

# The mediating role of learning experience in the relationship between transformational teaching methods with academic engagement in student

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## Abstract

**Context:** Academic engagement structure includes learning-related behaviors and teaching methods.

**Aims:** The purpose of this study was to investigate mediating role of learning experience in the relationship between transformational teaching methods with academic engagement in student.

**Settings and Design:** The research method was descriptive-correlational and, in particular, structural equation modeling.

**Materials and Methods:** The statistical population of the study was 571 high school students in the city of Mahmoudabad in 2019. Three hundred and thirty students were selected through a cluster sampling method of two stages. Furthermore, Beauchamp *et al.* (2010) transformational teaching methods Questionnaire, Fredricks, Blumenfeld, and Paris (2004) academic engagement Questionnaire, and the Hänze and Berger (2007) Learning Experience Questionnaire were used. In this research, data analysis was done by structural equation modeling in SPSS 18 and Amos 23.

**Statistical Analysis Used:** The collected data were analyzed using structural regression equations using SPSS 18 and Amos 23 software.

**Results:** The results showed that there is a significant direct relationship between transformational teaching methods with learning experience with academic engagement ( $P \leq 0.01$ ). The research model was fit and validated, and 0.428 of the variance of academic engagement was explained by transformational teaching methods and learning experience. Learning experience in the relationship between transformational teaching methods with learning experience with academic engagement was mediating ( $P \leq 0.01$ ).

**Conclusions:** Academic engagement changes on the basis of direct, transformational teaching methods of teachers, and indirect learning experience of students can be explained.

**Keywords:** Academic engagement, Learning experience, Students, Transformational teaching methods

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## INTRODUCTION

Academic engagement is an important factor in determining the personal growth and academic achievement of learners.<sup>[1]</sup> Academic engagement is the amount of energy a student uses for their academic work,<sup>[2]</sup> and the amount of effectiveness and efficiency in learning is defined.<sup>[3]</sup> Students who have academic engagement are more likely to focus on the issues and topics that they want to learn.<sup>[4]</sup> Indicators of academic engagement include participation in school-related activities and the amount of homework completed.<sup>[5]</sup> In the research literature, academic desire encompasses several constructs: Behavioral, cognitive, and emotional.<sup>[6]</sup> One of the antecedents of academic engagement at the educational level can be the transformational teaching methods of teachers and focusing on the belief that teachers can make meaningful changes in students' academic lives.<sup>[7]</sup> Transformational teaching focuses on the development of students' learning through the implementation of group-based activities.<sup>[8]</sup> Various studies have shown the impact of transformational teaching on academic engagement. In Jabbar<sup>[9]</sup> studies, showed that transformational teaching have positive effect on academic engagement and the quality of students' learning experience. Noland, Richards<sup>[10]</sup> showed that Academic learning experience is defined as the result of a self-regulated learning strategy to overcome learning problems and improve proficiency. It motivates them to participate actively in academic activities and perform better.<sup>[11]</sup> It motivates them to participate actively in academic activities and perform better.<sup>[12]</sup>

Learners who make use of positive learning experiences develop positive internal representations of themselves and others,<sup>[13]</sup> they can to their learning experience in the face of academic difficulties.<sup>[14]</sup> Students who use positive learning experiences based on their needs are able to control academic stress significantly<sup>[15]</sup> and thus have high achievement motivation and high academic performance.<sup>[16]</sup> The study of Guo *et al.*<sup>[17]</sup> showed that the learning experience was correlated with the appropriate perception of the class and the degree of enthusiasm and academic engagement. Research by Hänze and Berger<sup>[18]</sup> and Ebrahimzadeh and Asadzade<sup>[19]</sup> showed that academic learning experience enhances the positive perception of the classroom and academic engagement. Academic engagement one of the most effective and successful factors in learners' academic life.<sup>[20]</sup> Academic excellence is one of the primary goals of education and criterion for assessing the effectiveness of schools.<sup>[21]</sup> Students' academic engagement at school plays an important role in their lives.<sup>[22]</sup> From the researchers' view, a lack of academic

engagement in expressing students, especially adolescent students, has very serious and dangerous consequences, including school dropout, engaging in dangerous behaviors, and unsupervised behaviors, including switching to drug use.<sup>[23,24]</sup> Therefore, familiarity with the factors affecting it is important for those involved in education, including families and educational institutions, to provide opportunities for adolescents to promote it. In order to bridge the gap between studies in the consensus of past findings in the form of figure 1, the purpose of the present study is investigate mediating role of learning experience in the relationship between transformational teaching methods with academic engagement in student.

## MATERIALS AND METHODS

The purpose of this study was applied in terms of aim and the research methodology was descriptive-correlational in structural equations modeling type. The statistical population of the present study was all 571 high school students in the ninth course of the experimental field in the academic year of 2019 in Mahmoudabad city, regard to the number of observed variables and allocation of coefficient of 20 for each observed variable (15 variables observed in the model) by Klein method and considering the probability of the existence of incomplete questionnaires, 330 students were selected through a cluster sampling method of two stages. Specifically, 15 schools were randomly selected from all 22 schools in the first stage. In the second stage, 12 classes were randomly selected from all 30 classes.

### Inclusion to the research criteria included

Gender female, students of first high schools, ninth grade, resident of Mahmoudabad city, completion of informed consent form, absence of psychological and physical problems for cooperation according to the individual's own words.

### The exclusion criteria included

Reluctance to complete questionnaires or withdrawing from the study for any reason.

In the autumn of 2019, we went to schools for sampling. In the process of conducting the research and before the sampling was started, explanations of the purpose of the study and confidentiality were given to the individuals. Before the research, all participants were informed and gave their consent. The relevant data were collected by the Beauchamp, *et al.*<sup>[25]</sup> transformational teaching methods questionnaire. This questionnaire consists of 16 questions that measure the four subscales of mental stimulation, inspirational motivation, personal considerations, and

ideal impact. The questionnaire is developed based on a 5-option Likert scale. Sharif<sup>[26]</sup> confirmed validity and reported reliability with Cronbach's alpha method of 0.93. Fredricks *et al.*,<sup>[27]</sup> academic engagement Questionnaire, with 15 questions including three subscales behavioral, emotional, and cognitive. The questionnaire is developed based on a 5-option Likert scale. Abbasi *et al.*<sup>[28]</sup> confirmed validity and reported the reliability coefficient of the scale using Cronbach's alpha 0.85. and the Hänze and Berger<sup>[18]</sup> Learning Experience Questionnaire, consists of 15 questions with three components of basic needs, internal motivation, and active processing, as well as the questionnaire is developed based on a 5-option Likert scale. In Iran, validity was confirmed by Ebrahimzadeh and Asadzadeh<sup>[19]</sup> and Cronbach's alpha reliability obtained 0.86. The collected data were analyzed using structural regression equations using SPSS 18 and Amos 23 software (SPSS 18, Amos 23, in the USA, California, Stanford University).

**RESULTS**

Initially, statistical assumptions were evaluated by means of kurtosis, skewness, box, Kolmogorov–Smirnov tests, and the normality of the data was confirmed. The three-variable measurement model was confirmed, too.

The results contained in Table 1 show a significant correlation between experience learning and transformational teaching with academic engagement. There is a significant positive relationship (0.01) between experience learning and transformational teaching with academic engagement in students.

As shown in Table 2, the value of root mean square error of approximation is equal to 0.037, so it is < 0.1 that indicates that the mean square of the model errors is appropriate

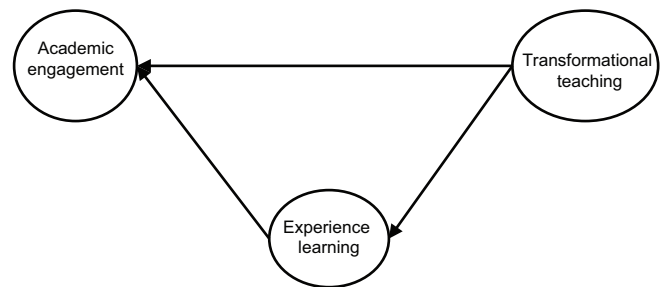
and the model is acceptable. In addition, the Chi-square value in degree of freedom (2.421) is between 1 and 3 and the amount of Goodness of Fit index, Comparative Fit Index, and Normed Fit Index (NFI) indexes are approximately equal to and greater than 0.9, indicating that the measurement model of the research variables is an appropriate model.

As shown in Table 3, transformational teaching pathways and experience learning have a significant direct effect on academic engagement. Specifically, 0.052 transformational teaching affects the academic engagement and experience learning of 0.0341 affects the academic engagement.

As shown in Table 4, the indirect pathway considered with regard to the values obtained in bootstrap method in 0.01 level were significant and confirmed.

**DISCUSSION**

According to the results of the analysis, the learning experience has an effect on the relationship between transformational teaching methods with academic engagement in students, and these results indicate the relationship of these variables to each other in line with

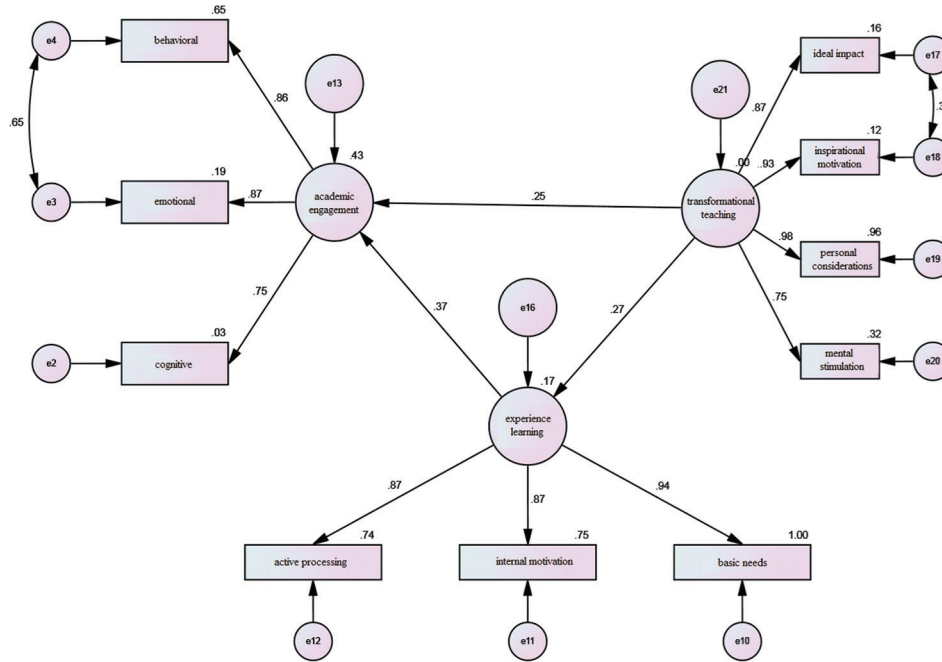


**Figure 1:** The conceptual model of the research

**Table 1: Descriptive statistics and Pearson correlation matrix between experience learning and transformational teaching with academic engagement**

Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
Ideal impact	12.65	2.87	1												
Inspirational motivation	12.17	3.96	0.79**	1											
Personal considerations	11.59	3.74	0.71**	0.51**	1										
Mental stimulation	11.87	3.28	0.55**	0.58**	0.29**	1									
Transformational teaching	53.81	16.52	0.94**	0.85**	0.79**	0.69**	1								
Basic needs	14.31	3.27	0.56**	0.45**	0.29**	0.40**	0.45**	1							
Internal motivation	14.62	3.08	0.27**	0.27**	0.25**	0.27**	0.27**	0.43**	1						
Active processing	10.52	3.12	0.15**	0.11*	0.21**	0.18**	0.19**	0.41**	0.36**	1					
Experience learning	36.24	9.72	0.19**	0.15**	0.18**	0.12*	0.18**	0.63**	0.66**	0.63**	1				
Behavioral	12.05	1.87	0.18**	0.14**	0.26**	0.24**	0.19**	0.25**	0.27**	0.59**	0.33**	1			
Emotional	14.68	2.33	0.22**	0.16**	0.18**	0.10*	0.15**	0.30**	0.23**	0.41**	0.47**	0.46**	1		
Cognitive	12.37	3.77	0.20**	0.12*	0.21**	0.17**	0.19**	0.23**	0.27**	0.53**	0.39**	0.53**	0.50**	1	
Academic engagement	48.56	12.07	0.18**	0.23**	0.18**	0.20**	0.20**	0.28**	0.17*	0.42**	0.44**	0.58**	0.66**	0.61**	1

\*Significant at the level of 0.05, \*\*Significant at the level of 0.01. SD: Standard deviation



**Figure 2:** Final tested model along with standardized prediction statistics

Generally figure 2 shown that transformational teaching on academic engagement through the mediation of experience learning had effect 0.428. As shown in Figure 2, it is shown that 0.43 of the variable dispersion of academic engagement is influenced by transformational teaching and experience learning.

**Table 2: Fit indices derived from data analysis and variables**

Test name	Explanations	Acceptable amounts	Achieved amount
$\chi^2/df$	Relative Chi-square	>3	2.421
RMSEA	Root mean square error of approximation	>0.1	0.037
GFI	Goodness of Fit Index	<0.9	0.992
NFI	Normed Fit Index	<0.9	0.987
CFI	Comparative fit index	<0.9	0.994
DF			119

**Table 3: Direct model estimation by maximum likelihood (ml<sup>3</sup>) method**

Variable	B	$\beta$	R <sup>2</sup>	t	Significant
Transformational teaching on academic engagement	0.527	0.244	0.128	4.036	0.000
Experience learning on academic engagement	0.341	0.199	0.067	3.661	0.004

**Table 4: Direct estimation of model by Bootstrap method**

Variable	Amounts	Lower limit	Upper limit	Significance
Transformational teaching on academic engagement through the mediation of experience learning	0.428	0.368	0.471	0.000

the findings of the labor studies, Jabbar,<sup>[8]</sup> that showed that classroom management style transformational teaching correlated with students’ academic engagement. Noland and Richards<sup>[10]</sup> have shown that transformational teaching has a positive effect on students’ academic

engagement and quality of learning experience. Guo et al.,<sup>[17]</sup> showed that the learning experience was correlated with the appropriate perception of the class and the degree of enthusiasm and academic engagement. Hänze and Berger’s research<sup>[18]</sup> showed that learning experience enhances the quality of learning and affects the level of academic achievement and academic engagement. Ebrahimzadeh and Asadzadeh<sup>[19]</sup> found that academic learning experiences increase positive perceptions of the classroom and academic engagement.

Learning experiences or educational activities are activities that are highly dependent on the type and quality of instructors, “teaching that influences learners” experiences in achieving educational goals.<sup>[29]</sup> Therefore, teachers’ activities for students consider with teaching methods and models.<sup>[30]</sup> Identifying learning experiences, teaching and learning, and teaching methods should definitely be done with regard to goals, especially behavioral, emotional and cognitive goals.<sup>[31]</sup> Therefore, outsourcing experiences that are irrespective of the principle of teaching by the teacher cannot always guarantee effective learning. This definition of experience, which involves the student’s interaction with the environment, indicates that the student plays a more active role,<sup>[18]</sup> in that certain characteristics of the environment attract and cause him/her attention. Behavioral, emotional, and cognitive responses of the teacher’s teaching method

lead to a better academic experience of the situation and to the academic engagement.<sup>[32]</sup> On the other hand, the teacher can provide the appropriate teaching style in the environment that motivates the type of response desired for a particular educational experience in the classroom.<sup>[33]</sup> To do this, the teacher must have some information about the students' interests and backgrounds, not only to make predictions about the reactions that students display in certain situations, also teachers must know types of reactions of students, which are essential for the learning desired.<sup>[34]</sup> Although in this sense, teacher is responsible for the learning of the students and the teacher must provide the appropriate environment and create motivational situations. Situations that trigger the desired behavior, control students' learning experiences and put them in the right channel.<sup>[35]</sup> The availability of resources, good programming, and helpful mentors from learning experiences fuel student engagement. The resources required to do the tasks can provide the context for the individual.<sup>[36]</sup>

This research has faced the limitations of the research; the research limitation to students of 9-grade high school, limitation to female gender, limitation to Mahmoudabad city in 2019, and limitation to using self-report questionnaire.

## CONCLUSIONS

This study showed that learning experience plays a mediating role in the relationship between transformational teaching methods with academic engagement in students, and in general 0.42 of the explained variance of academic engagement by learning experiences and transformational teaching methods in the pathways direct and indirect can be explained. In general, students who use more diverse transformational teaching methods have a better learning experience and have better academic performance and engagement. It is suggested that research in this area be conducted in broader areas with examples from different and larger communities to make the results more generalizable. School counselors and psychologists use the effects of transformative teaching methods and activating the learning experience to improve engagement and academic achievement in students.

## Conflicts of interest

There are no conflicts of interest.

## Authors' contribution

All authors contributed equally.

## Financial support and sponsorship

Nil.

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All ethical principles were considered in this article. The participants were informed about the purpose of the research and its implementation stages and signed the informed consent; they were also assured about the confidentiality of their information; moreover, they were allowed to leave the study whenever they wish, and if desired, the results of the research would be available to them. This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors. The present study has also been registered under the code of ethics of IR.IAU.SARI. REC.1398.057 at Islamic Azad University of Sari. This article is the result of Ms. Tahereh Nahnaee's doctoral thesis in education psychology. The authors thank all the staff of the managers of universities who participated in the research for their contribution to the study. This is the authors' independent research. All authors contributed to this research.

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