Int J Ethics Soc 2024; 6(3): 36-46

10.22034/ijethics.6.3.36

INTERNATIONAL JOURNAL OF Ethics & Society

Original Article

Analyzing the Relationship between Perceived Educational Ethics and Thinking Styles of Students with Academic Enthusiasm: The Mediating Role of Academic Engagement

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Received 14 Mar 2024 **Accepted** 01 Jun 2024 **Online Published** 02 Nov 2024

Abstract

Introduction: Academic enthusiasm is one of the concepts of positive psychology in educational processes, which can increase under the influence of perceived educational ethics, thinking style and academic engagement. The present study was conducted with the aim of investigating the relationship between perceived educational ethics and thinking styles with students' academic enthusiasm, considering the mediating role of academic conflict.

Material and Methods: The research method was descriptive correlation type with structural modeling approach. The statistical population included all the students of the fourth experimental high school of public schools in the center of Maysan city in the academic year 2023-2024 in the number of 1952 people, using Cochran's formula, 281 of them were selected by stratified random sampling. To collect research data, four standard questionnaires of perceived educational ethics, thinking style, academic engagement and academic enthusiasm were used. The face and content validity of the questionnaire was confirmed by experts and confirmed through factor analysis. The reliability of the instrument was confirmed using Cronbach's alpha coefficient. Data analysis was done using Pearson's correlation coefficient analysis and structural equation model in SPSS and Lisrel statistical software.

Results: The results showed that the relationship between perceived educational ethics and thinking styles with academic enthusiasm is positive and significant. Also, the results showed that the mediating role of academic engagement in the relationship between perceived educational ethics and thinking styles with academic enthusiasm is positive and significant.

Conclusion: Based on the results, it is possible to use the perceived educational ethics, thinking style and academic engagement in students to increase academic enthusiasm.

Keywords: *Perceived educational ethics, Thinking style, Academic involvement, Academic enthusiasm*

How to Cite: Hala Adnan Kazem Al-Adi, Ghalavandi H, Mohajeran B. Analyzing the Relationship between Perceived Educational Ethics and Thinking Styles of Students with Academic Enthusiasm: The Mediating Role of Academic Engagement, Int J Ethics Soc. 2024;6(3): 36-46. doi: 10.22034/ijethics.6.3.36

INTRODUCTION

Academic enthusiasm refers to behaviors related to learning and academic progress. This concept refers to the quality of effort that learners spend on targeted educational activities to directly contribute to achieving desired results [1]. Academic enthusiasm includes the total of conscious and unconscious factors of mental activity, based on which it shapes the will and behavior of learners towards success [2]. In fact, the structure of academic enthusiasm refers to the behaviors related to learning and academic progress, and it refers to the quality of effort that the learner spends on targeted educational activities to directly contribute to achieving desired results [3]. This concept is more than a

[DOI: 10.22034/ijethics.6.3.36]

transitory and special emotional state and refers to a persistent contagious and cognitive emotional state that focuses on a specific subject, event or behavior [4]. Academic enthusiasm includes three components of behavioral enthusiasm, it refers to learning activities, accuracy and attention, positive attitudes and the presence of students at the place of study. Emotional passion related to effective attitudes in the direction of recognizing the feeling belongs to the place of study, and finally, the passion for knowledge refers to flexibility in problem solving, preference for hard work, positive coping with failure, and the self-regulation approach to learning and the use of metacognitive strategies [5]. The comprehensive behavioral link (study styles and habits, participation with peers, interaction with the teacher) and the conditions of the educational institution (first year experience, academic support, school environment, peer support, educational approaches) causes the individual's enthusiasm and academic progress [6]. Academic enthusiasm has important implications for academic, occupational and social success [7].

Studies show that the perceived educational ethics in teaching can affect students' academic enthusiasm [8]. Teaching is the interaction between the teacher and the teacher, and in this interaction, the teacher tries to create favorable conditions for change with planning [9]. Teaching includes different concepts such as attitudes, tendencies, beliefs, habits and ways of behavior and in general all kinds of changes in the learner and has various styles [8]. One of the problems in the teaching-learning process is the failure to use effective and capable teaching styles by teachers and the observance of ethical principles in the teaching process. There are undeniable evidences in the society that indicate damages in the teaching-learning process, in such a way that academic decline, dropping out, and unemployment of graduates indicate the existence of damages in the teaching-learning process. In the educational system, problem-solving and thinking do not have a big contribution, if the main goal in the teaching-learning process is to think and think, which can end in the academic success of students [10]. In this regard, during the past years, the study of ethics in educational environments, especially in teaching situations, has been researched [11, 12]. Some experts present teaching as a profession that has an ethical nature, in a way that ethics is current in all its components [13]. Compliance with ethics in educational organizations is considered a self-evident principle, the violation of moral principles and values and the prevalence of unethical behaviors in educational organizations has made the urgent need of educational systems to comply with ethics necessary [14]. In the meantime, students' perception of the ethics of education in teachers' teaching can be the basis of their connection with the school and empowering students [15]. In addition, in the interpersonal space provided by the teaching style, the sense of justice and behavior based on perceived ethics is very important. In such an atmosphere, it provides an opportunity for students to experience close relationships and consider themselves important in relation to the teacher and other students. Although the teacher is only a part of the school's educational system, such components can be involved in increasing enthusiasm for education [16]. Educational ethics is important to the extent that it changes the educational and learning situation of learners, the meaning of educational ethics is piety and good and desirable Islamic-human qualities that the teacher has in his teaching process [17].

Studies show that thinking styles have a significant effect on students' academic enthusiasm [18]. Therefore, thinking is one of the most important topics that has received special attention in education. Today, the growth,

[DOI: 10.22034/ijethics.6.3.36]

cultivation and evaluation of thinking is one of the main functions of education and training [19]. Familiarity with thinking style can help people to identify their strengths and weaknesses and understand how they can develop their strategies in decision making and problem solving. This can reduce wrong decisions [20]. Therefore, it is essential to know and understand the models related to thinking and learning styles and related variables in education. Because many differences in people's performance can be attributed to thinking styles instead of ability. In such a way that if teachers have the necessary knowledge of the thinking styles of their students, they can achieve positive and effective results by designing and directing educational activities appropriately [21]. A researcher states that thinking styles are not synonymous with ability, but preferred ways of thinking or in other words, how to use potential abilities. Sternberg believes that man does not have a specific style, but has a profile of styles. People may have similar abilities, but different thinking styles. This theory describes thirteen styles of thinking that are distinguished from each other in five dimensions: functions, forms, levels, domains and tendencies [22].

On the other hand, studies show that if students can be more involved in academic issues and learning assignments, the more they can hope for their academic success [23]. Academic engagement as one of the motivational theories in the learning process plays a mediating role in students' perception in academic situations. The atmosphere of the class, the teacher's expectations from the students, the student's perception of success, the selection of goals according to the ability level, the use of decision-making strategies cause the formation of internal motivation in students. These motivational beliefs have a decisive role in the academic enthusiasm of students to complete academic and learning courses [24]. Academic conflict is a structure that was proposed for the first time to understand and explain academic decline and failure and considered as the basis for reformist efforts in the field of education and training [25]. Different definitions and models of academic engagement have been presented, in Finn's model, academic engagement consists of two emotional and behavioral components. It includes behavioral components such as persistence in homework and emotional components such as valuing homework and learning [26]. However, a review of more recent research shows that academic engagement is a multidimensional structure that consists of emotional, cognitive and behavioral components, agency [27].

One of the most important concerns of officials, education experts and students' families is academic enthusiasm. In addition to this issue, students are introduced as the main and dynamic forces in the direction of the progress of the society of any society, which, considering the consequences and effects of students' academic enthusiasm, can have valuable and important consequences for the society and individuals. Considering the essential role of academic enthusiasm in teaching and learning processes, one of the issues facing educational systems is to develop and control these characteristics in students. Developing the principles of educational ethics in the teaching process is a challenge in educational systems. According to what was mentioned, the aim of the current research is to investigate the relationship between perceived educational ethics and thinking style with students' academic enthusiasm with the mediating role of academic conflict.

MATERIAL AND METHODS

It is descriptive correlational research. The statistical population of the present study includes all the fourth-grade experimental high school students in public schools in the center of Maysan city in the academic year of 2023-24 in

[DOI: 10.22034/ijethics.6.3.36]

the number of 1952 people. A number of 281 people were selected for investigation based on Cochran's formula, in this research, one-stage cluster random sampling method was used to select the sample. In this regard, the high schools of Maysan city were divided into three districts based on the districts, and one district was randomly selected, which were Al-Andalus and Al-Thura high schools for boys and Al-Najah and Al-Bayan high schools for girls. Next, stratified random sampling method was used. In this research, four standard questionnaires were used as follows.

Perceived Educational Ethics Questionnaire: Perceived Educational Ethics Questionnaire is standard [28]. This questionnaire contains 24 closed-ended items based on a five-point Likert scale. The questionnaire measures the three dimensions of behavioral justice, conflict of responsibility, and fair protection. In research, the validity of the questionnaire was confirmed by experts and confirmatory factor analysis, the reliability of the questionnaire was also reported based on Cronbach's alpha coefficient of 0.80 [29]. The standard questionnaire of perceived educational ethics has content validity, but in order to coordinate the questions with the statistical population, some modifications were made. Therefore, its content and face validity were confirmed by the opinion of experts and professors of educational and management sciences. The results of the factor analysis of the perceived educational ethics questionnaire obtained three desired components in which 69% percent of the variance of the questions was extracted. KMO =731% and Bartlett's test (P<0.000) showed that the sample size is sufficient and these factors exist in the statistical population. The results of factor loadings higher than 3% with orthogonal rotation obtained the desired three components. The reliability of the questionnaire was obtained based on Cronbach's alpha coefficient of 0.82.

Thinking style questionnaire: The thinking style questionnaire is standard [22]. It evaluates 13 sub-tests in three thinking styles: first type, second type and third type. In research to check the reliability coefficient of the scale, they used Cronbach's alpha method and obtained a coefficient equal to 0.88 [30]. The standard questionnaire of thinking style has content validity, but in order to coordinate the questions with the statistical population, some modifications were made. Therefore, its content and face validity were confirmed by the opinion of experts and professors of educational and management sciences. The results of the factor analysis of the thinking style questionnaire obtained the desired thirteen components, in which 73% percent of the variance of the questions was extracted. KMO =785% and Bartlett's test (P<0.000) showed that the sample size is sufficient and these factors exist in the statistical population. The results of factor loadings higher than 3% with orthogonal rotation obtained the desired thirteen components. The reliability of the questionnaire was obtained based on Cronbach's alpha coefficient of 0.93.

Academic Enthusiasm Questionnaire: Academic Enthusiasm Questionnaire is standard [25]. This questionnaire contains 15 closed-ended items based on a five-point Likert scale. The questionnaire measures the three dimensions of emotional passion, cognitive passion and behavioral passion. In research, the validity of the questionnaire was confirmed by experts and confirmatory factor analysis. The reliability of the questionnaire was also reported based on Cronbach's alpha coefficient of 0.77 [31]. The standard questionnaire of academic enthusiasm has content validity, but in order to coordinate the questions with the statistical population, some modifications were made. Therefore, its content and face validity were confirmed by the opinion of experts and professors of educational and management sciences. The results of the

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factor analysis of the academic enthusiasm questionnaire obtained three desired components in which 63% percent of the variance of the questions was extracted. KMO =689% and Bartlett's test (P<0.000) showed that the sample size is sufficient and these factors exist in the statistical population. The results of factor loadings higher than 3% with orthogonal rotation obtained the desired three components. The reliability of the questionnaire was obtained based on Cronbach's alpha coefficient of 0.87.

Academic engagement questionnaire: The academic engagement questionnaire is standard [32]. This scale has 9 items and three components with a five-point Likert scale (never to always) and each item has a value between 1 and 5. The questionnaire measures the three dimensions of ability, commitment and attraction. This questionnaire was confirmed by experts. Reliability of the questionnaire was also reported based on Cronbach's alpha coefficient of 0.86 [33]. The standard questionnaire of academic involvement has content validity, but in order to coordinate the questions with the statistical population, some modifications were made. Therefore, its content and form validity were confirmed by the opinion of experts and professors of educational and management sciences. The results of the factor analysis of the psychological needs questionnaire obtained three desired components, in which 65% of the variance of the questions was extracted. KMO =702% and Bartlett's test (P<0.000) showed that the sample size is sufficient and these factors exist in the statistical population. The results of factor loadings higher than 3% with orthogonal rotation obtained the desired three components. The reliability of the questionnaire was obtained based on Cronbach's alpha coefficient of 0.86.

The analysis of the results of this research was done using SPSS22 and Lisrel statistical software at two descriptive and inferential levels. At the level of descriptive statistics, statistics such as frequency, percentage, mean, and standard deviation were used, and at the level of inference, Pearson's correlation coefficient tests and structural modeling were used in Lisrel software.

RESULTS

In Table 1, the descriptive indices of the variables including mean, standard deviation, skewness and kurtosis, the lowest and the highest are presented. Researchers suggest that in causal modeling, the distribution of variables should be normal. They suggest that the absolute value of skewness and kurtosis of the variables should not be more than 3 and 10, respectively [34]. According to table 1, the absolute value of skewness and kurtosis of all variables is less than one.

Table 1: Descriptive indices of research variables (**p<0.01)

Variable	Mean	SD	Skewness	Kurtosis	1	2	3	4
Perceived educational ethics	3.10	0.38	-1.02	1.95	1			
Thinking style	3.13	0.67	-0.62	1.27	0.69**	1		
Academic engagement	3.32	0.57	1.11	3.27	0.77**	0.71**	1	
Academic enthusiasm	3.37	0.74	-0.40	1.04	0.66**	0.68**	0.78**	1

One of the presuppositions of meaningful structural modeling is the correlation matrix between research variables [34]. As can be seen from Table 1, there is a significant relationship between the research variables. In this part, in order to analyze the research hypotheses, the structural modeling method has been used. The maximum likelihood method was used to test the theoretical model of the research and its fit with the collected data. In this study, this number was 126/22, which is lower than the number 168 that was calculated through the p(p+2) formula. In

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this formula, p is equal to the number of observed variables, which is 12 in this research. It should be noted that Lisrel software was used for data analysis.

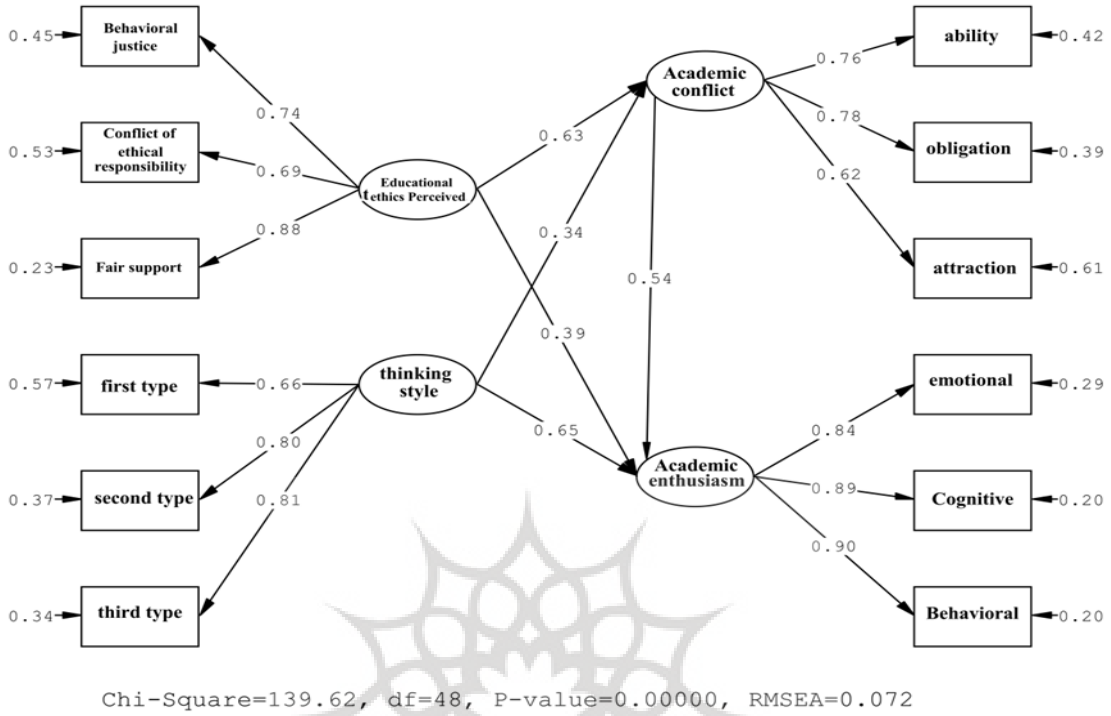

Figure 1: Tested research model in standard mode

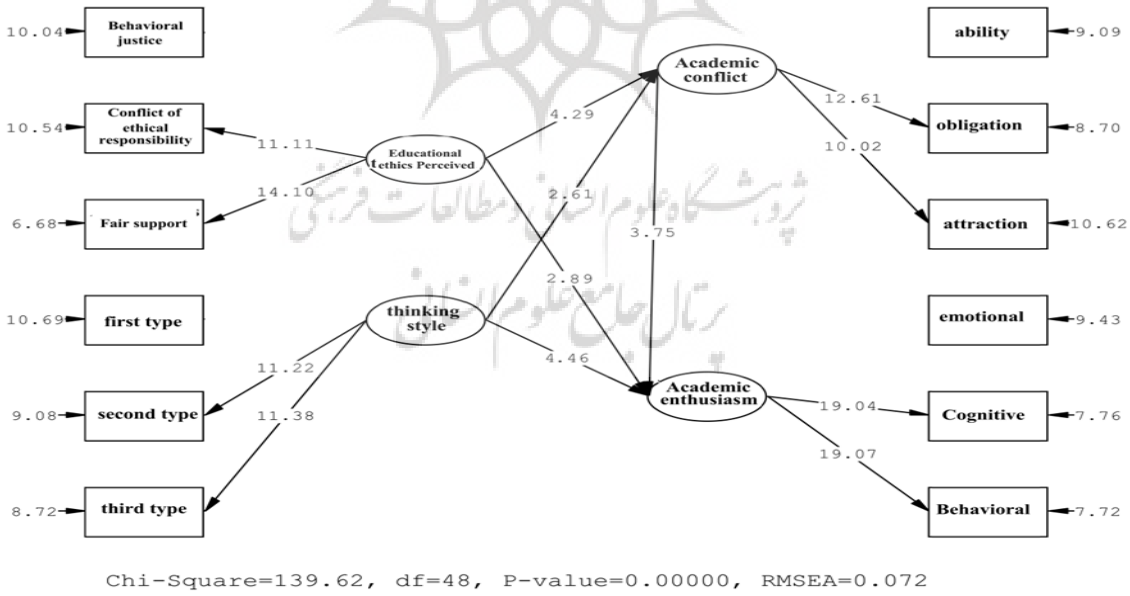

Figure 2: Tested model of the research in meaningful mode

According to Figure 1, the relationship between perceived educational ethics, thinking style and academic engagement with academic enthusiasm is positive and significant at the level of 0.01. The relationship between perceived educational ethics and academic enthusiasm with the

[DOI: 10.22034/ijethics.6.3.36]

mediating role of academic engagement is positive and significant at the 0.01 level. The relationship between thinking style and academic enthusiasm with the mediating role of academic engagement is positive and significant at the 0.05 level. In Table 2, the absolute, comparative and parsimonious fit indices are reported separately.

According to Table 2, all the fit indices are in the optimal level and it can be concluded that the tested model has a good fit with the collected data. In Table 3, a summary of the tested paths of structural modeling is presented.

Table 2: Goodness of fit indices of the tested research model

Absolute fit indices			
Indices	GFI	AGFI	SRMR
Experimental value	0.92	0.82	0.04
Accepted value	More than 0.90	More than 0.80	Less than 0.05
Comparative fit indices			
Indices	GFI	AGFI	SRMR
Experimental value	0.93	0.92	0.93
Accepted value	More than 0.90	More than 0.90	More than 0.90
Adjusted fit indices			
Indices	GFI	AGFI	SRMR
Experimental value	2.90	0.63	0.07
Accepted value	Less than 3	More than 0.60	Less than 0.08

Table 3: Paths tested in the structural equation model (**p<0.01)

Variables	Direct effects	Indirect effects	Total effects
Perceived educational ethics	0.39**	0.34**	0.72**
Thinking style	0.65**	0.18**	0.83**
Academic engagement	0.54**	-	-

DISCUSSION

The results of the research showed that the relationship between perceived educational ethics and academic enthusiasm is positive and meaningful directly and with the mediating role of conflict. In the study, it was shown that the effect of perceived educational ethics on the motivation of academic progress is positive and significant [29]. In another research, it was reported that the mediating role of academic conflict in relation to perceived teaching styles and academic competence is positive and significant [9]. In another research, it was found that the relationship between teacher's teaching style and students' academic motivation and engagement is positive and significant [10]. In another study, they found that ethical teaching style plays a role as a predictor of students' passion and dedication [8], the results of another study indicated the mediating role of academic conflict between psychological capital and academic burnout [35]. Another study concluded that teacher-student interaction causes satisfaction, participation in class, academic engagement, hope and more attendance in class [36]. In another research, it was shown that students who establish supportive and friendly relationships with teachers have a positive academic attitude, satisfaction with school, academic engagement and more hope to continue their studies [37]. These results can be consistent with the findings of the present study, because they reached similar results. In line with the obtained results, it can be stated that when students perceive fair behaviors in the learning process and based on the principles of educational ethics, their self-confidence and willingness to accept risky matters increases. The

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teacher should help the students to have successful experiences and build an image based on their moral principles based on these experiences. A person who engages students in teaching processes and takes fair evaluation from students. In this way, the student gains more experiences that allow him to develop more mental concepts and understand the moral principles in the teacher's teaching. Also, the teacher's knowledge of the subjects, learning issues, patterns, skills, methods, strategies and teaching techniques shows the structure of the teaching style. Mastering this important can create a correct understanding of the structure of teaching style in students. The classroom is a social organization of education. Social, educational-educational organizations, by observing the principles of educational ethics, move towards dynamics. The presence of order and discipline in the classroom, or in other words, classroom management, is very effective for the effectiveness and efficiency of a teacher's work. Also, a teacher faces many different students in the classroom, the speed of action and behavior of each of them is different from the other. Knowing the types of students and attracting the attention of all of them can become a challenging issue. The concept of perception of fair support looks at support from the perspective of a person's cognitive evaluation of the environment and his relationships with teachers. All the relationships that students perceive with their teachers and other classmates as an available or suitable resource to meet their needs, which can be the basis of their academic enthusiasm. Also, the quality of teachers' teaching, communication with the teacher, and the quality of his acceptance improves the student's motivation in academic activities, as well as his emotional and social performance, and is one of the important facilitating factors in solving problems. If students receive and understand the teacher's fair support, responsibility and behavioral justice as the principles of educational ethics in the teaching process, they have the ability to endure and overcome problems. Students who understand teachers' teaching style, structuredness, justice, support and independence, have higher self-confidence, motivation, enthusiasm and academic engagement and have better academic performance than other students.

Also, the analysis of research findings showed that the relationship between thinking style and academic enthusiasm is positive and significant with the mediating role of academic engagement. Recent research concluded that thinking styles are a key factor in improving students' academic progress [38]. In another research, it was found that the effect of thinking styles on participation in classroom discussion and learning results is positive and significant [39]. Another study found a positive and significant effect of thinking style on students' academic enthusiasm [40]. Similar research showed that thinking style has a positive and significant effect on academic performance with a mediating role of responsibility [41]. In a study, it was reported that thinking styles can be effective in students' academic engagement in teaching and learning processes [42]. In another study, it was found that the effect of belonging to school and involvement in academic processes on academic enthusiasm is positive and significant [43]. These results can be consistent with the findings of the present study, because they reached similar results. In explaining the obtained results, it can be stated that the thinking style is part of the rational methods of using individual abilities, and the preferred methods of people to use their abilities in doing cognitive tasks. Hence, people may be similar in abilities but different in styles. For example, students with a legal thinking style enjoy doing things that require creativity and design, and do things in their own way. Therefore, in terms of the fact that they are

[DOI: 10.22034/ijethics.6.3.36]

creative and innovative in their assignments, they will enjoy doing it and will have a good academic enthusiasm. Also, students with an executive thinking style who tend to follow orders and are more interested in tasks that are accompanied by explicit and clear instructions. Therefore, they enjoy doing the homework that they have to follow the rules and do them with more motivation. Therefore, they have a good desire to study. Students with a judicial thinking style also focus more on judging and evaluating people and things in terms of the characteristics of this thinking style. Therefore, they are not interested in being judged and they do not expose themselves to the criticism of their classmates and teachers, and for this reason, they also show good academic performance. As it is known, the types of thinking styles can somehow affect the academic enthusiasm of students. Also, for academic success in educational fields, thinking styles that produce creativity and require high cognitive complexity are of significant importance. Undoubtedly, if teachers encourage and encourage the use of creative and complex dimensions of thinking styles, students will feel more self-worth and self-confidence. In addition, they can design assignments for learners that instill in them the need for deep engagement and desire for optimal academic engagement. Thinking styles can provide a context for students to be more involved in academic processes, and as a result, they try to learn more and to control their emotions and tensions in order to achieve the goal and perform the task. Based on this, the thinking style affects the academic engagement of students. Academic engagement creates an environment for students to enjoy dealing with course materials and to make studying and attending class exciting for them. Also, they continuously prepare themselves for exams and feel satisfied and proud of the success they get through it, and they will try to make studying an important part of their daily activities. As a result of this importance, we can expect to improve students' academic enthusiasm.

The current research has faced some limitations, including the possibility that some students participating in the research had problems understanding the questions of the questionnaires. Also, factors such as the lack of sincere and honest cooperation of some students in conducting the research also affect the findings of the research. One of the other limitations of this research is related to the research tool. Obviously, using the questionnaire as a data collection tool has major limitations. Other methods of collecting information, including interviews, along with questionnaires, could enrich the findings of the research. In line with the obtained results, it is suggested that the education officials plan and take action to improve the educational ethics of teachers. It is suggested that teachers establish a friendly and intimate relationship with students in the classroom environment, this can provide the basis for the understanding of autonomous support in students. Also, flexibility in the use of thinking styles by teachers and learners and adjusting the styles that are used excessively, because different styles are useful in different situations. And finally, academic engagement has a motivational purpose, so it is suggested to focus more on the method of motivating students, and in this regard, teachers who are stimulating and full of energy should be employed to be a representative and role model for students.

CONCLUSION

The analysis of research results showed that the relationship between perceived educational ethics and thinking style with academic enthusiasm is positive and significant with the mediating role of academic engagement. One of the issues that educational systems and families need to pay attention to is students' academic enthusiasm. Because academic enthusiasm

[DOI: 10.22034/ijethics.6.3.36]

expands the circle of human thinking, expands creativity, curiosity, and connects more with others. Lack of enthusiasm is the problem of many schools and students. Students may get bored with their normal day-to-day tasks, but qualified and good students always keep themselves motivated by exploring and experiencing their educational goals and by studying more detailed course materials. Based on the results, the perception of educational ethics in teaching shapes the cognitive organization of students and their evaluation method, directs mental energy, guides the student's motivation and educational activities. Along with the thinking style and increase in students' academic involvement, it can be the basis for increasing students' academic enthusiasm.

ETHICAL CONSIDERATIONS

Ethical issues (such as plagiarism, conscious satisfaction, misleading, making and or forging data, publishing or sending to two places, redundancy and etc.) have been fully considered by the writers.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interests.

ACKNOWLEDGEMENT

The research group considers it necessary to thank the managers, teachers, students and all those who have cooperated in conducting this research

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[DOI: 10.22034/ijethics.6.3.36]