

The Significance of School Climate in Shaping Up the Self-Efficacy and Student Involvement

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Abstract

It is known that students with a high level of self-efficacy set high goals for themselves, adjust their attitudes and behaviors to achieve these goals, and work resolutely. For this reason, it can be said that the level of self-efficacy is an important factor affecting the success of students. In addition to the level of self-efficacy, the learning environment also affects the success of the student. In this context, the relationship between university students' self-efficacy level and student involvement and the effect of school climate on this relationship were investigated in this study. The main body of the study was Toros University associate and undergraduate students. Data: confirmatory factor analysis, correlation analysis, hierarchical regression analysis and PROCESS 2.16.3, which is based on regression analysis on the SPSS program developed by Hayes (2017). As a result of the research, it has been determined that the level of self-efficacy has a meaningful and positive effect on school climate and student involvement, school climate has a meaningful and positive effect on student involvement, school climate has a mediating role in the effect of self-efficacy level on student involvement.

Keywords:

Self-efficacy, Student Involvement, School Climate

Article History:

Received: 18th Apr 2022

Accepted: 25th May 2022

Published: 17th June 2022

1. INTRODUCTION

Self-efficacy is a concept that expresses the belief that a person can accomplish a certain job. Low or high self-efficacy beliefs affect the motivation of the individual. People with high self-efficacy levels are more likely to be successful than those with low self-efficacy levels (Yıldırım and İlhan, 2010). The circumstances of the person can also affect the belief of self-efficacy. In this context, the school climate, which is affected by school administrators, teachers, students and parents, can also be an important factor in the success of students. As a matter of fact, Bandura (1977) states that positive experiences create positive effects, and positive experiences also affect self-efficacy belief in a positive way. Student involvement is the fact that the student is interested in every subject related to the school with great energy, gives importance to his/her lessons and concentrates on his/her lessons (Ardıç and Polatçı, 2008). As all institutions have a unique character, schools also have a unique character (Bursalioglu, 2012), and the character of schools is an important factor in student involvement. Considering that the primary mission of schools is to improve the learning environment, improve academic opportunities, and contribute to the individual and social development of students (Taşkiran, 2008), it is expected that schools should have a character towards student involvement.

University education has an important role in the development of students' self-efficacy beliefs (Ünal and Şahin, 2013). Because this period is a span when students come out of adolescence, reach adulthood, and enter a different atmosphere and social environment. Commonly, during this period, students leave their families and live alone in a different city, face the problems caused by ethnic and social identity differences,

go through physical changes and are attracted to the opposite sex. Overcoming these challenges alone increases students' self-confidence. This situation also positively affects the self-efficacy feelings of university students (Erol and Temizer, 2016).

Self-efficacy:

Self-efficacy is the belief in one's own talents and confidence in one's own abilities. One's reaction to failure shows one's self-efficacy belief (Aslan and Kalkan 2018). Because people use knowledge in different ways, their reaction to problems varies as well. Bandura (1977) defined self-efficacy as the ability to direct the motivation of individuals to cope with any difficulty and the confidence they have in overcoming this difficulty. People's motivation and behavior are influenced by their self-efficacy, which leads to acts that can improve their lives (Arseven, 2016). However, self-efficacy is not the only factor on behavior (Schunk, 1995). Expectations regarding the potential repercussions of actions are also crucial. Therefore, self-efficacy and outcome expectations are related to each other (Arseven, 2016). The four dimensions of self-efficacy include successful experiences, modeling, verbal persuasion, physiological and affective responses (Bandura, 1994).

Successful experiences are correct and effective responses to the problems one faces. It is also critical that the person uses his or her knowledge and skill level, as well as his or her intuition established through previous experiences, when determining the correct and effective solution to the problems. In this context, positive behaviors experienced in the past enable people to take a positive approach to solving their problems and play an active role in shaping the self-efficacy belief of the person (Mohammedi, 2019).

Modeling is observing the behavior of other people and acting in accordance with the actions of the person they take as a role model. Modeling causes changes in the self-efficacy belief of the observer. Therefore, modeling is accepted as a resource that affects self-efficacy and enables the development of self-efficacy (Arseven, 2016).

The fact that a person is influenced by the guidance and advice of people who are usually superior or experienced in terms of status and changes their behavior as a result of it is known as verbal persuasion. Therefore, it can be said that recommendations and advice affect one's self-efficacy belief. Similarly, encouraging a person to solve a problem also affects self-efficacy belief. However, in cases where incentives are inconsistent and meaningless and recommendations are unrealistic, there is a rapid and sudden decrease in self-efficacy belief (Arseven, 2016).

Physiological and affective responses also affect a person's self-efficacy belief. Stress and anxiety, hopelessness and depression are among the factors that negatively affect self-efficacy belief (Bayrakçı, 2007). The fundamental reason for this is that people's resolve and determination are blunted, and their sense of self-confidence is destroyed. As a result, strengthening one's psychological condition and reducing negative feelings like worry and tension have a good impact on self-efficacy.

Student Involvement:

The term "involvement" refers to a person's cognitive, emotional, and physical commitment to and enjoyment of his or her profession (Özkalp and Meydan, 2015). The concept of involvement has been discussed in two dimensions (Schaufeli, 2013). These are employment involvement, which refers to the type of relationship people have with their jobs, and employee involvement, which refers to the relationships people have had within the business.

In every subject related to school, Roberts and Davenport (2002) define student involvement as the desire, excitement, and concentration on his lessons by assigning value to his lessons while going to school, in or out of school, and while studying (Ardıç and Polatçı, 2008). A student that is enthusiastic about school and lessons is highly driven and satisfied with his or her studies. Approaches such as educational methods, mutual interaction, encouraging research, creating a sense of belonging, and using multimedia techniques affect student involvement (Windham, 2005).

Student involvement has three dimensions: vigor, dedication, and assimilation (Leiter and Maslach, 2001; Mohammadi, 2019).

During work, vigor refers to a person's ability to be energetic, enthusiastic, mentally comfortable, serene, and flexible, to persevere despite obstacles, and to put up more effort (Schaufeli et al., 2002; Schaufeli, 2013). Vigor is an important factor for the continuity and success of students' motivation and involvement (Mensah and Atta, 2015). Encouraging students to work for a purpose increases vigor (Mohammadi, 2019).

Dedication is defined as a person's great energy and excitement for her or his work, as well as a belief in the value of her or his work and pride in it (Özkalp and Meydan, 2015). For vigor and assimilation, dedication is required (Mohammadi, 2019). The willingness and determination of employees and managers to learn is expressed as learning dedication (Kızrak and Yeloğlu, 2016; Mohammadi, 2019). Teachers' commitment to their students and their ability to make them feel is a key aspect in the formation of student involvement.

Assimilation is when people have full concentration and devote themselves to working completely. It is a mental state in which the employees focus only on their job and do not want to leave their job in a fast-flowing time (Özkalp and Meydan, 2015; Schaufeli et al., 2002). Assimilation is a natural result of vigor and dedication (Gündüz et al., 2013). Assimilation makes an important contribution to the success of students (El-Hilali et al., 2015). While assimilation contributes to student involvement, it can also have negative consequences (Çakır, 2016). In this environment, students may be thought to be overly focused on their lectures, resulting in difficulties in one-on-one relationships and a lack of time for rest and leisure.

School Climate:

The school climate is determined by individual and group relationships at school (Bursalıoğlu, 2012). School climate is the quality and constancy of interpersonal relationships at school that affects students' cognitive, spiritual, and social development (Haynes et al., 1997). All school-related actors, such as school administrators, instructors, students, and parents, are affected by school climate (Kurt and Çalık, 2010). The qualities and characteristics of school life are reflected in the school climate (Cohen et al., 2009). In fact, instead of school climate, terms like school atmosphere, school sentiments, school order, and school environment are commonly employed (Cohen et al., 2009; Freiberg, 2005; Homana et al., 2006; Zullig et al., 2010). Therefore, the school climate provides the relative continuity of school quality, which is experienced by school members, determines the values related to the behavior of the school members, and this affects their attitudes and behaviors within the school (Hoy and Miskel, 1996).

The value of positive relationships amongst social actors in schools cannot be overstated (Bear et al., 2011). It creates an environment at school that develops pleasant connections, contributes to, supports, and improves learning. Students feel safe in such an environment in social, emotional, and physical matters, and such a setting promotes social ideals (Durnalı and Filiz, 2019).

Teacher-student relationships, student-student relationships, school interest, and the fairness of school rules are the four characteristics of school climate (Durnalı and Filiz, 2019).

Teacher-student relationships are influenced by the quality of adult teachers' interactions with students at school, as well as both sides' perception levels. Students' care for teachers and non-teachers, students' love for their teachers, teachers' listening to students' issues, and teachers' recognition of students' accomplishments and successes are all examples of teacher-student relationships.

Student-student relationships are about the quality of interaction between students and how students perceive it. Student-student relations include situations such as students caring for each other, getting along well with each other, and behaving respectfully and friendly towards each other.

School interest reflects how students feel about the school in general. School interest includes situations such as students' desire to change their school or not, to love their school, to be proud of their school, and to compare the school to a prison by the students.

The fairness of school regulations assesses students' perceptions of the fairness and fairness of the rules established by the school. The fairness of the school rules covers situations such as whether the penal sanctions against this situation are fair when the rules set by the school are violated, and whether the teachers who correct the wrong behaviors act fairly.

Research model and hypotheses:

It can be said that students who have a high level of self-efficacy have a higher chance of succeeding. Because these students frequently establish high goals, they strive to learn in order to accomplish them, which improve their performance. Because students with high self-efficacy levels use the self-control mechanism effectively, so they monitor, regulate and control their own attitudes and behaviors. Furthermore, these students do not give up on the challenges they face and insist on overcoming them (Komarraju and Nadler, 2013). Students with high self-efficacy spend more time on cognitive and metacognitive strategies (Pajares, 1996). As a result, self-efficacy promotes academic competence and learning involvement, as well as academic achievement (Zimmerman, 1995).

In a study conducted by Britner and Pajares (2006) on high school students, it was determined that self-efficacy is one of the main factors determining academic success. It is stated that students with a high level of self-efficacy have a higher tendency to be kept in their classroom and school in terms of behavioral, cognitive and motivational aspects than other students (Linnenbrink and Pintrich, 2003). In a study conducted by Caraway et al. (2003), it was determined that students with high self-efficacy experience high levels of school involvement in behavioral, emotional and cognitive terms, and their grade point averages are higher than other students. Similar findings were obtained in another study conducted on high school students (Pintrich and De Groot, 1990). In a study conducted by Walker et al. (2006) on university students, it was determined that self-efficacy was effective on cognitive engagement. In this context, it is expected that self-efficacy will have a major impact on student involvement, as stated in the research hypothesis:

Hypothesis-1: Self-efficacy has a significant and positive effect on student involvement.

It has been determined that there is a positive and significant relationship between teacher candidates' self-efficacy beliefs and school climate (Gündoğan and Koçak, 2017). In a study examining subjective well-being at school in terms of school climate and self-efficacy, it was seen that self-efficacy and school climate positively affected subjective well-being (Asıcı and Ekiz, 2019). A pleasant school climate encourages students to achieve academic success while also allowing them to grow personally (Marshall, 2004). Learning, school performance, healthy personal and organizational growth, effective risk prevention, and the acquisition of excellent attributes for the younger generation are all important goals (Cohen et al., 2009). A positive school climate ensures that students are satisfied (Uzbaş and Yurdabakan, 2017) and academically successful (Karadağ et al., 2016; Loukas, 2007; Thapa et al., 2013). Furthermore, in such an environment, problems arising from attitudes and behaviors, as well as emotional origins, are decreased (Loukas, 2007; Thapa et al., 2013; Turner et al., 2014; Wang and Dishion, 2011). In this respect, it is expected that self-efficacy has a major impact on school climate, as stated in the research hypothesis:

Hypothesis-2: Self-efficacy has a significant and positive effect on school climate.

It can be said that teachers have an impact on students' self-efficacy beliefs. As a matter of fact, teachers are expected, in reality, to employ ways that promote students' self-efficacy beliefs, plan in a way that facilitates student learning and involvement, and act appropriately (Linnenbrink and Pintrich, 2003). Teacher support and the student's feeling of autonomy were found to boost behavioral involvement in research conducted by Skinner et al. (2008) on students at the basic education level. In a study conducted on primary school students, it was discovered that teacher assistance initially affected the students' perceived level of competency, and that this condition resulted in an increase in the students' involvement rate (Skinner and Belmont, 1993). In a study of students in basic education done by Leithwood and Jantzi (1999), it was discovered that the school principal's leadership resources had a significant impact on student involvement.

Furthermore, Blumenfeld and Meece (1988) discovered that teacher actions boosted students' cognitive engagement levels in a study conducted on students in basic education. In the meta-analytic study conducted by Roorda et al. (2011), it was discovered that the quality of the student-teacher interaction had an impact on student involvement. Tucker et al. (2002), discovered that teacher assistance had a favorable and significant influence on student involvement in a study of high school students. Walker et al. (2006) observed that the level of cognitive memory connected with academics was high in research he conducted on university students. In this respect, it is expected that school climate will have a major impact on student involvement, as stated in the research hypothesis:

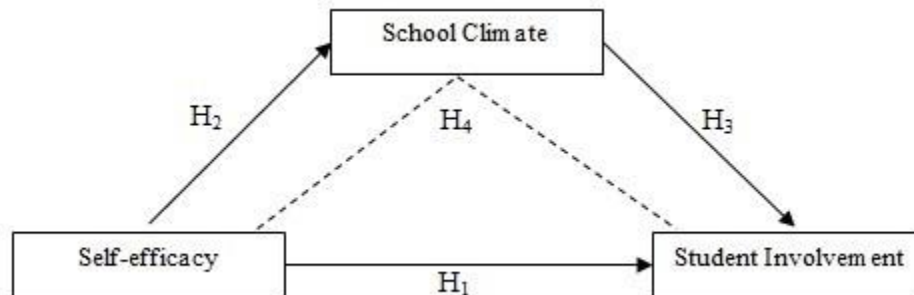
Hypothesis-3: School climate has a significant and positive effect on student involvement.

Although self-efficacy is an important factor for the success of the student, it can be said that the school environment in which the student learns is also important. The school climate has been found to have a mediating influence on students' passion and importance of their classes in every subject related to their school, and the research hypothesis is as follows:

Hypothesis-4: School climate has a mediating role in the effect of self-efficacy on student involvement.

The research model is shown in Figure 1.

Figure 1. Research Model



2. THE RESEARCH METHOD AND FINDINGS

In this study, which was conducted to determine the effect of self-efficacy on student involvement and the mediating role of school climate in this effect, firstly, information was given about the sample and the scales used to collect data, and then analyzes were made on the model created according to the data obtained from the samples. In this context, after confirmatory factor analysis of each variable, the correlation between the variables was examined and the mediation effect was tested with PROCESS 2.16.3, which works on the SPSS program based on regression analysis. Before starting the analysis, it was determined whether the data were normally distributed or not, and whether there were any missing data or outliers.

In this study, the survey technique was used to collect data. Data were collected through face-to-face interviews with the participants. The survey method consists of two parts and 36 questions. In the first part of the survey, there are 6 questions about the demographic information of the respondents. In the second part of the survey, there are 30 questions about self-efficacy, school climate and student involvement.

Sample of the research

Most of the participants in the study are Toros University's undergraduate students. Toros University has a total of 2824 undergraduate students. In calculating the sample size, a 5% margin of error was considered within the 95% confidence limit from the population, and the sample size was calculated as 338 (Sekaran, 1992). 370 students responded, 30 of whom were eliminated from the examination, and 340 of whom were judged to be appropriate for analysis.

Males account for 52.4% (n=178) of participants, 90.1 % (n=309) are single, and 98.2% (n=334) are Turkish citizens. All of the students are between the ages of 18 and 29 years old.

Scales of Research

Self-efficacy: The self-efficacy levels of the respondents were assessed using the "Generalized Self Entitlement Expectation Scale." This scale was first introduced by Jerusalem and Schwarzer (1992) as the "General Self-Efficacy Scale", and the scale was adapted into Turkish by Yeşilay (1996). This scale is one-dimensional and consists of 10 items. Some of these statements are "I always know how to behave in unexpected situations", "Whatever happens, I will get over it", "I think I will get over it in sudden events". The scale is 5-point Likert type (1 = I strongly disagree, 5 = I strongly agree). In the original study, the Cronbach's alpha coefficient was 0.82, while in the Turkish adaptation study, it was 0.83.

Student Involvement: In order to determine the involvement levels of the students, the adapted version of the "Utrecht Work Engagement Scale" developed by Schaufeli et al. (2006) was used. The Turkish version of this scale was developed by Çapri et al. (2014). The scale consists of three sub-dimensions: vigor, dedication, and assimilation. Each sub-dimension was measured with 3 questions. The sample statement for the vigor sub dimension is "I feel full of energy while studying as a student", the sample statement for the dedication sub dimension is "I am proud to study for my studies", and the sample statement for the assimilation sub-dimension is "I immerse myself in my studies while studying". The scale is 5-point Likert type (1 = I strongly disagree, 5 = I strongly agree). In the original study, the Cronbach's alpha coefficient of the scale was between 0.85 and 0.90 for all scales and sub-dimensions, and between 0.72 and 0.88 in the Turkish adaptation study.

School Climate: Bear et al. (2011) prepared this scale for primary, secondary and high school students, and Yang et al. (2013) developed the current version of the survey. The scale was adapted into Turkish by Durnalı and Filiz (2019). The scale has 17 items and is divided into four sub-dimensions: teacher-student relationships, student-student relationships, school interest, and the fairness of school rules. There are six statements in the "teacher-student relations" sub-dimension, four statements in the "student-student relations" sub-dimension, four statements in the "school interest" sub-dimension, and three statements in the "fairness of school rules" sub-dimension. The scale is 5-point Likert type (1 = I strongly disagree, 5 = I strongly agree). The scale's reliability coefficients were 0.88 for teacher-student relations, 0.81 for student-student relations, 0.83 for school interest, 0.70 for fairness of school rules, and 0.92 for the entire scale in the original study.

3. RESULTS

Confirmatory Factor Analysis (CFA) was used to see if the observed variables were actually latent variables (Hair et al., 2010). To see if the research model was appropriate for the data, six indexes were used. The goodness-of-fit values of the one-factor model for the self-efficacy scale were calculated as $\Delta\chi^2/sd= 2.56$, RMSEA= 0.06, CFI= 0.99, GFI= 0.96, NFI= 0.98, TLI= 0.98. The single-factor structure for the student involvement scale was found to have a higher goodness of fit than the other models, hence the research was continued with this model. Student involvement goodness-of-fit values were calculated as $\Delta\chi^2/sd= 2.39$, RMSEA= 0.06, CFI= 0.99, GFI= 0.97, NFI= 0.99, TLI= 0.99. Adaptation values of school climate were calculated as, $\Delta\chi^2/sd= 4.20$, RMSEA= 0.09, CFI= 0.95, GFI= 0.95, NFI= 0.94, TLI= 0.94.

It was determined that the factor loads of the self-efficacy scale ranged from 0.663 to 0.934 and were statistically significant, according to the CFA outputs performed using the Maximum Likelihood Estimation (MLE). The presence of convergent validity is indicated by the fact that these loads are greater than 0.5 (Hair et al., 2010; Abubakar et al., 2017; Bentler and Bonett, 1980; Bollen, 1989).

After the CFA analysis, convergent validity and discriminant validity were tested to examine the construct validity. The fact that Average Variance Extracted (AVE) values are more than the correlation between factors implies divergent and discriminant validity (above 0.50 indicates convergent validity), while the square root of AVE is greater than the correlation between factors suggests convergent validity (Anderson and Gerbing, 1988; Fornell and Larcker, 1981).

Cronbach’s alpha and composite Reliability (CR) values above 0.70 indicate that internal reliability is at a sufficient level (Fornell and Larcker, 1981). Descriptive statistics, correlation coefficients, reliability results and discriminant validity of the scale are shown in Table 1. The square root of the AVE values is shown in Table 1 by the values put in cross brackets. When Table 1 is examined, it can be said that convergent and divergent validity are provided, and when the correlation coefficients are analyzed, the connection between the variables is moderate and significant.

Table 1. Descriptive Statistics of the Data, Correlation Coefficients, Reliability Results and Discriminant

Variable	Validity								
	Avg.	Ss	1	2	3	4	5	6	
Self-efficacy	3.83	0.804	(0.892)						
Teacher-Student Relationship	2.97	0.550	0.586**	(0.849)					
Student-Student Relationship	2.88	0.626	0.532**	0.662**	(0.743)				
School Interest	2.91	0.655	0.573**	0.753**	0.624**	(0.760)			
Fairness of School Rules	3.05	0.572	0.569**	0.802**	0.623**	0.439**	(0.791)		
Student Involvement	3.67	0.896	0.734**	0.627**	0.547**	0.612**	0.563**	(0.906)	
Cronbach’s Alpha			0.975	0.951	0.964	0.878	0.856	0.976	
Composite Reliability (CR)			0.975	0.990	0.964	0.919	0.907	0.997	
Average Variance Extracted (AVE)			0.796	0.722	0.553	0.578	0.627	0.821	

*p <0.05 **p < 0.01

In order to determine the linear relations between variables, the effect of the independent variable on the dependent variable with another expression, regression analysis was performed. Regression model coefficients are shown in Table 2.

Table 2. Regression Model Coefficients

Hypothesis	Independent Variable	Dependent Variable	R	R ²	Δ R ²	F	SE	β	t	p
H ₁	Self-efficacy	Student Involvement	0.734	0.538	0.537	393.9	0.041	0.734	19.8	0.000
H ₂	Self-efficacy	School Climate	0.638	0.407	0.405	231.7	0.027	0.638	15.2	0.000
H ₃	School Climate	Student Involvement	0.666	0.444	0.442	269.8	0.069	0.666	16.4	0.000

According to the results of the regression analysis, it was determined that self-efficacy has a significant and positive effect on student involvement (β= 0.734, p<0.01), self-efficacy on school climate (β= 0.638, p<0.01), and school climate on student involvement (β= 0.666, p<0.01). H1, H2, H3 are accepted.

In order to determine the mediating role of school climate in the effect of self-efficacy on student involvement, the “Process Macro” software developed as an add-on to SPSS was used. In the Process Macro method, 5000 resampling options were preferred with the bootstrap technique. Regression results are given in Table 3.

Table 3. Regression Results

Effects	Standardize		
	Beta	SE	LLCI-ULLC
Self-efficacy→Student Involvement	0.5803***	0.0496	0.4827-0.6778
Self-efficacy →School Climate	0.4178***	0.0274	0.3638-0.4718
School Climate→Student Involvement	0.5692***	0.7557	0.4203-0.7182
Indirect Effect (Self-efficacy→School Climate→Student involvement)	0.2378***	0.0419	0.1642-0.3312

*** p <0.01

When Table 3 is examined; it is seen that self-efficacy ($\beta= 0.5803$, 95% CI= [0.04827, 0.6778], $t= 11.7000$, $p<0.01$) and school climate ($\beta= 0.5692$, 95%, CI= [0.4203, 0.7182], $t= 7.5185$, $p<0.01$) affect student involvement significantly and positively. In addition, it has been determined that the indirect effect of self-efficacy on student involvement is significant, that is, school climate mediates the relationship between self-efficacy and student involvement ($\beta= 0.2378$, SE= 0.0419, $p<0.01$, BCA CI= [0.1642, 0.3312]). The effect size of the mediation effect is 0.2133. As a result, in the tested model, the mediating effect has a high effect value (Preacher and Kelly, 2011). According to these findings, H4 was accepted.

4. CONCLUSION AND RECOMMENDATIONS

The impacts of self-efficacy on student involvement, as well as the mediating function of school atmosphere in this effect, were explored in this study. This research was conducted on undergraduate students studying at Toros University. Explanatory findings were obtained regarding the relationship between self-efficacy and student involvement and the mediating role of school climate in this relationship.

When the analysis results are analyzed, it is found that self-efficacy has a significant and positive effect on student involvement and school climate, that school climate has a significant and positive effect on student involvement, and that school climate plays a mediating role in the effect of self-efficacy on student involvement. These findings are consistent with similar studies (Caraway et al., 2003; El-Hilali et al., 2015; Kızrak and Yeloğlu, 2016; Pintrich and De Groot, 1990; Walker et al., 2006). A healthy school climate will not only increase student involvement, but also enable students to become individuals with high self-confidence and be more determined and more successful in the work they have done throughout their lives.

While self-efficacy is vital for academic performance, the environment in which students' study has an impact as well. Students' ability to adapt to the school environment in terms of mood, attitude, and conduct; a healthy school climate is critical for increasing student performance, correcting problematic behavior patterns, reducing school dropouts, and preventing disrespectful actions. Furthermore, it is critical that students have a positive impression of the school. A positive school climate is necessary for students to be successful academically and to complete their personal development. In order to ensure that university students have a strong self-efficacy belief and retain students, it is vital to prioritize the school climate and demonstrate sensitivity.

Future studies with a bigger sample size and at different colleges are thought to be necessary in order to generalize the relationships.

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