

Perceived teacher support and academic engagement among Vietnamese university students: A parallel mediation model

Apoyo percibido del docente y compromiso académico entre estudiantes universitarios vietnamitas: un modelo de mediación paralela

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ABSTRACT

Research on the direct and indirect relationships between perceived teacher support and academic engagement among university students is still lacking. This study aimed to examine whether enjoyment and boredom mediate the link between perceived teacher support and academic engagement among a sample of university students in Vietnam. A sample of 642 students from a university in Vietnam participated in a cross-sectional survey, which included standardized measures of perceived teacher support, academic enjoyment and boredom, and academic engagement. The results indicated that perceived teacher support was positively related to academic engagement ($B = 0.228, p < 0.001$) and enjoyment and boredom mediated the association between perceived teacher support and academic engagement ($B = 0.146, 95\% \text{ CI} = [0.090; 0.219]$ and $B = 0.044, 95\% \text{ CI} = [0.017; 0.074]$). These findings provide suggestions for administrators and teachers in developing effective teaching measures to enhance students' academic engagement.

Keywords: Academic boredom; academic engagement; enjoyment; perceived teacher support; Vietnam.

RESUMEN

Aún se carece de investigaciones sobre las relaciones directas e indirectas entre el apoyo percibido del docente y el compromiso académico entre estudiantes universitarios. Este estudio tuvo como objetivo examinar si el disfrute y el aburrimiento median la relación entre el apoyo percibido del docente y el compromiso académico en una muestra de estudiantes universitarios en Vietnam. Participaron 642 estudiantes de una universidad en Vietnam en una encuesta transversal que incluyó medidas estandarizadas de apoyo percibido del docente, disfrute y aburrimiento académicos, y compromiso académico. Los resultados indicaron que el apoyo percibido del docente se relacionó positivamente con el compromiso académico ($B = 0.228$, $p < 0.001$), y que el disfrute y el aburrimiento mediaron la asociación entre el apoyo percibido del docente y el compromiso académico ($B = 0.146$, IC del 95% = $[0.090; 0.219]$ y $B = 0.044$, IC del 95% = $[0.017; 0.074]$). Estos hallazgos ofrecen sugerencias para que administradores y docentes desarrollen medidas de enseñanza efectivas para mejorar el compromiso académico del estudiantado.

Palabras clave: Aburrimiento académico; compromiso académico; disfrute; apoyo percibido del docente; Vietnam.

1. INTRODUCTION

Perceived teacher support (PTS) and academic engagement (AEG) play an important role in students' academic success. As an important element of social support in the classroom, PTS includes the caring, dedicated, understanding, trustworthy, and friendly attitude that teachers show to students (Ryan & Patrick, 2001; Zhao & Yang, 2022). Supportive teachers not only focus on building personal relationships with students but also providing help, emotional support, and advice when students encounter difficulties (X. Liu *et al.*, 2021; Ryan & Patrick, 2001; Zhao & Yang, 2022).

AEG is a multidimensional concept that includes cognitive, emotional, and behavioral aspects (Fredricks *et al.*, 2004). Behavioral engagement reflects students' active participation in learning activities demonstrating diligence and perseverance, as well as participation in extracurricular activities at school (Fredricks *et al.*, 2004; Jelas *et al.*, 2016).

Several studies across different contexts (Jelas *et al.*, 2016; Sadoughi & Hejazi, 2021; Zhao & Yang, 2022) have found a positive association between PTS and AEG, often mediated by emotions such as enjoyment and boredom. In a sample of Chinese college students, Xu *et al.* (2023) showed that basic psychological need satisfaction mediated the relationship between PTS and AEG. According to previous studies, students' AEG depends not only on their personal characteristics but also on the support they receive from family,

friends, and teachers (Jelas *et al.*, 2016; Roeser *et al.*, 2000). Students' AEG can be enhanced if teachers show care and pay attention to their emotions (Pianta *et al.*, 2012). Timely support from teachers provides students with a sense of security and motivation, thereby encouraging them to put more effort into their studies, actively participate in activities, and achieve higher academic results (Ma *et al.*, 2021; Wentzel *et al.*, 2017; Zhao & Yang, 2022).

In Vietnam, some studies have reported the status of students' academic emotions (Huynh & Mai, 2020; Le & Ho, 2024), the relationship between AEG and other factors such as academic motivation (Pham *et al.*, 2024), academic satisfaction (Pham *et al.*, 2024), and learning effectiveness (Nguyen & Nguyen, 2023). However, there are still many gaps in the research on the relationship between PTS and university students' AEG in Vietnam. This study aims to fill the gap in the literature by investigating the parallel mediating roles of academic enjoyment (AEJ) and academic boredom (ABD) in the link between PTS and AEG in Vietnamese university students, which has not been explored in previous studies.

1.1 Academic emotions as mediators

Emotions are ever-present in the learning environment and have a powerful impact on students' AEG and academic achievement (Reeve, 2012). AEJ and ABD are two intense, frequent, and common emotions among university students (Jie *et al.*, 2022; Putwain *et al.*, 2018).

1.2 PTS and academic emotions

AEJ refers to a positive state in which challenges and the skills needed to deal with them are congruent (cites by Zhao & Yang, 2022). According to Putwain *et al.* (2018), AEJ is an emotion that triggers pleasantness, which promotes learning. This is an important factor that promotes effective learning and enhances students' ability to concentrate and actively participate in the lesson. Studies have shown that PTS has a positive relationship with students' AEJ (An *et al.*, 2023; Sadoughi & Hejazi, 2021; Wu & Kang, 2023b; Zhao & Yang, 2022). Students feel more comfortable, confident and interested in the learning process when there is enthusiasm (Dewaele & Li, 2021), friendliness (Dewaele *et al.*, 2019) and especially direct support from teachers (Sadoughi & Hejazi, 2021). This support from teachers contributes to a positive learning environment (An *et al.*, 2023; Wu & Kang, 2023b). Students can reduce their feelings of stress and helplessness when they feel cared for and supported by teachers, which facilitates the development of positive emotions such as AEJ. It can be said that teachers play an important role in promoting students to become more engaged with the lesson and to perceive the value of knowledge. This contributes to increased AEG and academic motivation (Pawlak *et al.*, 2021; Strati *et al.*, 2017; Suldo *et al.*, 2009).

ABD refers to a negative state that hinders the learning process, causing students to lose interest and become passive in acquiring knowledge (Jie *et al.*, 2022; Sharp *et al.*, 2020). ABD can come from many causes, including uninteresting teaching, confusing content, or lack of interaction from the teacher. Previous research has shown that low PTS is associated with high levels of ABD in students (Ekatushabe *et al.*, 2021; Tvedt *et al.*, 2021; B. Xu & Jing, 2024; Zhao & Yang, 2022). It has been argued that when teachers do not provide enough support, students are more likely to lose interest, feel left out, and have difficulty keeping up with lessons (Ekatushabe *et al.*, 2021; Sadoughi & Hejazi, 2021). Teachers' enthusiasm and friendliness can help reduce ABD (Borgonovi *et al.*, 2023; C. Li, 2022). Teachers' attitudes are related to students' feelings of control and purpose in the learning environment (Tam *et al.*, 2020). In cases where students lack support from teachers, they may feel lost, unmotivated, and bored. This state can cause students to lose focus (M. Liu & Hong, 2021), become passive in class, and reduce their ability to absorb knowledge (Pawlak *et al.*, 2021). On the contrary, timely help from teachers can reduce students' stress and negative emotions, helping students maintain focus (M. Liu & Hong, 2021) and academic motivation (Pawlak *et al.*, 2021).

Academic emotions and AEG

Previous research has reported that higher AEJ is associated with higher levels of AEG (Kang & Wu, 2022; Sadoughi & Hejazi, 2021; X. Zhang *et al.*, 2024; Zhao & Yang, 2022). These findings were found in samples of adolescents in China (Kang & Wu, 2022; X. Zhang *et al.*, 2024; Zhao & Yang, 2022) and university students in Iran (Sadoughi & Hejazi, 2021). These results suggest that AEJ plays an important role in promoting AEG among students. According to the Control-Value Theory of Achievement Emotions, students with high AEJ may be more likely to mobilize their individual cognitive resources, thereby increasing their level of AEG (Pekrun & Stephens, 2010). Students who have a high level of AEJ tend to be more active, positive, and willing to participate in learning activities, thereby improving their academic performance. This shows that AEJ not only promotes participation but also provides students with energy during the learning process (L. J. Zhang *et al.*, 2024).

On the other hand, ABD has been found to negatively impact students' AEG (Dewaele & Li, 2021; Sharp *et al.*, 2020; Weybright *et al.*, 2015; Zhao & Yang, 2022), with high levels of ABD linked to passivity and reduced academic participation (Goetz & Hall, 2014). Studies suggest that ABD is associated with decreased learning interest, concentration, and motivation, leading to lower levels of AEG (C. Li & Wei, 2023; Pekrun & Stephens, 2010; Schwartze *et al.*, 2020). This negative relationship is further mediated by factors like burnout (Bekker *et al.*, 2023).

1.3. Research purpose and hypothesis

This study aimed to examine whether AEJ and ABD mediate the link between PTS and AEG among a sample of university students in Vietnam. Based on previous studies, this study proposes the following three hypotheses:

H1: PTS would be positively correlated with AEG among students.

H2: AEJ would mediate the link between PTS and AEG among students.

H3: ABD would mediate the link between PTS and AEG among students.

2. METHODS

2.1. Sample and procedure

The study was approved by the University of Education, Hue University. A survey was conducted from September to October 2023, using a convenience sampling method and a cross-sectional research design. The participants were students at an education university in Vietnam. The participant recruitment process was as follows: We contacted the lecturers in charge of the class to ask for permission to engage with the students. During breaks in the classes, the research team met with the students and invited them to participate in the survey. Before starting, the purpose and requirements of the survey were thoroughly explained to the students. They were also assured that their personal information would be kept strictly confidential and would only be used for research purposes. Participation was completely voluntary, and students had the right to refuse if they did not want to participate. Students who agreed to participate signed a consent form and scanned the QR code to complete the online questionnaire. The survey took about 10 minutes to complete. Upon completion, students received a small gift from the research team as a thank you for their contribution. A total of 642 students completed a valid questionnaire, including 226 first-year students, 360 second-year students, and 56 third-year students. Of these, 139 were male and 503 were female, with ages ranging from 17 to 27 (mean age of 18.93, standard deviation 1.114).

2.2. Instruments

PTS: We used two items from the Learning Support scale to measure PTS. The Learning Support scale was developed by Jelas *et al.* (2016) and consists of 11 items, of which six items measure support from parents, three items from friends, and two items from teachers at school. The items that assess PTS are as follows: “At my school, there is a teacher who listens to me when I have something to say” and “at my school, there is a teacher who cares about me”. Each item is rated on a 5-point Likert scale with responses ranging from 1 (never) to 5 (very often). The sum of the two items ranges from 2 to 10, with higher scores indicating

higher levels of PTS. These two items were selected because they are the only items in the Learning Support scale by Jelas *et al.* (2016) that specifically measure perceived teacher support (PTS), distinct from support by parents and peers. Despite their brevity, these items capture the core elements of emotional and communicative support from teachers—key aspects of PTS as identified in previous literature (e.g., Chen *et al.*, 2024; Jelas *et al.*, 2016). The use of brief measures for specific constructs is not uncommon in educational research, especially when supported by strong psychometric evidence. Additionally, in this study, the two-item PTS scale demonstrated acceptable reliability and validity (see Table 1).

AEJ and ABD: This study used 16 items from the short version of the Achievement Emotions Questionnaire (AEQ-S), revised by Bieleke *et al.* (2021) from the original scale (The Achievement Emotions Questionnaire, AEQ) by Pekrun *et al.* (2002). These items were designed to measure two main emotions, AEJ (both class-related and learning-related AEJ) and ABD (both class-related and learning-related ABD). Sample items include: “I enjoy being in class” (class-related AEJ), “The lecture bores me” (class-related ABD), “I enjoy dealing with the course material” (learning-related AEJ), and “Studying for my courses bores me” (learning-related ABD). Participants were asked to rate their level of agreement with each item using a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Total scores for AEJ or ABD range from 8 to 40, with higher scores indicating higher levels of AEJ or ABD. In previous studies in Vietnam, the scale had good reliability and validity (Le & Ho, 2024). In this study, the psychometric indices of the scale demonstrated both reliability and validity (see Table 1).

AEG: We used the behavior engagement subscale from the Students’ AEG scale to measure this dimension. The Students’ AEG scale, developed by Jelas *et al.* (2016), consists of 21 items: six measuring affective engagement, seven measuring cognitive engagement, and eight measuring behaviour engagement. Sample items include “I try hard to do well in school” and “I pay attention in class”. Each item is rated on a 5-point Likert scale that provides response options from 1 (strongly disagree) to 5 (strongly agree). Total scores for behaviour engagement range from 8 to 40, with higher scores reflecting higher levels of engagement. In this study, the psychometric properties of the Behaviour Engagement subscale confirmed reliability and validity (see Table 1).

Table 1.
Psychometric properties of the research instrument

Scale/ items	Factor loadings	α	CR	AVE
<i>AEG</i>				
1.I try hard to do well in school	0.654	0.874	0.901	0.532
2.When I'm in class, I practice in class activities	0.659			
3.I pay attention in class	0.619			
4.If I have trouble understanding a problem, I go over it again until I understand it	0.774			
5.When I run into a difficult homework problem, I keep working at it until I think I've solved it	0.671			
6.I volunteer to help with school activities such as sport day and parent day	0.596			
7.I make up my own examples to help me understand the important concepts I learn from school	0.704			
8. When studying, I try to combine different pieces of information from course material in new ways	0.741			
<i>AEJ</i>				
1. I enjoy being in class.	0.764	0.868	0.896	0.520
2. I am looking forward to learning a lot in this class.	0.717			
3. I am motivated to go to this class because it's exciting.	0.760			
4. I enjoy participating so much that I get energized.	0.721			
5. I enjoy the challenge of learning the material.	0.715			
6. I enjoy dealing with the course material.	0.735			
7. I am so happy about the progress I made that I am motivated to continue studying.	0.709			
8. When my studies are going well, it gives me a rush.	0.758			
<i>ABD</i>				
1. I get bored.	0.556	0.899	0.919	0.586
2. The lecture bores me.	0.732			
3. I think about what else I might be doing rather than sitting in this boring class.	0.685			
4. I get restless because I can't wait for the class to end	0.620			
5. Studying for my courses bores me.	0.595			
6. The material is so boring that I find myself daydreaming.	0.620			
7. I would rather put off this boring work till tomorrow.	0.724			
8. While studying I seem to drift off because it's so boring	0.723			

Scale/ items	Factor loadings	α	CR	AVE
<i>PTS</i>				
1. At my school, there is a teacher who cares about me	0.872	0.854	0.932	0.872
2. At my school, there is a teacher who listens to me when I have something to say	0.862			

Note: AEG: academic engagement, PTS: perceived teacher support, AEJ: academic enjoyment, ABD: academic boredom.

Table 1 demonstrated that the scales used meet acceptable thresholds for both reliability and validity (PTS: $\alpha = 0.854$, CR = 0.932, AVE = 0.872; AEJ: $\alpha = 0.868$, CR = 0.896, AVE = 0.520; ABD: $\alpha = 0.899$, CR = 0.919, AVE = 0.586; AEG: $\alpha = 0.874$, CR = 0.901, AVE = 0.532)

2.3. Data analysis

The study used SPSS 20 and SMART PLS 3.9 software for statistical processing. The processing procedure was carried out sequentially in the following steps: (1) Data were entered into SPSS software to perform descriptive statistics and correlation analysis. (2) SPSS data files were transferred to SMART PLS to analyze the reliability and validity of the scales and the structural equation model. In the mediation model, PTS was treated as the independent variable, AEG as the dependent variable, and AEJ and ABD as the mediating variables.

3. RESULTS

3.1. Preliminary analysis

In Table 2, the data indicated that PTS was positively correlated with both AEJ ($r = 0.333$, $p < 0.001$) and AEG ($r = 0.418$, $p < 0.001$), but negatively correlated with ABD ($r = -0.270$, $p < 0.001$). AEJ was positively correlated with AEG ($r = 0.570$, $p < 0.001$), but negatively correlated with ABD ($r = -0.467$, $p < 0.001$). ABD was negatively correlated with AEG ($r = -0.421$, $p < 0.001$).

Table 2.
Descriptive statistics and correlation analysis

Variables	M \pm SD	PTS	AEJ	ABD
PTS	6.076 \pm 2.151	1		
AEJ	30.042 \pm 4.973	0.333***	1	
ABD	17.167 \pm 5.428	-0.270***	-0.467***	1
AEG	30.556 \pm 4.573	0.418***	0.570***	-0.421***

Note: ***: $p < 0.001$, AEG: academic engagement, PTS: perceived teacher support, AEJ: academic enjoyment, ABD: academic boredom.

3.2. Mediation analysis

In Figure 1, the data indicated the parallel mediating roles of AEJ and ABD in the association between PTS and AEG. Accordingly, PTS negatively predicted ABD ($B = -0.274, p < 0.001$) and ABD negatively predicted AEG ($B = -0.161, p < 0.01$). PTS positively predicted AEJ ($B = 0.343, p < 0.001$) and AEJ positively predicted AEG ($B = 0.425, p < 0.01$). In addition, PTS positively predicted AEG ($B = 0.228, p < 0.001$).

In Table 3, the data showed that the indirect effects from PTS to AEG through AEJ ($B = 0.146, 95\% \text{ CI} = [0.090; 0.219]$) and ABD ($B = 0.044, 95\% \text{ CI} = [0.017; 0.074]$) were statistically significant. The total indirect effect from PTS to AEG was statistically significant ($B = 0.190, 95\% \text{ CI} = [0.140; 0.254]$).

Table 3.
Indirect effects of PTS on AEG

Effects	B	se	95% CI
PTS → AEJ → AEG	0.146***	0.033	[0.090; 0.219]
PTS → ABD → AEG	0.044**	0.015	[0.017; 0.074]
Total indirect effect	0.190***	0.029	[0.140; 0.254]
Total effect	0.419***	0.036	[0.354; 0.488]

Note: **, $p < 0.01$, ***, $p < 0.001$, AEG: academic engagement, PTS: perceived teacher support, AEJ: academic enjoyment, ABD: academic boredom.

4. DISCUSSION

Previous research reported that the link between PTS and AEG is mediated by ABD and AEJ in Chinese adolescents and university students in the context of learning English and mathematics. In a Vietnamese university student sample, this study explored the mediating role of ABD and AEJ in the path from PTS to AEG in a general academic context. The salient findings of the study are discussed in detail as follows:

In this study, PTS was found to be positively associated with AEG. This means that as the level of PTS increases, so does students' AEG. This result is in line with hypothesis H1 and previous findings (Jelas *et al.*, 2016; Sadoughi & Hejazi, 2021; X. Xu *et al.*, 2023; Zhao & Yang, 2022). Based on previous studies, the link between PTS and AEG can be explained as follows: PTS is associated with students' feelings of safety and care (Wentzel *et al.*, 2017), which in turn leads to students' confidence in participating in learning activities. Additionally, students with high levels of PTS often perceive that their efforts are recognized and appreciated by their teachers, increasing their academic motivation and thus tending to increase their AEG (Wentzel *et al.*, 2017). Furthermore, PTS can help students increase

their attention and increase their ability to understand lesson content, thereby increasing their ability to participate in learning and complete learning tasks well.

AEJ was found to mediate the link between PTS and AEG. This implied that PTS could increase students' AEJ and thereby increase their AEG. This result is in line with hypothesis H2 and previous findings on Chinese adolescents (Zhao & Yang, 2022) and Iranian university students (Sadoughi & Hejazi, 2021); however, these findings were found in the context of foreign language learning (Sadoughi & Hejazi, 2021; Zhao & Yang, 2022). Previously, it was also revealed that there is a positive relationship between PTS and AEJ (An *et al.*, 2023; Sadoughi & Hejazi, 2021; Wu & Kang, 2023b; Zhao & Yang, 2022) as well as between AEJ and AEG (Kang & Wu, 2022; Sadoughi & Hejazi, 2021; X. Zhang *et al.*, 2024; Zhao & Yang, 2022). According to previous studies, students who perceive a high level of support from their teachers are more likely to feel confident and interested in their classes and subjects (Dewaele & Li, 2021; Dewaele *et al.*, 2019; Sadoughi & Hejazi, 2021). PTS contributes to increased learning motivation (Pawlak *et al.*, 2021; Strati *et al.*, 2017; Suldo *et al.*, 2009) and creates a positive learning environment, thereby increasing students' AEJ (An *et al.*, 2023; Wu & Kang, 2023b). In addition, there is evidence that students who enjoy their classes and subjects tend to increase their attention, increase their motivation, and are willing to spend more time on learning (M. Liu & Hong, 2021). AEJ can activate positivity, increase students' learning energy, and help students mobilize their personal cognitive resources to participate in academic activities (Pekrun & Stephens, 2010; L. J. Zhang *et al.*, 2024).

ABD was found to mediate the link between PTS and AEG. This implied that PTS could decrease students' ABD and thereby increase their AEG. This result is in line with hypothesis H3 and previous findings in the context of foreign language learning (Zhao & Yang, 2022). In the literature, the link between PTS and ABD (Ekatushabe *et al.*, 2021; Tvedt *et al.*, 2021; B. Xu & Jing, 2024; Zhao & Yang, 2022) as well as between ABD and AEG (Bekker *et al.*, 2023; L. Li *et al.*, 2022; Wu & Kang, 2023a; Zhao & Yang, 2022) among students has also been established in the context of learning English and mathematics. Based on previous findings, this indirect relationship is explained as follows: PTS is related to students' sense of control and purpose in the learning environment (Tam *et al.*, 2020). Students who lack PTS tend to have low learning interest, high levels of learning difficulties (Ekatushabe *et al.*, 2021; Sadoughi & Hejazi, 2021), and lack of motivation to learn (Pawlak *et al.*, 2021; Strati *et al.*, 2017; Suldo *et al.*, 2009). In addition, students with low levels of support from teachers tend to feel lost and have a reduced ability to absorb lectures (Pawlak *et al.*, 2021; Zhao & Yang, 2022). Therefore, high PTS can reduce ABD (Ekatushabe *et al.*, 2021; Tvedt *et al.*, 2021; B. Xu & Jing, 2024; Zhao & Yang, 2022). Subsequently, students with high ABD become passive in learning (Goetz & Hall, 2014), lose motivation to learn (C. Li & Wei, 2023; Pekrun & Stephens, 2010; Schwartze *et al.*,

2020), and lose concentration (Adesola *et al.*, 2019). Furthermore, high ABD is associated with low learning effort and poor self-regulation (Schwartz *et al.*, 2020). These negative manifestations contribute significantly to reduced students' AEG (Goetz & Hall, 2014; Zhao & Yang, 2022). Therefore, high ABD can reduce AEG (Bekker *et al.*, 2023; C. Li, 2022; L. Li *et al.*, 2022; Wu & Kang, 2023a; Zhao & Yang, 2022).

This study also found that the direct effect of PTS on students' AEG was greater than the indirect effect of PTS on students' AEG through AEJ and ABD. This suggests that enhancing PTS is more crucial than focusing on increasing AEJ or reducing ABD. This finding is not similar to the finding of Zhao and Yang (2022) on a sample of Chinese students in an English learning context. Zhao and Yang (2022) reported that the direct effect of PTS on students' AEG was smaller than the indirect effect of PTS on students' AEG through AEJ and ABD. Furthermore, this study also found that the mediating effect of AEJ was larger than the mediating effect of ABD in the link between PTS and students' AEG. This implies that AEJ plays a more important role in explaining the link between PTS and students' AEG. This finding is similar to the finding of Zhao and Yang (2022) on a sample of Chinese students in the context of English learning. According to previous studies, teachers find it more difficult to recognize when their students are bored compared to when they are enjoying their studies, as students often hide their emotions to avoid negative evaluations and criticism from teachers (Kruk & Zawodniak, 2018; Zhao & Yang, 2022). Therefore, high PTS can significantly increase AEJ, though it merely serves as a protective factor against ABD (X. Liu *et al.*, 2021; Zhao & Yang, 2022).

While previous research has examined the associations between PTS, academic emotions, and academic engagement—mostly among secondary school students in countries such as China, Iran, and Malaysia—this study contributes to the literature by extending evidence on the mediating roles of academic emotions in the PTS-AEG link, particularly within the underexplored context of Vietnamese university students. Therefore, the findings of this study have important theoretical and practical implications. Theoretically, this study provides further empirical evidence on the direct and indirect links between PTS and university students' AEG in a general academic context. The results showed that, regardless of different cultures or in any learning context, from general academic environments to specific subjects, and regardless of whether the subjects are high school or university students, PTS still plays an important role in shaping students' learning attitudes and behaviors, as well as creating a positive learning environment. Furthermore, this study further clarifies the role of ABD and AEJ in the link between PTS and AEG in the general academic context. In practical terms, the findings of this study provide suggestions for administrators and teachers in developing effective teaching measures to enhance students' AEG. Measures that focus on enhancing PTS and increasing AEJ and reducing ABD can increase students' AEG. This not only enhances students' learning motivation and AEG but

also improves academic performance and contributes to improving the quality of education in universities. However, the findings of this study indicate that measures that enhance PTS and AEJ should be prioritized because they can be faster and more effective in improving the level of students' AEG. These measures may include guiding and supporting students to develop self-learning skills, building a positive learning environment, encouraging student participation; adjusting teaching methods based on the individual needs of each student, relating lesson content to practice, encouraging student interaction, applying information technology in teaching, providing constructive feedback and encouraging student progress.

The results should be interpreted within the Vietnamese cultural and educational setting. In Vietnam, where Confucian values shape education, teachers are viewed with high respect and moral authority (Nguyen, 2021). This makes PTS more emotionally and motivationally significant. Teacher encouragement may fulfill cultural expectations of harmony and validation, thus enhancing AEJ and reducing ABD. Additionally, under strong academic and familial pressure, Vietnamese students may rely more on teacher support as a buffer against stress and disengagement. This may explain the strong direct effect of PTS on AEG. Hence, fostering supportive teacher-student relationships could be especially impactful in the Vietnamese context.

There are still some limitations in this study that future research should consider. First, the use of a cross-sectional design makes it difficult to infer the direction of the relationships between PTS, academic emotions, and students' AEG. Second, the use of a convenience sampling method and the sample collected at a single university make the sample not representative of the population, making it difficult to generalize the results to other sample groups. Third, the proportion of female students in this sample is much higher than the proportion of male students, which often leads to biased research results, making it difficult to reason and generalize. A long-term study using random sampling methods and stratified sampling techniques is needed to improve the accuracy and reliability of the research results. Finally, another limitation of this study is the use of only two items to measure PTS. Although these items are derived from a validated scale (Jelas *et al.*, 2016) and demonstrated satisfactory psychometric properties in this study, they may not fully capture the multidimensional nature of PTS. Future studies should consider employing more comprehensive and theoretically grounded instruments to better reflect the complexity of teacher support.

Declaration of Conflicting Interests

The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Informed Consent

Informed consent was obtained from all individual participants, parents, and teachers involved in this study.

Ethical Approval

This study was conducted with the permission of the University of Education, Hue University. Although the university does not have a formal institutional bioethics committee, the study adhered to the ethical standards of the institution and complied with national ethical regulations concerning research involving human participants.

Data Availability Statement

Research data are not shared.

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