high school students selected by purposive sampling and randomly assigned to experimental and control groups (15 people in each group). Successful intelligence educational package (Babaei, 2015) was carried out in the experimental group during 10 sessions of 90 minutes. The research tools were Academic Engagement Inventory (Salmela-Aro & Upadaya, 2012) and Academic Resilience Scale (Samuels, 2004). The reliability of the research questionnaires was estimated using Cronbach's alpha coefficient of 0.79 for the academic engagement inventory and 0.91 for the academic resilience scale. The results revealed that successful intelligence training had a positive effect on students' academic engagement (and its components) and academic resilience (and its components) in female high school students. The findings emphasize the importance of considering the cognitive interventions that contributes to the ongoing enhancement of academic engagement and academic resilience as the motivational constructs in educational setting.

Keywords: Successful intelligence training, academic engagement, academic resilience, high school students

Introduction

During the period of education, it is a phase of life in which rapid cognitive and social changes occur, and adaptation and compatibility with these changes have always been of interest to educational researchers. One of the most significant challenges facing students during their education is resilience (Youssef Vand et al., 2019). Resilience is defined as the ability to return to the initial state and successfully adapt despite high stress and unfavorable conditions (Ng et al., 2019). Resilience is one of the constructs that researchers have focused on in various fields of developmental and educational psychology.

Resilience refers to the dynamic process in which individuals exhibit positive adaptive behavior in the face of adverse conditions or psychological challenges (Mehta et al., 2019). Resilience is also one of the important variables in the field of positive psychology that has received attention in recent years (Yates et al., 2015).

In the educational environment, resilience is considered the most important factor in achieving very high success in school and other educational settings despite cultural, social, and economic challenges ([Abolghasemi, 2011](#); [Firoozmokhtar et al., 2023](#)).

One dimension of resilience is academic resilience, which is defined as the process of coping with stress and advancing challenges in school and utilizing skills that help students overcome these conditions ([Rudd et al., 2021](#)). Students have important capacities that their development is essential for the success and development of today's societies. However, the presence of multiple risk factors along this path has always resulted in short-term and long-term individual and social damages. Many students face challenging social and educational situations in school, at home, and in society that can lead to their failure in school and ultimately to a life of weakness and disability ([Foster, 2013](#)). Nevertheless, many studies have shown that students, even in high-pressure, challenging, and threatening situations, can succeed and experience high levels of academic achievement ([Khalaf, 2014](#); [Mirzaee et al., 2016](#)). This process is referred to as academic resilience.

According to [Alva \(1991\)](#), students with academic resilience have high motivation and good performance even in the face of stressful events and conditions that could lead them to perform poorly and ultimately leave school. [Martin and Marsh \(2009\)](#) define academic resilience as students' capacity to overcome acute and chronic threats, which are considered major threats in the educational process, and they see it as part of their academic life. On the other hand, they believe that academic resilience is not limited to students with a background and unfavorable conditions; rather, all students experience levels of poor performance, difficulties, challenges, and failures in their educational process.

[Mashhadi et al. \(2022\)](#) demonstrated that positive group education had a significant positive effect on social competence and academic resilience and was also effective on subscales of communication skills, future orientation, and problem-centeredness. [Nazari \(2022\)](#) showed that online flipped education increases self-regulation and academic resilience. [Jolani et al. \(2022\)](#) demonstrated that teaching social-emotional skills had a meaningful effect on academic emotions and academic resilience in students. [Kanaparan \(2016\)](#) showed that academic resilience has a direct and significant effect on academic engagement and academic self-efficacy in students. [Karimi Qartmani and Karimi Qartmani \(2015\)](#) found that teaching self-regulated learning strategies had an effect on increasing academic motivation and academic resilience in female students.

As positive psychology continues to gain momentum, emphasizing resilience and fostering personal strengths rather than dwelling on weaknesses and shortcomings, psychologists within this framework have increasingly turned their focus toward academic engagement as a key element of psychological capital ([Mohebi Nooredinvand et al., 2014](#)). Academic engagement, or "flow," is a positive mental state

in which an individual, with a certain level of skill, becomes deeply immersed in a challenging activity with high excitement ([Jalili et al., 2019](#)). When a student faces challenges in achieving their goals, they may experience a cognitive imbalance, but if they can regain their cognitive balance through thinking and problem-solving, they can return to a state of flow. In a state of flow, there is intense focus, interest, and enjoyment in an activity simultaneously, accompanied by inner motivation, high control, and enjoyment ([Mehdinejad, 2020](#)).

Academic engagement is described as the use of energy, commitment to academic tasks, and a sense of attachment to these tasks. Energy in this context refers to a positive attitude towards academic tasks, commitment to a positive cognitive attitude towards tasks, and meaningful evaluation of these tasks, ultimately leading to complete focus on studying and unawareness of the passage of time ([Salmela-Aro & Upadaya, 2012](#)). Furthermore, academic engagement means viewing complex subjects as an opportunity for mastery when engaging deeply with study topics, ultimately resulting in a deep cognitive engagement with the subjects being studied. On the other hand, external academic engagement involves performing tasks or pursuing activities because of their outcomes. Academic engagement can also make students optimistic about their studies ([Safaei et al., 2019](#)).

[Yavari and Lotfi Azimi \(2021\)](#) also demonstrated that academic engagement, progress goals, and implicit intelligence beliefs significantly predict academic procrastination in students. [Mehdinejad \(2020\)](#) concluded that academic engagement is explained by motivation, academic optimism, and academic enjoyment. [Jolani et al. \(2022\)](#) found that academic engagement has a significant effect on achievement goals, self-control, and appreciation. [Özhan and Kocadere \(2020\)](#) demonstrated that academic engagement has a very significant impact on academic motivation in an online learning environment. [Kizildağ et al. \(2017\)](#) showed that academic engagement is significantly related to peer relationships, and it can also predict academic progress and fear.

Today, various methods are used to enhance academic resilience and academic engagement. One of these methods is successful intelligence education. Successful intelligence is a combination of analytical, creative, and practical abilities that help individuals adapt, choose, and change their environment to achieve their goals in life, considering the cultural and social context. The combination of these three types of analytical, creative, and practical abilities, and a balance between them, can lead to individuals' success in their lives ([Babaei, 2015](#)).

Successful intelligence is a set of abilities required for success in life, helping individuals choose, adapt to, and change their environment to achieve their goals. Successful intelligence is based on personal goals within a cultural-social context and involves a balance in the use of practical, creative, and

analytical skills. In this definition, analytical ability refers to comparing and evaluating prerequisites for problem-solving and decision-making processes ([Hashemi et al., 2020](#)).

Individuals with successful intelligence exhibit a balance of analytical, creative, and practical thinking abilities when dealing with situations. In many educational programs, there is often a heavy emphasis on analytical intelligence, especially at lower levels. Unfortunately, the importance of creative and practical thinking, which are vital for success in life, is often overlooked or not considered at all. Regrettably, in schools, the predominant type of thinking expected from students is analytical thinking. However, outside of school, in the real world, creative and practical thinking, especially practical thinking, is much more expected ([Babaei, 2015](#)).

The components of successful intelligence include: 1) the ability to achieve personal goals in life considering the socio-cultural context; 2) investing in strengths and improving or compensating for weaknesses; 3) adapting to, shaping, or choosing the environment; 4) achieving success in life through a combination of analytical, creative, and practical abilities ([Sabahi & Talepasand, 2016](#)).

[Martin-Rhee and Bialystok \(2008\)](#) demonstrated in their research that a successful intelligence education program is effective in increasing students' motivation for academic progress. [Sternberg et al. \(2001\)](#) showed that students who received training in the components of successful intelligence displayed better motivation and performance. [Masumzadeh et al. \(2022\)](#) indicated that that education based on Successful Intelligence had a significant effect on every four aspects academic engagement (agency, behavioral, emotional, cognitive) and academic achievement of students. [Akrami et al. \(2019\)](#) showed that an education program based on the theory of successful intelligence positively affected teachers' self-efficacy and implicit theories of intelligence. [Hashemi et al. \(2020\)](#) concluded that teaching successful intelligence components significantly affects students' motivation for academic progress. [Tok and Sevinç \(2012\)](#) demonstrated that successful intelligence education leads to an increase in creative thinking, including verbal fluidity, verbal originality, and visual originality. [Prieto et al. \(2015\)](#) showed that successful intelligence education can promote creative and practical abilities and increase creativity in students. [Núñez Lira et al. \(2019\)](#) found that the development of successful intelligence through the use of mind mapping techniques with a teaching strategy tailored to the application group by the teacher results in significant improvement in successful intelligence, creative, and practical abilities.

Finally, [Martin and Elliot \(2016\)](#) in their research found that a successful intelligence education program is effective in increasing students' motivation for academic progress. Considering the earlier studies, it appears that creating a balance between successful intelligence education, academic engagement, and academic resilience is essential. Therefore, the present research aimed to investigate the effectiveness of successful intelligence education on academic engagement and academic resilience in students.

Material and Methods

Given the research's objective, a semi-experimental pretest-posttest approach was employed, involving both experimental and control groups. The study's statistical population comprised all second-grade female high school students in Zahedan, Iran, amounting to 3,385 individuals in the year 2022. For this research, 30 students were purposefully chosen and subsequently divided into two similar groups: the experimental group, which underwent ten sessions of successful intelligence training (each session lasting 90 minutes), and the control group, which received no intervention. For data collection in this study, two standard questionnaires were used as follows:

A. Schoolwork Engagement Inventory: This questionnaire was developed by [Salmela-Aro and Upadaya \(2012\)](#) and consists of 9 questions about academic assignments, measuring three dimensions: energy (1-4-8), dedication (2-5-7), and absorption with respect to schoolwork (3-6-9). Participants respond to each question on a seven-point scale ranging from completely disagree (0) to completely agree (6). In the study by [Salmela-Aro and Upadaya \(2012\)](#) the internal consistency coefficients for the general factor of academic engagement and the sub-scales of energy, dedication, and absorption were found to be 0.94, 0.82, 0.87, and 0.80, respectively. Additionally, in the research by [Abdollahpour and Shokri \(2015\)](#), internal consistency coefficients for the factors of energy, dedication, and absorption, and the total score of academic engagement were 0.73, 0.85, 0.81, and 0.90, respectively.

B. Academic Resilience Inventory (ARI): ARI, designed to measure academic resilience, was developed by [Samuels \(2004\)](#). It was validated by [Soltaninejad et al. \(2014\)](#) among students and university students. This questionnaire consists of 29 questions and assesses the components include communication skills, future orientation, problem-oriented approach, and optimistic orientation. Respondents answer each question on a five-point Likert scale ranging from completely disagree (1) to completely agree (5). The Cronbach's alpha coefficient calculated in [Soltaninejad et al. \(2014\)](#) for this questionnaire was 0.77.

C. Successful Intelligence Training Package

The design of this research is a semi-experimental pretest-posttest design with a control group. Participants were placed in two groups, experimental and control, and a pretest (the academic engagement and resilience scales) was administered to both groups. After the pretest, the experimental group received successful intelligence training in 10 sessions, each lasting 90 minutes. Subsequently, after one month, posttests (the research scales) were administered to both groups again. The summary of the successful intelligence training sessions is presented in the table 1.

Table 1. The summary of the successful intelligence training sessions

Session	Content
1	Introduction, course objectives, course structure and creating motivation in students
2	Identifying the issues and problems of the living environment and the processes related to each issue and investigating it in depth, recognizing the resources related to the issue and rational allocation of resources
3	Building the skill of organizing information by using the formulation of problem solving steps and mental representation, building skill in choosing a solution for the given problem and building skill in monitoring problem solving strategies and building skill in evaluating ideas
4	Developing the skill of reviewing the problem and re-planning it, developing the skill of thinking in new ways and replacing the old methods with a careful and logical examination of the problem.
5	Developing the skill of defending creative work and new methods and developing skills in presenting more ideas, developing skills in revising and examining a problem from different angles.
6	Developing skills in identifying and organizing ideas and developing skills in identifying and questioning existing situations and ideas
7	Developing skills in controlling impulsive thoughts and replacing them with more reflection, realizing when to persevere and when to give up.
8	Develop skills in keeping yourself motivated.
9	Creating an understanding of the effort to reach the end result and managing personal problems
10	Adapting the activities to the individual's abilities, creating an understanding of taking responsibility for one's own work and not using self-compassion to summarize the materials presented during the training course.

Results

The descriptive findings related to the mean and standard deviation of pretest and posttest academic engagement and academic resilience in students, categorized by the experimental and control groups, are presented in Table 2.

Table 2. Descriptive statistics of pretest and posttest educational engagement of students in the experimental and control groups

Group	Variable	Pretest		Posttest	
		Mean	SD	Mean	SD
Experimental	Energy	6	1.69	9.33	0.81
	Dedication	11.53	1.99	13.33	0.81
	Absorption	11.07	1.48	17.40	0.50
	Total academic engagement	28.60	2.61	40.07	1.58
Control	Energy	6.20	2.07	7.93	1.58
	Dedication	11.60	1.50	11.47	2.29
	Absorption	11.20	1.37	12.53	1.68
	Total academic engagement	29	2.33	31.93	3.43
Experimental	Communication skill	34.47	2.61	40.73	1.87
	Future orientation	38.40	2.29	46.60	2.53
	Problem oriented and positivity	16.13	1.64	22.07	1.87
	Total academic resilience	89	3.02	109.40	4.76
Control	Communication skill	34.80	2.45	35.27	2.68
	Future orientation	38.80	1.97	42.67	4.41
	Problem oriented and positivity	16.47	1.50	17.60	2.82
	Total academic resilience	90.06	4.18	95.53	8.04

Question 1: Does successful intelligence training have an effect on the academic engagement of female second-grade high school students in Zahedan?

According to the results of Levene's test that was not significant ($F = 0.007$, $p > 0.05$), it can be concluded that the assumption of homogeneity of variances for the academic engagement variable is met.

Table 3. Analysis of covariance results for comparing academic engagement in the experimental and control groups

Source	SS	DF	MS	F	p	Effect size
Pretest	11.48	1	11.48	1.64	0.21	0.057
Academic engagement	505.30	1	505.30	72.42	0.001	0.72
Error	188.37	27	6.97			
Total	39576	30				

In Table 3, the results of the analysis of covariance for comparing the scores of academic engagement of students in the experimental and control groups at the posttest stage are shown. The obtained F value is 72.42, which is significant ($p < 0.01$). Furthermore, the effect size of successful intelligence training on the academic engagement of students is 72%. Based on this and considering the higher mean scores of the experimental group in the posttest, it can be concluded that successful intelligence training had a positive effect on the academic engagement of female second-grade high school students in Zahedan, increasing their academic engagement.

Question 2: Does successful intelligence training have an effect on the components of academic engagement of female second-grade high school students in Zahedan?

According to the results of Box's M statistic (5.25) is not significant ($p > 0.05$). Therefore, the homogeneity of covariance matrices for the components of academic engagement of students is confirmed.

Table 4. Multivariate analysis of covariance results for comparing academic engagement components between groups

Effect	Test	Value	F	Effect DF	Error DF	p	Effect size
Group	Pillai's Trace	0.86	47.71	3	23	0.001	0.86
	Wilks' Lambda	0.13	47.71	3	23	0.001	0.86

As observed in Table 4, the Pillai's Trace statistic (0.86) and Wilks' Lambda statistic (0.13) are significant ($p < 0.01$). Additionally, the effect size of successful intelligence training on the academic engagement components is 86%. Thus, there is a significant difference in the components of academic engagement between the experimental and control groups in the posttest. To investigate the differences

between the two groups in each of the academic engagement components, a test of within-subjects effects was used, and the results are presented in Table 5.

Table 5. Within-subjects effects related to academic engagement components

Variable	Source	SS	DF	MS	F	p	Effect size
Energy	Between group	15.87	1	15.87	10.33	0.004	0.29
	Within group	38.38	25	1.53			
	Total	2295	30				
Dedication	Between group	25.77	1	25.77	9.89	0.001	0.28
	Within group	65.14	25	2.60			
	Total	4722	30				
Absorption	Between group	181.35	1	181.35	118.49	0.001	0.82
	Within group	38.26	25	1.53			
	Total	6941	30				

In Table 5, the results of the between-subjects effects test for comparing the components of academic engagement in individuals from the experimental and control groups in the posttest phase are displayed. Considering the results presented in Table 5, the obtained F-value is significant for the Energy component ($F = 10.33$), dedication component ($F = 9.89$), and absorption component ($F = 118.49$) ($p < 0.01$). Furthermore, the effect size of successful intelligence training on the energy component is 0.29, on the dedication component is 0.28, and on the absorption component is 0.82. Based on the higher mean scores of the experimental group in the posttest, it can be concluded that successful intelligence training had a positive effect on the components of academic engagement in female second-grade high school students in Zahedan, leading to increased energy, dedication and absorption.

Question 3: Does successful intelligence training have an effect on the academic resilience of female second-grade high school students in Zahedan?

According to the results of Levene's test that was not significant ($F = 1.10$, $p > 0.05$), it can be concluded that the assumption of homogeneity of variances for the academic resilience variable is met.

Table 6. Analysis of covariance results for comparing academic resilience in the experimental and control groups

Source	SS	DF	MS	F	p	Effect size
Pretest	164.21	1	164.21	4.18	0.05	0.13
Academic resilience	1557.47	1	1557.47	39.70	0.001	0.59
Error	1059.12	27	39.22			
Total	317648	30				

In Table 6, the results of the analysis of covariance for comparing the scores of academic resilience of students in the experimental and control groups at the posttest stage are presented. The obtained F-value is 39.704, which is significant ($p < 0.01$). Furthermore, the effect size of successful intelligence training

on academic resilience is 59%. Based on this and considering the higher mean scores of the experimental group in the posttest, it can be concluded that successful intelligence training had a positive effect on academic resilience in female second-grade high school students in Zahedan, increasing their academic resilience.

Question 4: Does successful intelligence training have an effect on the components of academic resilience in female second-grade high school students in Zahedan?

According to the results of Box's M statistic (2.06) is not significant ($p > 0.05$). Therefore, the homogeneity of covariance matrices for the components of academic resilience of students is confirmed.

Table 7. Multivariate analysis of covariance results for comparing academic resilience components between groups

Effect	Test	Value	F	Effect DF	Error DF	p	Effect size
Group	Pillai's Trace	0.68	16.37	3	23	0.001	0.68
	Wilks' Lambda	0.31	16.37	3	23	0.001	0.68

As observed in Table 7, the Pillai's Trace statistic (0.68) and Wilks' Lambda statistic (0.31) are significant ($p < 0.01$). Additionally, the effect size of successful intelligence training on the academic resilience components is 68%. Thus, there is a significant difference in the components of academic resilience between the experimental and control groups in the posttest. To investigate the differences between the two groups in each of the academic resilience components, a test of within-subjects effects was used, and the results are presented in Table 8.

Table 8. Within-subjects effects related to academic engagement components

Variable	Source	SS	DF	MS	F	p	Effect size
Communication skill	Between group	241.27	1	241.27	50.73	0.001	0.67
	Within group	118.89	25	4.75			
	Total	43694	30				
Future orientation	Between group	130.52	1	130.52	9.71	0.005	0.28
	Within group	335.84	25	13.43			
	Total	60243	30				
Problem oriented and positivity	Between group	155.64	1	155.64	25.96	0.001	0.50
	Within group	149.84	25	5.99			
	Total	12111	30				

Table 8 presents the test results of the between-subject effects for comparing the components of academic resilience in the experimental and control groups in the post-test phase. According to the results presented in the table, the obtained F-value is statistically significant for the components of communication skills ($F = 50.73$), future orientation ($F = 9.71$), and problem-solving and positivity ($F = 25.96$) ($p < 0.01$). Furthermore, the effect size of successful intelligence training on the communication skills component is ($\eta^2 = 0.67$), on the future orientation component is ($\eta^2 = 0.28$), and on the problem-

solving and positivity component is ($\eta^2 = 0.50$). Considering the higher mean scores of individuals in the experimental group in the post-test phase and the effect sizes, it can be concluded that successful intelligence training has had a positive impact on the components of academic resilience in female second-grade high school students in Zahedan, leading to an improvement in communication skills, future orientation, and problem-solving skills, as well as fostering a positive outlook among the students.

Discussion

This research was conducted during the academic year 2022 with the aim of determining the effectiveness of successful intelligence training on academic engagement and academic resilience in female second-grade high school students in Zahedan. In the first question, it was found that successful intelligence training had a positive effect on the academic engagement of female second-grade high school students in Zahedan, increasing it by 8.72%. This finding aligns with the results previous studies ([Akrami et al., 2019](#); [Hashemi et al., 2020](#); [Jalili et al., 2019](#); [Karimi Qartmani & Karimi Qartmani, 2015](#); [Martin & Elliot, 2016](#); [Özhan & Kocadere, 2020](#); [Prieto et al., 2015](#); [Sabahi & Talepasand, 2016](#)).

The findings related to second question indicated that successful intelligence training had a positive impact on the Energy component of educational engagement by 3.29%, the dedication component by 3.28%, and the absorption component by 6.82%. This led to an increase in the energy, dedication, and absorption of female second-grade high school students in Zahedan. These results are consistent with the findings of past researches ([Martin & Elliot, 2016](#); [Özhan & Kocadere, 2020](#); [Prieto et al., 2015](#); [Sabahi & Talepasand, 2016](#))

[Özhan and Kocadere \(2020\)](#) showed that academic engagement plays a crucial role in online learning environments. Academic engagement is described as energy, dedication, and absorption related to learning tasks. Energy in this context refers to a positive attitude towards tasks, commitment to a positive cognitive attitude towards tasks, and meaningful evaluation of these tasks, ultimately leading to complete focus on studying and unawareness of the passage of time. All these components are influential in students' academic progress. Additionally, successful intelligence training can provide equal opportunities for all students to cultivate and flourish their talents in various areas. As such, it can be inferred that successful intelligence training enhances and improves the energy, dedication, and absorption of students in their academic pursuits.

The results of the third question indicated that successful intelligence training had a positive effect on the academic resilience of female second-grade high school students in Zahedan, increasing it by 5.59%. This finding is consistent with the results of earlier studies ([Akrami et al., 2019](#); [Hashemi et al., 2020](#); [Jolani et al., 2022](#); [Prieto et al., 2015](#); [Tok & Sevinç, 2012](#)).

[Jolani et al. \(2022\)](#) demonstrated that training in socio-emotional skills has a significant impact on increasing emotional intelligence and academic resilience in students. [Hashemi et al. \(2020\)](#) concluded that teaching successful intelligence components had a significant impact on students' motivation for academic progress. [Tok and Sevinç \(2012\)](#) demonstrated that successful intelligence training led to an increase in creative thinking, including verbal fluency, verbal originality, and visual originality. According to [Alva \(1991\)](#), students with academic resilience, even in the face of stressful events and conditions that could put them at risk of poor performance and ultimately dropping out of school, have high motivation and perform well.

In the findings of the fourth question, it was clarified that successful intelligence training had a positive impact on the communication skills component by 67%, the future orientation component by 28%, and the problem-centered and positive outlook component by 9.50%. Successful intelligence training led to an increase in communication skills, future orientation, and problem-centered and positive outlook in female second-grade high school students in Zahedan. This finding is consistent with the results of [Mashhadi et al. \(2022\)](#), [Tok and Sevinç \(2012\)](#) and [Prieto et al. \(2015\)](#).

[Mashhadi et al. \(2022\)](#) showed that group positive thinking education had a significant positive effect on social competence and academic resilience, and it was effective on the sub-scales of communication skills, future orientation, and problem-solving efficiency. [Prieto et al. \(2015\)](#) showed that successful intelligence training could lead to the growth of creative and practical skills and increased creativity in students. Education based on successful intelligence is important for students because it helps them reach a level of academic achievement that aligns with their abilities and skills. Successful intelligence training is closely related to schools, as intelligence plays a crucial role in academic progress and performance. Additionally, education based on successful intelligence can help students develop resilience in the face of changing environmental conditions, new learning methods, changing job nature, and rapidly evolving social structures by creating a balance of analytical, creative, and practical capabilities through adaptation, change, and choice. Therefore, it can be concluded that successful intelligence training enhances communication skills, future orientation, and problem-centered and positive outlook, thereby increasing academic resilience in students.

The utilization of a questionnaire in this study imposes certain constraints. In light of the research findings, it is advisable to incorporate the successful intelligence package into the curriculum of the Thinking and Lifestyle course as a means to enhance students' academic engagement. Furthermore, it is recommended that educators adopt successful intelligence teaching techniques when formulating and executing educational programs, thereby providing students with dynamic and stimulating learning prospects that align with their individual interests and aptitudes. Additionally, the establishment of

conducive learning environments and the structured cultivation of resilience skills will furnish students with a solid foundation for achievement in both their educational pursuits and life beyond.

Conflict of interest: There is no conflict of interest in this study.

Financial support: The authors confirm that they have not received any financial support for this research.

Acknowledgments: The researchers find it necessary to express their utmost appreciation and gratitude to all those who assisted them in conducting this study.

References

- Abdollahpour, M. A., & Shokri, O. (2015). Analyzing the psychometric characteristics of the study engagement list in Iranian students. *Journal of Education and Learning Studies*, 7(2), 87-104.
- Abolghasemi, A. (2011). The relationship of resilience, self-efficacy and stress with life satisfaction in the students with high and low educational achievement. *Journal of Psychological Studies*, 7(3), 131-152. <https://doi.org/10.22051/psy.2011.1545>
- Akrami, L., Abedi, A., & Salehzadeh, M. (2019). The Effect of Educational Program Based on the Theory of Successful Intelligence on Structure of Teaching, Increasing the Sense of Efficiency and Implicit Intelligence Theories in Teachers of Boys and Girls in Primary School. *Research in Teaching*, 7(4), 213-192. <https://doi.org/10.34785/J012.2019.519>
- Alva, S. A. (1991). Academic invulnerability among Mexican-American students: The importance of protective resources and appraisals. *Hispanic Journal of Behavioral Sciences*, 13(1), 18-34.
- Babaei, A. (2015). *The effect of successful intelligence on the academic achievement of Farhangian University students* Shahid Chamran University of Ahvaz]. Ahvaz.
- Firoozmokhtar, M., Arefi, M., & Golparvar, M. (2023). Designing a Native Happiness Education Package and Examining its Effectiveness on Grit, Hope, Self-Control, Resilience and Academic Procrastination in High School Students. *Iranian Evolutionary and Educational Psychology Journal*, 5(1), 1-11.
- Foster, T. A. (2013). *An exploration of academic resilience among rural students living in poverty* Piedmont College].

- Hashemi, B., Ghazanfari, A., Sharifi, T., & Ahmadi, R. (2020). The Effectiveness of Successful Intelligence component teaching on motivation of Academic Achievement in girl Students. *Journal of Educational Psychology Studies*, 16(36), 189-203. <https://doi.org/10.22111/jeps.2019.5149>
- Jalili, F., Arefi, M., Ghomrani, A., & Manshaee, G. (2019). The effectiveness of Self-determination Education on Academic Motivation and Academic Flow of Farhangian University Students in Birjand. *Journal of Educational Psychology Studies*, 16(34), 27-58. <https://doi.org/10.22111/jeps.2019.4945>
- Jolani, F., Hashemi Nosratabad, T., Taklavi, S., & Beyrami, M. (2022). The effectiveness of social-emotional skills training on improving academic resilience and academic excitement in female students [Research]. *Rooyesh-e-Ravanshenasi Journal(RRJ)*, 11(2), 95-104. <http://frooyesh.ir/article-1-3318-fa.html>
- Kanaparan, G. (2016). *Self-efficacy and engagement as predictors of student programming performance: An international perspective* Open Access Te Herenga Waka-Victoria University of Wellington].
- Karimi Qartmani, M., & Karimi Qartmani, M. T. e. o. t. s.-r. l. s. o. a. e. a. a. r. o. S. a. s.-s. s. s. s. (2015). *The effect of teaching self-regulated learning strategies on academic enthusiasm and academic resilience of Shahid and self-sacrificing secondary school students* The second national conference of modern researches in the field of humanities and social studies, Iran, Qom.
- Khalaf, M. A. (2014). Validity and reliability of the academic resilience scale in Egyptian context. *US-China Education Review*, 4(3), 202-210.
- Kizildağ, S., Demirtaş Zorbaz, S., & Zorbaz, O. (2017). School engagement of high school students. *EGITIM VE BILIM-EDUCATION AND SCIENCE*, 42(189).
- Martin-Rhee, M. M., & Bialystok, E. (2008). The development of two types of inhibitory control in monolingual and bilingual children. *Bilingualism: language and cognition*, 11(1), 81-93.
- Martin, A. J., & Elliot, A. J. (2016). The role of personal best (PB) and dichotomous achievement goals in students' academic motivation and engagement: A longitudinal investigation. *Educational Psychology*, 36(7), 1285-1302.
- Martin, A. J., & Marsh, H. W. (2009). Academic resilience and academic buoyancy: Multidimensional and hierarchical conceptual framing of causes, correlates and cognate constructs. *Oxford Review of Education*, 35(3), 353-370.
- Mashhadi, R., arab, a., & jenaabadi, H. (2022). The Effect of Group Positivity Training Method on Social Adequacy and Academic Resilience of Girl High School Student. *Journal of Applied Psychology*, 16(1), 134-113. <https://doi.org/10.52547/apsy.2021.223217.1110>

- Masumzadeh, S., Hajhosseini, M., & Gholamali Lavasani, M. (2022). Effectiveness of education based on Successful Intelligence on academic Engagement and academic achievement of Students. *Journal of School Psychology, 11*(1), 92-104. <https://doi.org/10.22098/jsp.2022.1567>
- Mehdinejad, M. (2020). Prediction of academic fascination based on academic fascination, motivation and optimism in Karaj conservatory students. [Applicable]. *The Journal Of New Advances In Behavioral Sciences, 5*(46), 1-11. <http://ijndibs.com/article-1-467-fa.html>
- Mehta, M. H., Grover, R. L., DiDonato, T. E., & Kirkhart, M. W. (2019). Examining the positive cognitive triad: A link between resilience and well-being. *Psychological reports, 122*(3), 776-788.
- Mirzaee, S., Kiamanesh, A. R., Hejazi, E., & Banijamali, S. (2016). The Effect of Perceived Competence on Academic Resiliency with Mediation of Autonomous Motivation. *Psychological Methods and Models, 7*(25), 67-82. https://jpmm.marvdasht.iau.ir/article_2099_7b93914b64272d123109bafc5f7c5107.pdf
- Mohebi Nooredinvand, M. H., Shehni Yeilagh, M., & Sharifi, H. P. (2014). The relationship of psychological capital (hope, optimism, resiliency and self-efficacy) with the achievement goals and academic performance of the first-year students. *Research in Curriculum Planning, 11*(40), 61-79. https://jsr-e.isfahan.iau.ir/article_534316_0bf5c0dc5bf7550f85219dad9a60dab5.pdf
- Nazari, K. (2022). The Effect of Online Flipped Teaching Method on Academic Self-direction and Resilience during Covid-19 pandemic. *Research in Teacher Education(RTE), 5*(1), 15-27. https://te-research.cfu.ac.ir/article_2054_d5d3548653a0b95059b82c928c23e67e.pdf
- Ng, R., Chahine, S., Lanting, B., & Howard, J. (2019). Unpacking the literature on stress and resiliency: a narrative review focused on learners in the operating room. *Journal of surgical education, 76*(2), 343-353.
- Núñez Lira, L. A., Novoa Castillo, P. F., Majo Marrufo, H. R., & Salvatierra Melgar, Á. (2019). Mental Maps as a Strategy in the Development of Successful Intelligence in High School Students. *Journal of Educational Psychology-Propósitos y Representaciones, 7*(1), 72-82.
- Özhan, Ş. Ç., & Kocadere, S. A. (2020). The effects of flow, emotional engagement, and motivation on success in a gamified online learning environment. *Journal of Educational Computing Research, 57*(8), 2006-2031.
- Prieto, D., Ferrándiz, C., Ferrando, M., & Bermejo, M. R. (2015). *La Batería Aurora: una nueva evaluación de la inteligencia exitosa: Aurora Battery: A new assessment of successful intelligence*. Ministerio de Educación.
- Rudd, G., Meissel, K., & Meyer, F. (2021). Measuring academic resilience in quantitative research: A systematic review of the literature. *Educational Research Review, 34*, 100402.

- Sabahi, S., & Talepasand, S. (2016). Psychometric characteristics of teaching for successful intelligence questionnaire (TSI-Q) in Tehran teachers. *Quarterly of Educational Measurement*, 7(26), 55-75.
<https://doi.org/10.22054/jem.2016.6119>
- Safaei, M., rezaei, a., & Talepasand, S. (2019). Predict academic performance based on family support, Friends Support and Others Support: The Mediating Role of Academic Self-Efficacy, Academic Resilience and Academic Engagement. *Educational Psychology*, 15(52), 239-268.
<https://doi.org/10.22054/jep.2019.41526.2658>
- Salmela-Aro, K., & Upadaya, K. (2012). The schoolwork engagement inventory. *European journal of psychological assessment*, 47, 777-780.
- Samuels, W. E. (2004). *Development of a non-intellective measure of academic success: Towards the quantification of resilience*. The University of Texas at Arlington.
- Soltaninejad, M., Asiabi, M., Ahmadi, B., & Tavanaiee Yosefian, S. (2014). A study of the psychometric properties of the Academic Resilience Inventory (ARI). *Quarterly of Educational Measurement*, 4(15), 17-35.
- Sternberg, R. J., Grigorenko, E. L., & Jarvin, L. (2001). Improving Reading Instruction: The Triarchic Model. *Educational Leadership*, 58(6), 48-52.
- Tok, E., & Sevinç, M. (2012). The Effects of Thinking Skills Education on The Creative Thinking Skills. *Egitim ve Bilim*, 37(164), 204.
- Yates, T. M., Tyrell, F. A., & Masten, A. S. (2015). Resilience theory and the practice of positive psychology from individuals to societies. *Positive psychology in practice: Promoting human flourishing in work, health, education, and everyday life*, 773-788.
- Yavari, H., & Lotfi Azimi, A. (2021). The prediction of academic dishonesty based on academic engagement, achievement goals and implicit beliefs of intelligence in during pandemic Coronavirus. *Journal of Research in Educational Science*, 15(52), 33-45.
https://www.jiera.ir/article_131169_b32cfd3de155b0202c1e96cebc8c45e2.pdf
- Youssef Vand, M., Ghadampour, E., Sadeghi, M., & Gholamrezaei, S. (2019). Presenting a causal model for predicting academic resilience based on internal locus of control (mediated by academic optimism); The application of path analysis. *Education and Learning Research Journal*, 16(2), 29-40.



This work is licensed under a [Creative Commons Attribution-Noncommercial 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/)