

Effectiveness of Flourishing Education on Consistency and Academic Engagement in Students (Case Study: Second-Grade Students of High School in Chalus City)

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Article history:

Received date: 2021/09/07

Review date: 2021/10/18

Accepted date: 2021/10/28

Keywords:

Flourishing Education, Consistency, Academic Engagement, Students

Purpose: based on the role of consistency and academic engagement in academic performance, this research aims to determine the effectiveness of flourishing education on the consistency and academic engagement of students.

Methodology: This research was semi-experimental with a pre-test, post-test design, and a control group. The statistical population of this research was the second-grade high school students of Chalus city in the academic year of 2019-2020. The sample size was 30 people who were selected by convenience sampling method and replaced by the simple random method in two equal groups including experimental and control groups. The experimental group had flourishing education for two months at 8 sessions (one session a week), and the control group did not receive any education. The research tools were Duckworth, Peterson, Matthews & Kelly's (2007) consistency questionnaire and Reeve & Tseng's (2011) academic engagement questionnaire. The data were analyzed by multivariate covariance analysis methods in SPSS software at a sig. level of 0.05.

Findings: the results showed that flourishing education increased students' consistency (and both of its dimensions include stability in interest and persistence in effort) and academic engagement (and all four of its dimensions include cognitive, emotional, behavioral, and agency) ($P < 0.05$) after controlling for the effect of the pre-test.

Conclusion: it is essential to use the mentioned method to improve academic characteristics by considering the effectiveness of flourishing education in increasing consistency and academic engagement in students.

Please cite this article as: Harsejghasemi SA, Sadeghi J, Homayouni AR. (2022). Effectiveness of Flourishing Education on Consistency and Academic Engagement in Students (Case Study: Second-Grade Students of High School in Chalus City), *Iranian Journal of Educational Sociology*. 5(2): 121-130.

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1. Introduction

Each educational system tries the comprehensive development and promotion of its learners in cognitive, emotional, and social fields (Ma & Bennett, 2021). One of the important indexes of the success of the education system is the success rate in scientific and academic activities, and many factors are effective on academic progress. Since the degree of academic progress or failure is one of the main criteria for the efficiency of the education system, the discovery, and study of the effective variables will help understand and predict better which one of the effective variables on academic progress or failure is academic engagement (Hajjalizadeh, Rafeipour & Samavi, 2016). Students are actually the future builders of society today and many factors are effective in their all-around growth and improvement, one of which is academic engagement (Martin-Storey, Santo, Recchia, Chilliak, Nardi & Da Cunha, 2021). Academic engagement was proposed to understand and explain academic failure in advance as a basis for reformist efforts in the field of education, (Palos, Maricutoiu & Costea, 2019). Engagement means the interaction of individual characteristics with important environmental characteristics and includes the initiation of motivated action and its continuation in the face of obstacles and problems (Karki, Chaudhury & Patangia, 2020). Academic engagement means constructive, enthusiastic, active, voluntary, and knowledge-based participation of the learner in academic activities and indicates the effort quality of students on targeted educational and academic activities to get desired educational goals and results (Buzzai, Filippello, Costa, Amato & Sorrenti, 2021).

When academic tasks have meaning and value for students, they spend their energy on them, show a lot of effort and persistence, and spend a lot of time on them (Hughes & Cao, 2018). Academic engagement has four cognitive, emotional, behavioral, and agency dimensions that cognitive engagement is the degree of a person's strength to implement academic activities, emotional engagement is the positive and negative reactions to the teacher, class, classmates, school studies, behavioral engagement is the degree of a person's participation in activities and refers to mainstream and extracurricular learning, and agency dimension refers to structured, constructive, intentional, and beneficial participation in the learning process (Reeve & Tseng, 2011). academic engagement is necessary for any kind of development and progress in academic and educational affairs and is one of the most important predictors of academic outcomes including high grades and academic progress, school attendance, effective coping with educational assignments, and academic resilience (Zhen, Liu, Wang, Ding, Jiang, Fu & Sun, 2020).

Another effective variable in academic progress or failure is consistency (Postigo, Cuesta, Fernandez-Alonso, Garcia-Cueto & Muniz, 2021), which means persistence and patience on the way to get long-term goals and includes a lot of hard work on challenges and maintaining and raising interest and effort over time despite difficulties and failures (Howard, Nicholson & Chesnut, 2019). Consistency is a type of self-regulation that creates perseverance to pursue interests and persistent efforts to achieve long-term goals, and a person does not stop trying and persevering even in confrontation with challenges, failures, and problems (Bozgun & Akin-Kosterelioglu, 2020). This structure includes two dimensions consistency in interest and persistence in the effort, consistency in interest indicates focus and commitment to achieve a set of important goals, and persistence in effort indicates the amount of effort towards the set goals (Duckworth, Peterson, Matthews, & Kelly, 2007). Consistency plays an important role in overcoming challenges, failures, and breaks, because academic self-efficacy, academic consistency, academic meaning, and acceptance of academic limitations and strengths are realized as a result (Bliss & Jacobson, 2020). This structure helps students to understand how to set and achieve their goals successfully. When students are taught how to regulate attention, emotions, and behavior, they can pursue important goals, which in this case provide the basis for their abilities to flourish and reach their maximum potential (Clark & Malecki, 2019). Consistency improves academic achievements, positive classroom behaviors, high academic achievement, studying in better fields, increasing academic meaning and resilience, and realizing academic success (Whipple & Dimitrova-Grajzi, 2021).

One of the relatively new and effective training methods to improve the characteristics about which little research is the self-actualization training method (Weziak-Bialowolska, Bialowolski, Lee, Chen, VanderWeele & McNeely, 2021), which is derived from the approach of positive psychology. In addition,

this approach pays attention to and emphasizes the capabilities and flourishing of their talents instead of paying attention to and emphasizing the inabilities and weaknesses of people (Dahl, Wilson-Mendenhall & Davidson, 2020). Flourishing means realizing one's potential and realizing progress, and it is a state of mental health in which a person behaves appropriately in addition to having their feelings (Levin, 2020). Flourishing is the result of living with high health, creativity in work and life, more relaxation, having positive emotions and not having negative emotions, finding meaning in life, and prosperity and success (Davari Dowlatabadi & Mousavi, 2021). Flourishing education is an approach beyond the education of the status quo that helps people to take steps towards their all-round flourishing as self-made people through the simultaneous training of traditional skills and well-being skills, (Laakso, Fagerlund, Pesonen, Lahti-Nuutila, Figueiredo, Karlsson & Eriksson, 2021). Flourishing education helps people to focus more on empowerment, values, and important goals by increasing and promoting psychological well-being, vitality, self-regulation, personal growth, meaningful life, appropriate social relationships, positive emotions, and purposeful life (Leibow, Lee, & Morton, 2020).

Little research has been conducted about flourishing education and no research was found about its effectiveness on consistency and academic engagement. The results of the most important research about the effectiveness of flourishing education are as follows:

Montano (2021) concluded that there was a significant positive relationship between flourishing and academic engagement.

Ziaee, Rezaei, Tale-Pasand & Mohammadifar (2021) concluded that education based on the psychological model of flourishing increased the happiness, competence, and social participation of students.

Asghari Soleimani, Khanmohammadi, Abbasi Esfajir & Sadeghi (2020) concluded that flourishing education reduced students' anxiety, stress, and depression.

Jain & Sunkarapalli (2019) concluded that there was a significant positive relationship between consistency and flourishing.

Rupp & McCoy (2018) concluded that there was a positive and significant relationship between flourishing and academic engagement in teenagers.

Arshadi, Azadi, Bassak Nejad, Beshlideh & Neisi (2018) concluded that flourishing education increased psychological capital and its all four components including hope, self-efficacy, optimism, and resilience.

Rassa, Rezaei & Bigdeli (2017) concluded that flourishing education reduced the psychological distress of high school students.

Aswini & Amrita (2017) concluded that there was a significant positive relationship between flourishing, resilience, and consistency.

Mirzakhani, Rezaei, Aminbeidokhti, Najafi & Rahimian Bougar (2017) concluded that flourishing education improved flourishing components including positive emotion, fascination, relationships, meaning, and progress.

It can be claimed about the importance and necessity of this research that consistency and academic engagement are the effective characteristics of other academic features and functions. In addition, providing conditions for their improvement and promotion using educational methods can provide the basis for the growth and promotion of other academic functions. Furthermore, one of the relatively new educational methods, which have few studies, is the flourishing education method. The results of all the essays found in the country were reported that examined its effectiveness on flourishing and health-related characteristics, and no research was found abroad about its effectiveness. They only examined its relationship with other variables, including consistency and academic engagement. Therefore, one of the existing gaps was the lack of research on the effectiveness of flourishing education on educational characteristics, which is hoped to be the starting point for researching its effectiveness on various educational variables and characteristics. As a result, this research was conducted to determine the effectiveness of flourishing education on consistency and academic engagement in students.

2. Methodology

This research was semi-experimental with a pre-test, post-test design, and a control group. The statistical population of this research was the second-grade high school students of Chalus city in the academic year of 2019-2020. The sample size was 30 people who were selected by convenience sampling method and replaced by the simple random method in two equal groups including experimental and control groups. To conduct this test was coordinated with the education officials of Chalus city and the samples were randomly selected with the help of The lottery was assigned to two equal groups of 15 people after sampling and stating the importance and necessity of the research, stating the ethical points and receiving the consent form to participate in the research which was signed by the students themselves and at least one of their parents. Then, the experimental group took the flourishing education for 8 sessions (one session a week) for two months, and the control group did not receive any training. In addition, both groups were evaluated in terms of consistency and academic engagement in the pre-test and post-test phases. It should be noted that the mentioned course was also held for the control group after the completion of the training course and the determination of the results, to comply with ethics in the research.

The content of flourishing education, by Rassa et al (2017) and based on the research of Sha (2011) was a two-day full-time educational workshop from 8:30 am to 4:30 pm, designed according to the time of high school students in school for 8 two-hour sessions. In addition, the validity of this educational package was confirmed by 5 psychology experts who studied and recorded in the field of positive psychology, such as conducting a thesis, research project, presenting an article, authoring and translating a book, or counseling and training in the field of human flourishing or related topics. Therefore, the title and content of flourishing education are presented in Table 1 by the sessions' separation.

Table 1. The title of content of flourishing education are presented in Table 1 by sessions' separation

Session	Title	Content
First	Initial familiarity and Basic introduction and introduction of resilience and ABC model	Familiarity of members with each other and creating a trust-based relationship between the members and the counselor, introducing the students to positive psychology based on building resilience and the ABC model.
second	Introducing mental traps and their correction technics	Reviewing the previous session, explaining about mental traps, examining how they affect people's views and teaching how to correct them
Third	Introducing personality abilities and the five elements of flourishing	Reviewing the previous meetings, introduction of capabilities, classification of personality capabilities, benefits of focusing on capabilities, explanations of flourishing elements based on Seligman's model (positive emotions, fascination or overwhelm, relationships, sense of meaning and progress)
Fourth	Positive emotions and their role in life	Reviewing the previous sessions, introducing positive emotions, meditating on love and kindness, and adding positive parts by choosing a positive feeling and making a general plan for that feeling.
Fifth	Fascination or infatuation and how to increase it and relationships and its importance in life	Reviewing the previous meetings, describing fascination or infatuation, how to do it in work and studies, ways to increase it, introducing quality relationships, knowing the paths and benefits of achieving quality relationships, how to build trust in others and how to achieve quality relationships

Sixth	Feeling its meaning and importance in life	Reviewing the previous sessions, introducing the sense of meaning in life, describing having meaning in life and the methods of achieving a sense of meaning in life and improving it.
Seventh	Progress and its importance in life	Reviewing the previous meetings, describing the progress or success, knowing the ways to achieve success and how to achieve it, and effective ways to praise, and reward successful people.
Eighth	Conclusion	Reviewing the previous sessions, summarizing and concluding with the help of students, examining students' views on the educational content and surveying the impact of the educational program on their lives.

Data collection tool for this research are as follows:

Consistency questionnaire: The consistency questionnaire was created by Duckworth et al in 2007. This questionnaire had 12 questions and two dimensions consistency of interest and consistency of effort (6 questions in each dimension). Each question is completely similar to a score of 5, very similar to a score of 4, sometimes similar to a score of 3, not very similar to a score of 2, and not at all similar to a score of 1 by the five-point Likert spectrum method. In addition, the dimension of the consistency of interest is scored in reverse. It means the options are completely similar are score 1, very similar are score 2, sometimes similar are score 3, not very similar are score 4, and not at all similar are score 5. The total score or dimension is calculated through the total score of the questions, the range of scores for each dimension is between 6 and 30, the range of the total scores of the questionnaire is between 12 and 60, and a higher score shows more consistency or more desirable dimensions. The creators of the construct validity of the instrument were examined by the exploratory factor analysis method, and the results indicated the existence of two factors or the consistency of interest and consistency of effort dimensions. In addition, its reliability was 0.85 for the entire instrument, and it was reported as 0.83 and 0.81 for the two dimensions of consistency of interest and consistency of effort, respectively. In 2020, Narimani & Hedayat obtained the reliability of the tool as 0.80 by Cronbach's alpha method for the whole tool and obtained 0.78 and 0.75 for the two dimensions of consistency of interest and consistency of effort, respectively. In this research, the reliability value using Cronbach's alpha method for the whole instrument was 0.84 and for the two dimensions consistency of interest and consistency of effort were 0.81 and 0.80, respectively.

Academic engagement questionnaire: the academic engagement questionnaire was created by Reeve & Tseng in 2011. This questionnaire had 22 questions and four dimensions including cognitive (8 questions), emotional (4 questions), behavioral (5 questions), and agency (5 questions). Using the seven-point Likert spectrum method, each question is scored as strongly agree with a score of 7, agree with a score of 6, sometimes agree with a score of 5, having no opinion with a score of 4, sometimes disagree with a score of 3, disagree with a score of 2, and strongly disagree with the score 1. The total score or dimensions are calculated through the total score of the questions and the range of scores for the cognitive dimension is 8 to 56, the emotional dimension is 4 to 28, the behavioral and agency dimensions are 5 to 35, and the range of the total scores of the questionnaire is between 22 to 154, and a higher score indicates more academic engagement or its dimensions are more desirable. The maker of the questionnaire reported this tool's validity with the exploratory factor analysis method and the results indicated the existence of four factors of cognitive, emotional, behavioral, and agency dimensions. In addition, its reliability was determined 0.96 by Cronbach's alpha method for the entire tool and reported 0.88, 0.78, 0.94, and 0.82 for the four cognitive, emotional, behavior, and agency, respectively. In 2021, Eskandari & Sadoughi obtained the reliability of the tool by Cronbach's alpha method for the whole tool as 0.92 and for the four cognitive, emotional, behavioral, and

agency dimensions as 0.78, 0.74, 0.75, and 0.77 respectively. In this research, the reliability value for the whole instrument was 0.90 and for the four cognitive, emotional, behavioral, and agency dimensions, 0.83, 0.79, 0.81, and 0.75 using Cronbach's alpha method, respectively.

Data were analyzed using multivariate covariance analysis methods in SPSS software by sig. 0.05 level.

3. Findings

The mean and standard deviation results of students' consistency and academic engagement criteria were presented in Table 2.

Table 2. the results of mean and standard deviation results of students' consistency and academic engagement by control and test groups' separation

Variables	steps	Test group		Control group	
		Mean	St. dev	Mean	St. dev
Consistency	Pretest	45.44	5.15	45.77	5.55
	Posttest	59.22	11.87	46.29	8.08
Academic engagement	Pretest	63.80	7.63	63.80	6.23
	Posttest	82.07	7.98	64.40	5.75

Investigating the assumptions of multivariate covariance analysis showed that the assumption of normality based on the Kolmogorov-Smirnov test for consistency and academic engagement of the experimental and control groups in the pre-test and post-test steps, the assumption of the equality of variances of variables based on Levine's test, the assumption of the equality of covariance based on Box's M test, and the assumption of the equality of the slope of the regression lines were not rejected based on the interaction effect of the group and the pre-test ($P > 0.05$). Thus, conditions for using covariance analysis were provided. The results of the Wilks lambda test from the set of multivariate tests showed a significant difference between the groups in terms of at least one of the consistency and academic engagement variables ($F = 7.38$, $P < 0.001$). The results of multivariate covariance analysis were presented in Table 3 to determine the effectiveness of flourishing education on students' consistency and academic engagement.

Table 3. The results of multivariate covariance analysis to determine the effectiveness of flourishing education on students' consistency and academic engagement

Variables	reference	sum of squares	Degree of freedom	Mean squares	F-value	Sig. level	Effect size
consistency of interest	Group	97.32	1	97.32	21.67	0.002	0.99
consistency of effort	group	112.08	1	112.08	24.15	0.001	0.99

Based on Table 3, the results of multivariate covariance analysis showed that flourishing education significantly increased students' consistency and academic engagement ($P < 0.05$) after controlling for the pre-test effect. The results of Wilks's lambda test from the set of multivariate tests showed that there was a significant difference between the groups at least in terms of one of the dimensions of consistency including consistency of interest and consistency of effort ($F = 75.60$, $P < 0.001$). The results of multivariate covariance analysis were presented in Table 4 to determine the effectiveness of flourishing education on students' consistency dimensions.

Table 4. The results of multivariate covariance analysis to determine the effectiveness of flourishing education on the consistency dimensions of students

Variables	reference	sum of squares	Degree of freedom	Mean squares	F- value	Sig. level	Effect size
consistency	Group	39.88	1	39.88	12.23	0.002	0.92
academic engagement	group	26.74	1	29.74	11.19	0.002	0.9

According to Table 5, the results of multivariate covariance analysis showed that flourishing education significantly increased both dimensions of students' consistency including consistency of interest and consistency of effort ($P < 0.05$) after controlling for the pre-test effect. The results of the Wilks lambda test from the set of multivariate tests showed a significant difference between the groups based on at least one dimension of academic engagement including cognitive, emotional, behavioral, and agency ($F = 69.33$, $P < 0.001$). The results of multivariate covariance analysis were presented in Table 5 to determine the effectiveness of flourishing education on the dimensions of students' academic engagement.

Table 5. The results of multivariate covariance analysis to determine the effectiveness of flourishing education on the dimensions of students' academic engagement

Variables	reference	sum of squares	Degree of freedom	Mean squares	F- value	Sig. level	Effect size
Cognitive	Group	150.05	1	150.05	10.65	0.003	0.88
Emotional	group	137.54	1	137.54	32.68	0.001	0.99
Behavioral	group	72.90	1	72.90	27.70	0.001	0.99
agency	group	261.48	1	261.48	111.96	0.001	0.99

According to Table 5, the results of multivariate covariance analysis showed that flourishing education caused a significant increase in all four dimensions of students' academic engagement after controlling for the pre-test effect which includes cognitive, emotional, behavioral, and agency ($P < 0.05$).

4. Discussion

This research was conducted to determine the effectiveness of flourishing education on consistency and academic engagement in students regarding the role of consistency and academic engagement in other educational variables.

The findings showed that flourishing education increased consistency and both of its dimensions included consistency of interest and consistency of effort. These findings are in some ways similar to the findings of Ziaee et al (2021) research on the effectiveness of education based on the psychological model of flourishing on increasing happiness. Competence and social participation of students, Jain & Sunkarapalli (2019) showed a positive significant relationship between consistency and flourishing, and Aswini & Amrita (2017) showed a positive significant relationship between flourishing and consistency. It is explained based on findings that consistency means how to achieve long-term goals because of the existence of obstacles and challenges and trying to overcome them. Students who face major challenges in school and do not receive support from peers and teachers sometimes find it difficult to keep up. However, if they are trained to flourish and have consistency, they can stay more stable and show more effort. Students who believe that their information and learning are fixed and unchangeable show less effort to succeed and overcome challenges, but students with flourishing skills show more effort to achieve success. Another important point is that flourishing education allows people to understand issues in the present and deal with them without any prejudice or judgment. The main goal of flourishing education is to expand students' abilities from pleasant experiences so that that person

is encouraged to look at their emotional responses more clearly and observe the functioning of these inner experiences. Another important goal of flourishing education is to encourage a person to change his perspective on internal experiences from a judgmental and controlling state to a state of acceptance and non-judgment, and its other important purpose is to improve the quality of life. As a result, flourishing education cause people to engage in activities that are compatible with their values and actively interact with important people in their lives and choose actions that help them achieve their goals and increase their efforts according to the mentioned goals and processes. Thus, the mentioned factors cause flourishing education to increase consistency and both of its dimensions include consistency of interest and consistency of effort in students.

Other findings showed that flourishing education increases academic engagement and all its four dimensions include cognitive, emotional, behavioral, and agency, which are in agreement with Montano's research findings (2021) to some extent regarding the significant positive relationship between flourishing and academic engagement, Rupp & McCoy (2018) based on the positive and meaningful relationship between flourishing and academic engagement and Arshadi et al (2018). In addition, self-efficacy, optimism, and resilience were aligned based on the effectiveness of flourishing education on increasing psychological capital and all four of its components including hope. It can be explained by findings that flourishing education see that they have more factors and passages in life to pursue their goals, and when they face obstacles, they maintain their motivation and use alternative passages, but people who did not receive such education or people Non-prosperous people lose their motivation quickly and experience negative emotions when faced with obstacles because they have fewer means and passages. Flourishing education can be effective for students who suffer from mood disorders or depression and reduce their problems of these students. Therefore, flourishing education reduces stress and improves resilience through experiencing positive emotions as one of the components of flourishing. Therefore, it can be said that the use of flourishing education and positivity can reduce stress and increase engagement in various activities, including academic activities, and improve academic performance. As a result, flourishing education can play an effective role in increasing academic engagement and all its four dimensions, including cognitive, emotional, behavioral, and agency in students according to the explanations.

The most important limitations of this research are the convenience sampling method that is not following up the results in the long term, the small sample size in the experimental and control groups, not examining the results by gender, and the inability to control intervening variables such as the high desire and motivation of some samples and the low desire and motivation of some others. The most important research proposals in this research were the use of random sampling methods to reduce the sampling error, checking the continuity of the effectiveness of the results in the long term, increasing the sample size in the groups, and checking the results by gender. Other important research proposals included repeating this research on elementary school students and college students and even high school students in other cities and comparing their results with the results of this research. Another research proposal is to investigate the effectiveness of flourishing education on other variables related to education such as academic optimism, academic meaning, academic vitality, etc.

It seems essential to use the mentioned method to improve academic characteristics regarding the effectiveness of flourishing education on increasing consistency and academic engagement and their dimensions in students. Therefore, the Ministry of Education can organize a flourishing education course for teachers, counselors, and school executive staff. Furthermore, the counseling and psychological services system can organize a comprehensive flourishing education program for its members so that its members, i.e. psychologists, counselors, and therapists, can benefit from this method in their psychological interventions.

Acknowledgments

Hereby, the authors appreciate the officials of the Chalus Education Department for their cooperation with the researchers and the students for their participation in this research.

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