Teacher’s support of students’ autonomy in academic engagement: The mediating role of achievement emotions

Masoud Gholamali Lavasani,
Associate professor of psychological and educational sciences school, University of Tehran, Tehran, Iran

Leila Afzali,
PhD student of educational psychology, University of Tehran, Tehran, Iran

Mahsa saleh Najafi,
Ph.D. student of educational psychology, University of Tehran, Tehran, Iran

Somayyeh Esmaieli,
Department of Psychology, College of Educational Science and Psychology, Islamic Azad University (IAU), Eslamshahr Branch, Eslamshahr, Iran

Abstract

The aim of this research was to investigate the relationship between teacher’s support of student’s autonomy in academic engagement in terms of the mediating role of achievement emotions. The ex facto model was used in this study. For this purpose, 300 high school students of Tehran city were chosen based on the cluster sampling. The required data for this study were accumulated through three questionnaires: The Leaning Climate Questionnaire (LCQ), Achievement Emotions Questionnaire (AEQ) and Academic Engagement Questionnaire (M.S.L.Q). The results of the analysis showed that the teacher’s support of students’ autonomy has a direct and positive effect on the academic engagement. In addition, the indirect effect of teacher’s support of students’ autonomy was positive and significant with regard to the academic engagement mediated by positive achievement emotions. On the other hand, the indirect effect of teacher’s support of students’ autonomy was negative and insignificant in terms of academic engagement mediated by negative achievement emotions. The findings of this study suggest that the teacher’s support of students’ autonomy affects their achievement emotions and as a result, these emotions increase students’ academic engagement.

Key words: teacher’s support of students’ autonomy, academic engagement, achievement emotions

1- Introduction:
Fredricks et al. (2004) consider the academic engagement as the entailment of three aspects of behavioral, emotional and cognitive engagements. Behavioral involvement refers to the students’ observable behaviors in doing the assignments including the components of effort in doing the assignments, stability in doing them and asking others’ help in doing them. In this study, the attention has been given to the effort since it represents an individual’s tendency and continuance in doing the assignments. On the other hand, an emotional engagement shows the emotional aspects of the assignment including three components of emotion, the value of assignment and affection (Wolters & Rosental, 2000).

In general, the concept of academic engagement emphasizes the role of self-awareness in studying, the design of meta-cognitive beliefs and self-regulation (Entwistle et al., 2004 cited in Saber and Sharifi, 2009). The increase and growth of students’ academic engagement is conditioned by providing the personal and environmental backgrounds. The existing variables in classroom and school are recognized as the influential factors in the level of students’ academic engagement. In this regard, the role of underlying components of school has been emphasized in the model of academic learning. Numan (1981) explained that the general and main reformative actions of schools can decrease students’ alienation and increase their academic engagement. Therefore, the researchers refer to defining the compatible and explicit educational purposes and encouraging the cooperation and cooperative interaction among students. Thus, they can do the reformations in schools in order to increase
students' engagements in reformations to encourage their free choices and active participation in school's decisions (Finn and Zimmer, 2012).

Achievement emotions are personal variables which have significant effect on academic engagement. Achievement emotions also can predict different levels of engagement with assignments. Students who perceive positive have more interest to be involved in their assignments while students experiencing negative emotions do not have any interest in engaging in school assignments (King and Garlend, 2014).

In this regard, the studies have shown that the positive and negative emotions have some effects on academic achievement and learning (King and Garlend, 2014). The achievement emotion affects directly the academic engagement. In addition, there is a relationship between contextual and underlying variables with achievement emotion. This variable (achievement emotion) can also interfere as a mediator variable to affect indirectly the teacher’s support of students’ autonomy on their academic engagement. Based on Pekrun’s control hypothesis, the value of educational environments can change in a way that alter students’ emotional pattern (Linbrink, 2006).

Achievement emotions are considered as the social factors in terms of support of teacher’s autonomy and also emotional factors. Achievement emotions are defined as emotions which are directly associated with consequences or the activities for achievement or progress (Pekrun, 2006).

This hypothesis also addresses the effects of achievement emotions on academic engagement and student’s performance and considers an increase of achievement emotion to improve academic engagement and as a result, high academic performance (Pekrun and Colleagues, 2007). Based on the afore-mentioned materials, this research aimed at investigating the direct effect of teacher’s support of students’ autonomy (contextual variable) and achievement emotion (personal variable) on students’ academic engagement. Moreover, it examined the indirect effect of teacher’s support of students’ autonomy on academic engagement through the mediations of achievement emotions.

2- Measurement method:
Achievement Emotions Questionnaire (progress): Achievement emotions were measured by means of language progress emotions questionnaire adapted from mathematics progress emotions questionnaire (Perun, Gutez, & Fernzel, 2005). This questionnaire has 60 items which measures 7 distinct emotions: enjoyment, honor, anger, anxiety, shame, disappointment and impatience. This questionnaire has three organized sections including class-related emotions, learning-related emotions and exam-related emotions. These sections have 19, 18 and 23 items, respectively. The whole questionnaire was employed in this research. Since the teacher’s enthusiasm in the class was considered, 19 items of class-related emotions including the emotions of enjoyment, honor, anger, anxiety, shame, and impatience were utilized in the analyses. With regard to the reliability of the questionnaire, Pekrun et al. (2005) have reported the alpha coefficients for different emotions from 0.84 to 0.92 in this questionnaire. The alpha coefficients for these emotions (pertinent to three conditions, class, studying and exam) in Pekrun and Colleagues’ (2005) study and in this research have been reported in table 2.3.

The Learning Climate Questionnaire LCQ: Williams and Desi (1996) learning climate questionnaire was employed to measure teacher’s support of students’ autonomy. This questionnaire encompasses 15 items and it has been developed based on 5-point likert scale from “I totally disagree” (1) to “I totally agree” (5). The reliability of this instrument has been determined by Williams and Desi (1996). The reliability coefficient of this scale was achieved through Cronbach Alpha index. The reliability coefficient was attained as 0.96 in Williams and Desi (1996) study, 0.93 in Black and Desi (2000) research and 0.91 in Hejazi and Colleagues (2012) study, respectively.

Academic Engagement Questionnaire (M.S.L.Q): To collect the required data, learning-related motivational strategies questionnaire (Panetrich, Smith, Garcia and Mekichi, 1991) was utilized. This questionnaire consists of 81 items and it is divided to two parts; motivation and self-regulation strategies of learning. The six components of motivation part includes: Internal orientation of purpose, external orientation of purpose, assignment value, the beliefs of learning control, self-sufficiency and exam anxiety. The nine components of learning self-regulation strategies consist of: mental rehearsal, expansion, organization, critical thinking, metacognition, duration of study, learning with peers, effort management and seeking help. The response to the items of this questionnaire was done based on 7-point Likert scale. This questionnaire was validated and approved by Fian and Seif (2004). The Cronbach Alpha coefficients for the components of this questionnaire were 0.88 to
0.56 in motivation part and 0.77 to 0.71 in learning strategies part. In this study, the sub-scales of assignment value including 6 items were used.

3. Results

Table 1. Descriptive indexes of research variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Skewness</th>
<th>Kurtosis</th>
<th>Lowest score</th>
<th>Highest score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic engagement</td>
<td>18.61</td>
<td>4.22</td>
<td>0.07</td>
<td>0.92</td>
<td>6</td>
<td>35</td>
</tr>
<tr>
<td>Autonomy support</td>
<td>49.31</td>
<td>11.01</td>
<td>-0.15</td>
<td>0.05</td>
<td>19</td>
<td>71</td>
</tr>
<tr>
<td>Positive achievement emotion</td>
<td>53.11</td>
<td>9.42</td>
<td>0.53</td>
<td>1.19</td>
<td>31</td>
<td>97</td>
</tr>
<tr>
<td>Negative achievement emotion</td>
<td>98.38</td>
<td>24.26</td>
<td>0.68</td>
<td>2.33</td>
<td>44</td>
<td>199</td>
</tr>
</tbody>
</table>

Table 2. Correlation matrix of research variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Autonomy support</th>
<th>Positive achievement emotion</th>
<th>Negative achievement emotion</th>
<th>Academic involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy support</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive achievement emotion</td>
<td>0.46**</td>
<td>1</td>
<td>-0.47**</td>
<td></td>
</tr>
<tr>
<td>Negative achievement emotion</td>
<td>-0.24**</td>
<td>-0.47**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Academic engagement</td>
<td>0.48**</td>
<td>0.49**</td>
<td>-0.52**</td>
<td>1</td>
</tr>
</tbody>
</table>

*P<0.01  **P<0.05

The above table shows the correlations of all variables with each other. Based on the results of table, the highest correlation coefficient is pertinent to the relationship between negative achievement emotion with academic engagement (-0.52) that is a reverse relationship. The academic engagement decreases when the negative achievement emotion increases. In addition, the relationship between the support of teacher’s autonomy with positive achievement emotion was (0.46), support of teacher’s autonomy with academic engagement was (0.49), and positive achievement emotion with academic involvement was (0.49), respectively. The lowest correlation coefficient was associated with the relationship between support of teacher’s autonomy with negative achievement emotion which was (-0.24).

The Lisrel software was used in order to investigate the model variables including the external variable of autonomy support, mediating variables of positive and negative achievement emotions and internal variable of academic engagement.

Table 3: An estimation of the direct effect coefficients

<table>
<thead>
<tr>
<th>The direct relationships of variables in the model</th>
<th>Estimation values</th>
<th>T value</th>
<th>Estimation error</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy support and positive achievement emotion</td>
<td>P&lt;0.01</td>
<td>0.001</td>
<td>8.99</td>
<td>0.46**</td>
</tr>
<tr>
<td>Autonomy support and negative achievement emotion</td>
<td>P&lt;0.01</td>
<td>0.001</td>
<td>-3.58</td>
<td>-0.20**</td>
</tr>
<tr>
<td>Autonomy support and academic engagement</td>
<td>P&lt;0.01</td>
<td>0.001</td>
<td>6.46</td>
<td>0.38**</td>
</tr>
<tr>
<td>Positive achievement emotions and academic engagement</td>
<td>P&lt;0.01</td>
<td>0.001</td>
<td>5.75</td>
<td>0.32**</td>
</tr>
<tr>
<td>Negative achievement emotions and academic engagement</td>
<td>P&lt;0.01</td>
<td>0.001</td>
<td>-5.82</td>
<td>-0.34**</td>
</tr>
</tbody>
</table>
Table 4: An estimation of the indirect effect coefficients

<table>
<thead>
<tr>
<th>The indirect relationships of variables in the model with academic engagement</th>
<th>Standardized parameter</th>
<th>T value</th>
<th>Estimation error</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy support mediated by positive achievement emotion</td>
<td>P&lt;0.05</td>
<td>0.02</td>
<td>3.18</td>
<td>0.15*</td>
</tr>
<tr>
<td>Autonomy support mediated by negative achievement emotion</td>
<td>P&lt;0.05</td>
<td>0.09</td>
<td>-1.98</td>
<td>-0.07**</td>
</tr>
</tbody>
</table>

Table 5: An estimation of the whole effect coefficients

<table>
<thead>
<tr>
<th>The whole relationships of variables in the model</th>
<th>Standardized parameter</th>
<th>T value</th>
<th>Estimation error</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy support and academic engagement</td>
<td>0.53**</td>
<td>9.92</td>
<td>0.001</td>
<td>P&lt;0.01</td>
</tr>
<tr>
<td>Positive achievement emotion and academic engagement</td>
<td>0.32**</td>
<td>5.75</td>
<td>0.001</td>
<td>P&lt;0.01</td>
</tr>
<tr>
<td>Negative achievement emotion and academic engagement</td>
<td>-0.34**</td>
<td>-5.82</td>
<td>0.001</td>
<td>P&lt;0.01</td>
</tr>
</tbody>
</table>

The analysis of the results showed that the estimated value in the direct relationship between teacher’s support of students’ autonomy with academic engagement equals to 0.38 (t= 6.46) which is significant at the level of p<0.01. Therefore, there is a relationship between teacher’s support of students’ autonomy with academic engagement. In addition, the estimated value in the direct relationship of positive achievement emotions with academic engagement equals to 0.32 (t=7.75) which is significant at the level of p≤0.01. Thus, there is a positive relationship between positive achievement emotions with student’s academic engagement.

The estimated value in the direct relationship between negative achievement emotions with academic engagement equals to -0.34 (t= -5.82) which is significant at the level of p≤ 0.01. Therefore, there is a negative relationship between negative achievement emotions and students’ academic engagement.

The estimated value in indirect relationship between teacher’s support of student’s autonomy and academic engagement (with mediation of positive achievement emotions) equals to 0.15 (t= 3.18) which is significant at the level of p≤ 0.01. Therefore, there is a positive relationship between teacher’s support of student’s autonomy with academic engagement (with the mediation of positive achievement emotions).

The estimated value in indirect relationship between teacher’s support of student’s autonomy with academic engagement (with mediation of negative achievement emotions) equals to -0.07 (t= -1.98) which is not significant at the level of p≤ 0.01. Therefore, there is not a significant relationship between teacher’s support of student’s autonomy with academic engagement (with the mediation of negative achievement emotions).

4 - Discussion and conclusion:

The results of analysis showed that the effect coefficient of teacher’s support of student’s autonomy with academic engagement is positive and significant indicating the effect of teacher’s support for autonomy on the increase of academic engagement. This finding is in line with the findings of Dehghani Firuzabadi (2013); Hejazi, hezri azar and Amani (2012) and Younespour Isalou’s (2012) research. Based on this finding, it can be said that when the educational environments support students’ autonomy, students feel agent, autonomous in starting, maintaining and adjusting activities and they think that they themselves are the cause of their behavior. Therefore, it results in meeting their main psychological needs, academic engagement and academic progress. Finally, the results showed that there is a relationship between teacher’s support for student’s autonomy and academic engagement. Thus, the first hypothesis of the research is approved.

The results of analysis illustrated that the effect coefficient of positive achievement emotions on academic engagement was positive and meaningful indicating the effect of positive achievement emotions on the augmentation of academic engagement. This finding is consistent with the results of Pekkrun’s (2000), (2006), Younespour Isalou (2012); and Dehghani Tazrjani’s (2012) research.
To explain these findings, it can be said that the emotions prepare the motivational and physiological energy, create the concentration, change the thoughts, and stimulate wishes and purposes related to the activity. They do so to have a role of providing and continuing the reactions towards important conditions and incidents. This implicitly expresses that emotions can affect thoughts, motivation and action a lot (Pekrun and Colleagues, 2002). Therefore, an experience of positive emotions results in the augmentation of students’ academic engagement.

The results of analysis illustrated that the effect coefficient of negative achievement emotions on academic engagement was negative and significant showing the effect of negative achievement emotions on the decrease of academic engagement. This finding is congruent with the results of Nikdel, Kadivar, Farzad, Arab Zadeh and Kavousian (2012) and Younespour Isalou’s (2012) research. In order to explain this finding of the research, it can be declared that the assumption is that a number of cognitive and motivational mechanisms are the mediator of the emotions effect on learning and progress in a cognitive-motivational model (Pekrun, 1992; cited in Pekrun and Colleagues, 2002).

Emotions may form, maintain or decrease the academic engagement. They can also do it by inducing the purposes and emotion-related aims. These purposes can be facilitated by congruent ways of emotions to process self-related information and assignments. For example, attention and retrieval can concentrate on positive efficiency information in creating positive information and on negative information in creating negative information. In this way, the positive activator emotions like learning enjoyment may generally increase the academic engagement while negative inactivator emotions (such as disappointment and impatience) may decrease an academic engagement (Pekrun, Gutze and Titez, 2002). For instance, when the abilities self-assessments are high and educational demand is low, or vice versa, when the demand is high and abilities self-assessments are low, the impatience is experienced by a person. Apparently, impatience enlists the operations for mental and behavioral escape from the conditions which does not provide enough stimulation. In addition, an individual may escape from those conditions which the demand of that condition is higher than his/her ability (Pekrun and Colleagues, 2002).

Students’ perception from teacher’s support of autonomy indirectly affects students’ academic engagement through positive emotions. In other words, based on the findings of this research, the indirect effect of teacher’s support of students’ autonomy is positive and significant through the positive emotions on students’ academic engagement. Such finding is in line with that of Nikdel et al. (2012) and Younespour Isalou’s (2012).

Students’ perception from teacher’s support of autonomy indirectly affects students’ academic engagement through positive emotions. In other words, based on the findings of this research, the indirect effect of teacher’s support of students’ autonomy is negative and insignificant through the negative emotions on students’ academic engagement. Such finding is in line with that of Nikdel et al. (2012) and Younespour Isalou’s (2012).

Skinner and Blueman (1993) believe that students need to have autonomy for learning and occasional involvement increases when autonomy support is experience by them. In this regard, teachers can support students’ autonomy by giving them free action in their learning activities and providing the relationship between school activities and students’ interests. The studies show that the type of teacher’s motivational style (the style of autonomous support against harness style) affects students’ motivational quality (Rio, Bult, & Sai, 1001 cited from Khoshbakht & Kheir, 2005).

Considering the effect of supporter behaviors of autonomy on students’ academic engagement we can concentrate on their learning and personal improvement by creating an environment supporting students’ autonomy. The researchers consider the supporter behaviors of autonomy in educational contexts as : 1. Careful listening; 2. Creating opportunities for students to do the assignments in their own specific ways; 3. Providing opportunities for discussion; 4. Encouraging the effort and stability; 5. Positive feedback due to improvement and dominance; 6. Responding students’ questions and explanations; 7. Accepting and approving students’ viewpoints (Rio, 2007).

By recognizing these properties, some schemes can be considered to encourage autonomy. In addition, it is suggested that since the proposed model was executed on male students in this study, another research can be done on female students. So, the results of that study can be compared with the results of this study. In addition, a quantitative approach was employed in this study. It is suggested that future studies employ qualitative or an
amalgamation of both qualitative and quantitative approaches (mixed-method approach) to present a model in recognizing effective factors on achievement emotions and academic involvement.

References:


