



## EXAMINING THE JOINT PREDICTIVE EFFECTS OF PERCEIVED TEACHER ENJOYMENT, ANXIETY, BOREDOM ON STUDENTS' ATTITUDES: A MULTI-DIMENSIONAL APPROACH

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### Abstract:

The current study sought to investigate the link between student-perceived teacher enjoyment (PTE), anxiety (PTA), and boredom (PTB) and students' attitudes towards the teacher (ATT). Furthermore, how the three teachers' emotions jointly predict ATT was also examined. A sample of 760 Moroccan university students aged 17–50 years was involved in the study. Statistical analyses showed that PTE and PTB were found to be the significant predictors of students ATT. They contributed uniquely and significantly to the overall model, which explained 21% ( $R^2 = .21$ ) of the variance in the outcome variable (ATT). As such, PTA, unexpectedly, offered nothing uniquely in terms of predicting students' ATT. Students were found to show a strong preference for teachers who feel a sense of enjoyment over those who experience anxiety and boredom. Theoretical and practical implications for future research and educational practice are discussed.

**Keywords:** perceived teacher enjoyment, perceived teacher anxiety, perceived teacher boredom, attitudes, emotions

### 1. Introduction

It is until the turn of the third millennium that researchers have become increasingly interested in a nuanced understanding of the role of positive and negative emotions in educational settings (Dewaele & Li, 2020). Yet, it was not until MacIntyre and Gregersen's breakthrough work in 2012 that the positive psychology (PP) movement started while it really broke through to the masses in foreign language settings since 2016 (Dewaele et al., 2019). Furthermore, given that teaching is emotional (Schutz, 2014; Lee et al., 2016), it

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is necessary for teachers to deal successfully with the situations and events raised in the classroom to approach students' emotions effectively.

A great flurry of research on teachers' emotions was dominated by qualitative approaches (Frenzel, 2014) neglecting the investigation of some crucial topics, including how teachers' emotions are perceived and their impact on students' attitudes. Students are rarely asked how they see or perceive their teachers' emotions in a formal manner (Moskowitz & Dewaele, 2020). To this end, the present study comes to explore students' ATT based on PTE, PTA, and PTB using an adapted version from the short version of the Achievement Emotions Questionnaire (AEQ-S) (Bieleke et al., 2021), and an adapted version of the sub-category of ATT from Attitude/Motivation Test Battery (AMTB), developed and validated by Gardner (1985).

Despite the great importance of teachers' emotions impact on learners' attitudes in higher education contexts, studies about the issue are hardly available. Thus, the present research makes a noteworthy contribution to the paucity of empirical studies on the role of teachers' emotions. According to our present state of knowledge, this is the first study to explore PTE, PTA, and PTB impact on EFL students' ATT in more detail, based on the CVT and crossover frameworks. Put differently, the majority of previous studies on this front were conducted in nonacademic settings (Becker et al., 2014) and used solely one single emotion variable in the analytic model (see Dewaele et al., 2022; Pekrun et al., 2014; Pinxten et al., 2014; Moskowitz & Dewaele, 2021). In the current study, the three perceived emotions were included in one single regression model simultaneously (see Figure 9).

## 2. Review of Literature

### 2.1 Flourishing of Positive Psychology in Education Settings

It is worth pointing out that an important trend in the study of the role of emotions in learning and teaching started with the flourishing of PP which revolutionized the field by shifting the focus into the crucial role of discrete positive emotions (e.g. enjoyment, joy and hope). Fredrickson's groundbreaking work (1998, 2001, 2003) reflected in her theory of 'broaden-and-build of positive emotions' led the way. Such theory advocates the idea that positive emotions played a crucial role in enhancing beneficial and broadening behaviors such as curiosity, exploration and creativity. As a result, Fredrickson's contribution and that of other researchers in the field, positive emotions have attracted increasing interest as positive psychology has gradually infiltrated education research. The last decade has witnessed an exponential increase in the number of studies documented in the literature on emotion in second and foreign language education, which has been described as a 'positive renaissance' (Dewaele & Li, 2020).

Needless to say that the need for PP has been brought into the center of the stage because of the changes at different levels. During the COVID-19 pandemic, enhancing students' well-being and optimizing their lives has become a necessity as students experienced a wide range of negative emotions. Importantly, PP has been spreading

rapidly in foreign language learning (FLL) educational institutions. MacIntyre & Gregersen's (2012) article noted a great influence of PP on SLA and caused a 'positive renaissance' (Dewaele & Li 2020) as researchers tend to investigate the traditionally neglected emotions. It is worth noting that the most important findings in the field of education were interested in foibles. Nevertheless, an understanding of positive aspects can lessen the negative side caused by detrimental effects on students (Gable & Haidt, 2005). PP focuses on increasing the well-being and quality of life of all stakeholders. This is through improving teachers' lives and offering them guidance to regulate their emotions. Hence, it is of great importance to base the educational curricula on positive emotions to create an ideal climate where students are emotionally comfortable (e.g. enthusiastic and excited) (Schutz, 2014).

## 2.2 Teachers' Emotional World and Well-being

A wealth of studies relating to different facets of teachers' emotions has appeared and is increasing since the environment where teachers work is hostile to their satisfaction and well-being. For a sense of effectiveness, teachers' well-being is considered a crucial element and a necessary condition (Day and Qing, 2009). The emotional aspect of teachers' lives has a great influence on themselves, students, and their interaction with their students. Indeed, this and other factors help shape the professional identity of teachers. Importantly, teachers' well-being is a strong predictor of positive and/or negative outcomes and a sense of effectiveness. That is, prioritizing teachers' personal well-being contributes to boosting the emotional well-being of students (Day and Qing, 2009) as previous research has found statistically significant links between teacher well-being and student achievement. In contrast, it is likely that teachers' ability to perceive, manage, and regulate background, primary, and social emotions is affected in situations where their well-being is at risk or not supported (Day et al., 2007). Moreover, the importance of well-being lies in the sense that it is a social and psychological construct. It is "... a dynamic state, in which the individual is able to develop their potential, work productively and creatively, build strong and positive relationships with others, and contribute to their community". (Government Office for Science, 2008, p. 10).

It is important to argue that teachers' experience of emotions in achievement contexts is a result of their subjective evaluation of failure and success (Frenzel et al., 2009). Emotions' appraisals play a major role in determining teachers' behaviours. Assumptions about the relationship between teachers' emotional experiences and their achievement of behavioral goals for the classroom are supported by empirical evidence. Given the expressive effects of emotions, particularly because of their implications on the enthusiasm shown while teaching, teacher emotions may also have an impact on the quality of teaching (Frenzel et al., 2009). Enthusiasm then is a crucial aspect of effective teaching approaches that lead to a high level of variation and creativity in the classroom during teacher-student interactions.

It is now commonly acknowledged and appreciated how important it is for teachers to be able to regulate their emotional life in various academic contexts. In an

important and must-read book, Johnson et al. (2004) stressed that stories about teaching being an easy profession are fictional, as everyone who is familiar with schools knows. Even in the favourite circumstances, good teaching is a difficult and grueling job. Given this, no one can deny that academic settings need to develop into places where teachers may find connections and participate in intellectual work in order to maintain their professional standing. Furthermore, a sense of well-being is a prerequisite for being able to access, use, and control the social-emotional settings that are essentially dynamic and in which teachers and students learn.

### **2.3 Teacher Enjoyment, Anxiety, and Boredom**

There has been a mounting interest in the study of achievement emotions in recent years since Pekrun (2006) developed one of the best-studied theoretical frameworks of achievement emotions, control-value theory (CVT). It has been the first theory whose exclusive focus is academic emotions and achievement settings through a three-dimensional taxonomy. The CVT revealed new insights and indicated that emotions had a significant impact on students' learning, performance, engagement, and personality development. Therefore, a wide range of emotions (e.g., Enjoyment, anxiety, and boredom) has sparked academic interest in a variety of pedagogical, linguistic, cultural, and social contexts. Thus, there has been a discernable increase in the number of important researchers exploring emotions in educational environments, since the learning environment has a significant impact on students' academic achievement (Amiri & Elkarfa, 2021).

Some researchers (e.g. Kruk et al., 2022a; Fahlman et al., 2009; Derakhshan et al., 2022; Pekrun et al., 2010; Eastwood et al., 2012; Elahi Shirvan et al., 2020; Dewaele & MacIntyre, 2014; Dewaele & MacIntyre, 2016; Boudreau et al., 2018; Li & Wei, 2022; Piniel & Albert, 2018; Putwain et al., 2018; Pavelescu, 2018) investigated thoroughly three academic emotions (enjoyment, anxiety and boredom). Their prominent work has caused an 'emotional turn' and sparked the interest of researchers in the field, and has encouraged wider discussion about the role of other academic emotions using different frameworks (Dewaele & Li, 2020). Yet, relatively few studies have examined the joint predictive effects of teachers' negative and/or positive emotions in shaping their ATT. Teachers as human beings with their own intentions, goals, and emotional experiences have received less attention than students have (Frenzel, 2014). Hence, our work fits squarely within this trend of research. It is therefore clear that research on teachers' emotions in higher education was and is still currently needed. Interestingly, in the present study, the focus was solely on three emotions: Enjoyment, anxiety and boredom. These are three of the frequently and intensely experienced academic emotions (see Li & Wei, 2022; Goetz et al., 2007; Tsang & Dewaele, 2023).

### **A. Enjoyment**

Enjoyment is one of the poorly studied topics in EFL classrooms (Dewaele & MacIntyre 2016). With the flourishing of PP and the broaden-and-build theory, it has been the focus of many scholars (Dewaele & Alfawzan, 2018). It is considered as a pleasant activating, a salient, and a frequent positive emotion that people experience (Fredrickson & Cohn, 2008; Frenzel et al., 2007), especially teachers (Sutton & Wheatley, 2003). Crucially, numerous researchers (e.g. Izard, 1977; Plutchik, 1980; Tomkins, 1984; Ekman Scherer, 1982) list enjoyment as a basic emotion. To understand the concept thoroughly, Csikszentmihalyi (2008) contrasted enjoyment with pleasure. He noted that pleasure refers to the experience of contentment related to repetitive routines and biological programs such as food, rest, sleep, and sex for needs/desires satisfaction. By contrast, enjoyment, a crucial item of the flow experiences, is a feeling that goes beyond planned, expected, or even imagined things. Such a feeling is achieved after enjoyable events take place. Pleasure thus is separate from enjoyment in the sense that it is impermanent. Furthermore, enjoyment, according to CVT, can enhance and boost more creative ways on the part of students as greater achievement is achieved by greater enjoyment. Given the reciprocal relations between academic achievement and academic emotions, academic success is vital in creating an atmosphere of greater enjoyment.

### **B. Anxiety**

Unsurprisingly, anxiety is the most researched and extensively studied emotion in second and foreign language learning (see Dewaele & MacIntyre, 2014; MacIntyre 2017; Boudreau et al., 2018; Dewaele & Li 2018). Anxiety refers to *“the feeling of tension and apprehension specifically associated with second language contexts, including speaking, listening, and learning”* (MacIntyre & Gardner, 1994, p.284). As such, it is a feeling of negative emotional state, worry (MacIntyre, 1999) and a psychological issue (Spielberger, 1983) that occurs while learning a second language. It is worth pointing out that the introduction of anxiety into the field of teaching and learning started with the prominent work of Horwitz et al. (1986), who developed a well-known scale to measure anxiety. It is found to influence other skills such as motivation and self-esteem and is therefore detrimental to students' proficiency (Crookall & Oxford, 1991). Overall, in the great vast majority of students, anxiety has a detrimental impact on academic achievement.

### **C. Boredom**

Being a deactivating and negative emotion, academic boredom is one of the most frequently experienced emotions in educational contexts (Li, 2021; Li & Dewaele 2020; Amiri & El Karfa, 2022). Defining boredom is not an easy task. Scholars in the field differ widely in providing a general definition of the term 'boredom'. It is defined as underlying mental processes (Eastwood et al., 2012), disengagement and attention deficit (Fahlman, 2009) occur when individuals experience boredom. This negative achievement emotion affects psychological vigilance (Pekrun et al., 2010) and increases a lack of interest and concentration (Nett et al., 2010) during a particular activity or task. Crucially, Putwain et

al. (2018) differentiated trait and state boredom. He claimed that the latter is a situation-specific and momentary experience, whereas the former is seen as an innate aspect and part of humans. In a FLL context, Trait boredom in fact is experienced when the learners find that the environment is not stimulating enough and not engaging (Bench & Lench, 2013). As stated in CVT, academic boredom has a reciprocal relation with academic achievement. That is, the lower performance and success is, the greater boredom exists.

### 3. Research Questions

The main aim of the present paper was to investigate PTE, PTA and PTB impact on students' ATT. The study also aimed to find out the link between PTE, PTA and PTB and students' ATT. In more specific terms, the present study was guided by the following research questions:

**RQ1:** What are teachers' levels (from the vantage point of the students) of enjoyment, anxiety, and boredom during classes?

**RQ2:** To what extent do PTE, PTA and PTB predict students' ATT?

**RQ3:** Are students' ATT related to how enjoyed, anxious, and bored they think their teachers actually feel?

In the present study, it was hypothesized that PTE, PTA and PTB uniquely, statistically and significantly contribute to predict ATT. They also account for a large amount of variance in the dependent variable. We also hypothesized that PTE, PTA and PTB have a potent effect and predict ATT, and students therefore show a strong preference for teachers who feel a sense of enjoyment over those who experience anxiety and boredom.

### 4. Methodology

#### 4.1 Participants

A total of 760 university students participated in this study. They were enrolled in the English department, Moroccan University, at the time of the study, of which 313 were males (41.2 %), 426 were females (56.1 %), 20 preferred not to say (2.6 %), and one missing (0.1 %). Participants ranged in age from 17 to 50 years old, their mean age was 21.07 years old (SD = 3.59). They were from five different disciplines. 600 from English Studies, 39 from Applied Linguistics, 49 from Translation Studies, 20 from Cultural Studies, and 52 from Language, Communication and Society. They were asked and instructed to fill an anonymous questionnaire with three main sections, including demographic information, PTE, PTA, PTB, and ATT.

#### 4.2 Instrument

The main questionnaire used to collect data was comprised of three main sections. The first section was devoted to collecting basic demographic data including gender, age, grade, and major. Besides, the second section of the questionnaire comprised an adapted

version from the short version of the Achievement Emotions Questionnaire (AEQ-S) (Bieleke et al., 2021) to measure the independent variables of PTE, PTA and PTB. The items in this scale consist of six affirmative statements with five response options ranging from "Always" to "Never". The scale assessed three academic emotions experienced during class: enjoyment (2 items; My teachers probably enjoy being in class, My teachers probably enjoy teaching that they get energized), anxiety (2 items; My teachers feel nervous in class, My teachers get tense in class), and boredom (2 items; My teachers probably get bored, Teaching probably bore my teachers).

Furthermore, the last section was devoted to assessing the ATT. To do so, an adapted version of the subcategory of ATT from Attitude/Motivation Test Battery (AMTB), developed and validated by Gardner (1985), was used. The items in this scale consist of eight affirmative statements with five response options ranging from "Strongly agree" to "Strongly disagree". Sample items from this scale are: "I look forward to going to class because my teachers are so good", "My teachers are a great source of inspiration to me" and "I really like my teachers".

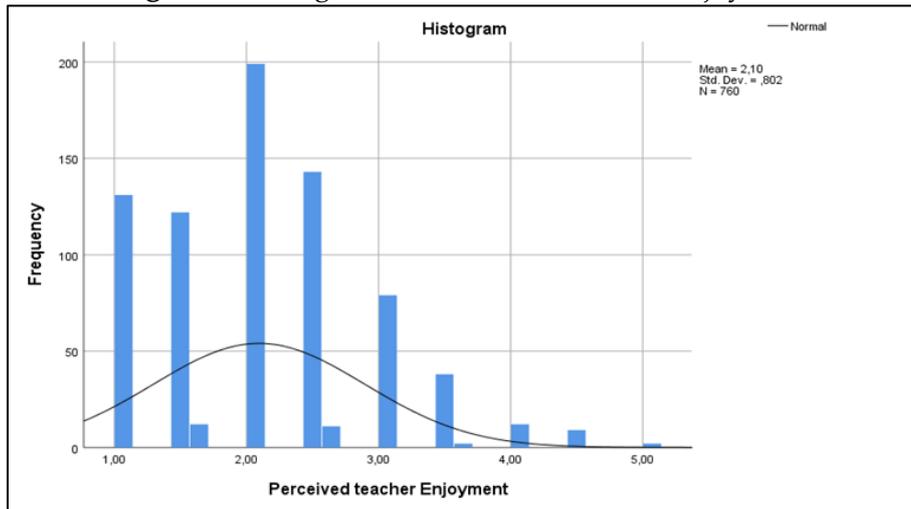
It should be noted that all the questionnaires that were not properly completed were excluded and disregarded (n = 2). As such, negatively worded items in the current scale were reverse-coded.

### 4.3 Data Analysis

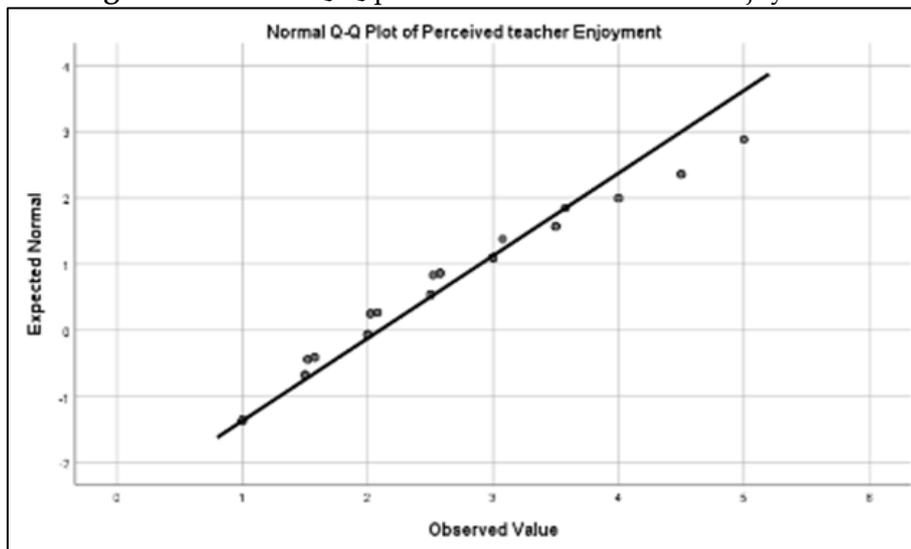
Raw data were transformed into a format that may be used for data analysis, giving each response a numeric value, removing data input errors from the database and naming the necessary needed variables. New variables were subsequently computed in Statistical Package for the Social Sciences 26.0 (SPSS) software package. Additionally, a codebook containing a list of the variables, their meanings, and the numbers corresponding to each response option was created. Afterwards, quantitative data was explored; a process concerned the data inspection for a descriptive analysis of data basic features (Creswell & Plano Clark, 2018). Descriptive statistics (Informational coefficients) were determined for all study variables. This includes measures of central tendency (means) and measures of variability (standard deviation, minimum and maximum variables, variance, kurtosis, and skewness). Normality tests and correlation coefficients for the study variables were also calculated. A Kolmogorov-Smirnov and Shapiro Wilk tests were carried out and which showed no normal distribution for all variables (all  $p < .001$ ). However, both Q-Q plots and histograms showed normal distribution for all study variables, including PTE (Figure 1 & Figure 2) PTA (Figure 3 & Figure 4), PTB (Figure 5 & Figure 6), and students' ATT (Figure 7 & Figure 8) as shown in the figures below.

In addition, a multiple regression analysis with PTE, PTA, and PTB as the independent variables and ATT as the dependent variable. The aim of such equation modeling was to explore the complex relationship between dependent and independent variables, and to find out the extent to which the three teachers' emotions jointly predict and linked to students' ATT. To this end, PTE, PTA, and PTB were included in one single regression model simultaneously to predict students' ATT.

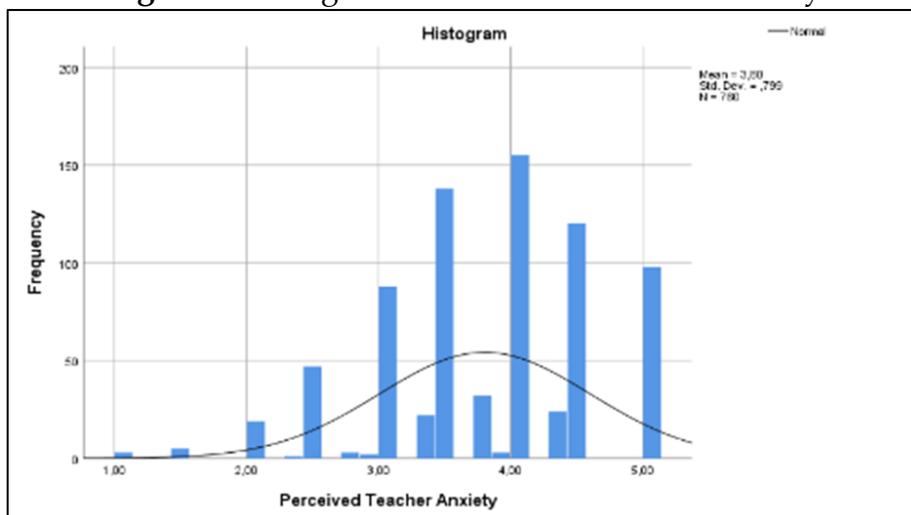
**Figure 1: Histogram of Perceived Teacher Enjoyment**



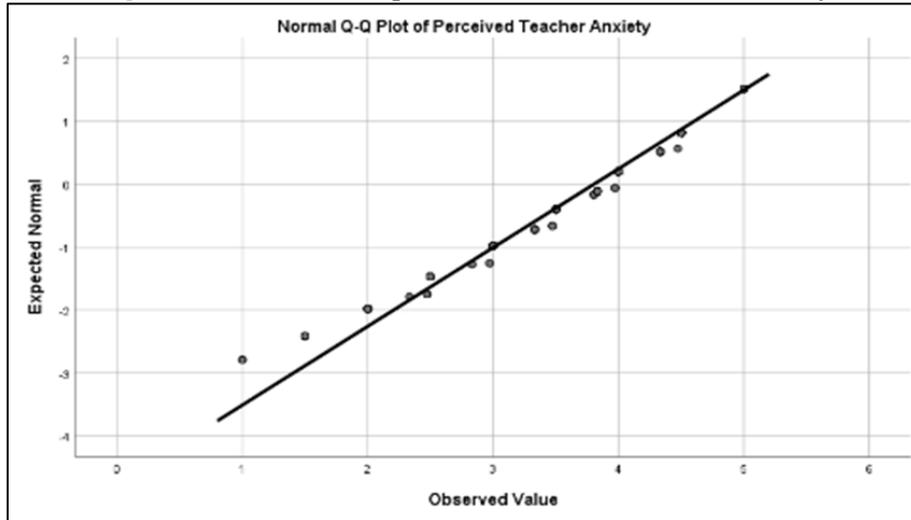
**Figure 2: Normal Q-Q plot of Perceived Teacher Enjoyment**



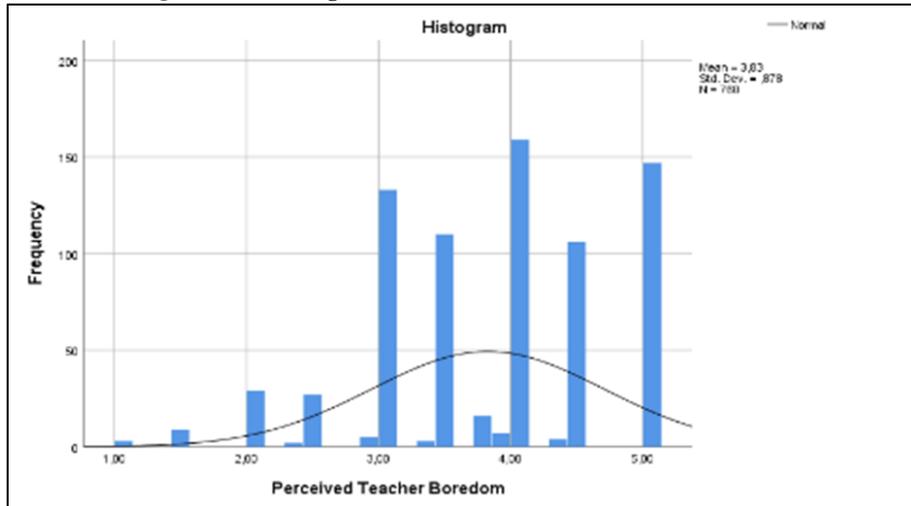
**Figure 3: Histogram of Perceived Teacher Anxiety**



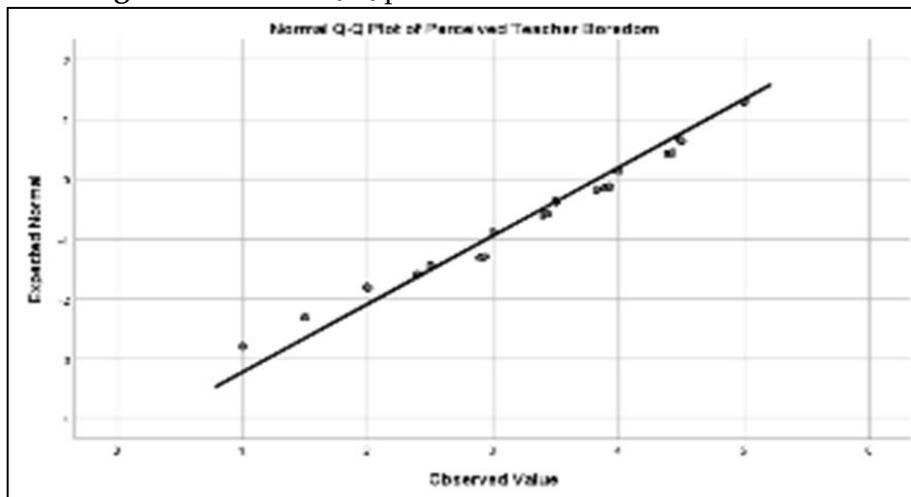
**Figure 4:** Normal Q-Q plot of Perceived Teacher Anxiety



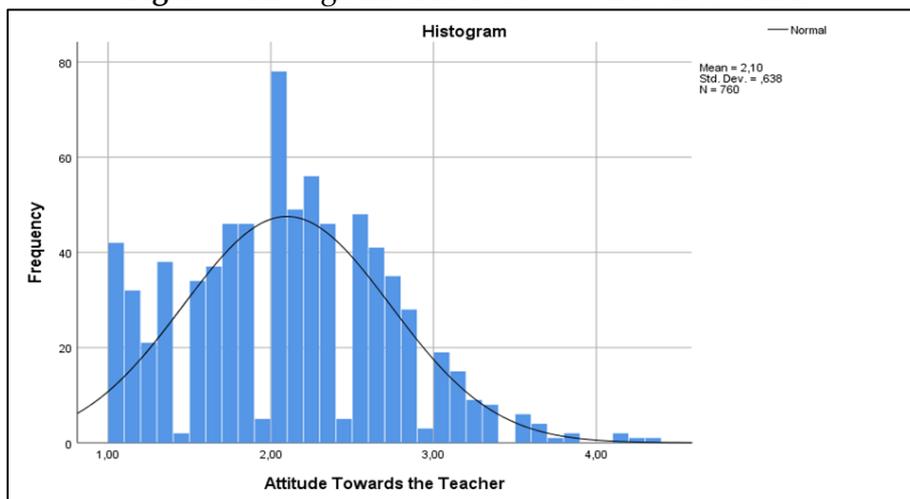
**Figure 5:** Histogram of Perceived Teacher Boredom



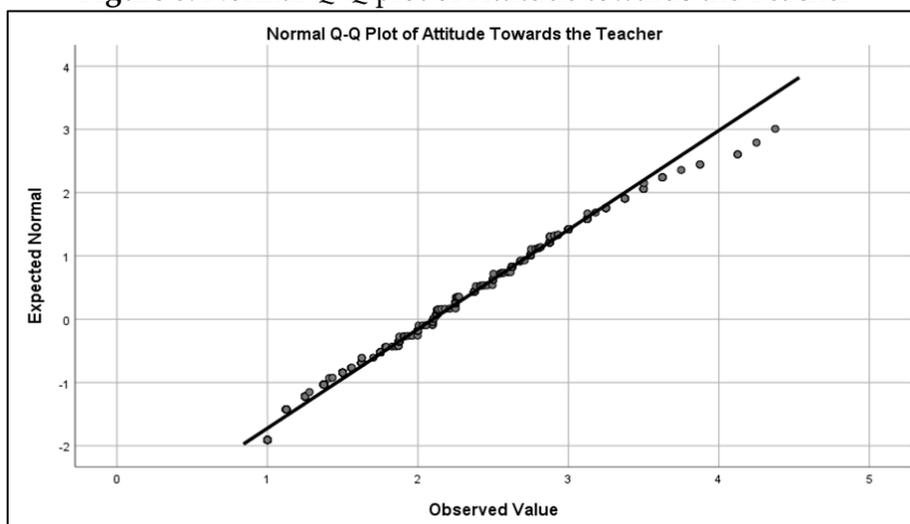
**Figure 6:** Normal Q-Q plot of Perceived Teacher Boredom



**Figure 7:** Histogram of Attitude towards the teacher



**Figure 8:** Normal Q-Q plot of Attitude towards the Teacher



## 5. Results

### 5.1 Descriptive Statistics

To paint a clear image about the salience, pervasiveness and experiencing of PTE, PTA, PTB and ATT during classes, we explored the issue by looking at the mean values of the item scales of the study variables.

Regarding the salience of the PTE, PTA, PTB and ATT, negative emotions (PTA and PTB) provided a similar picture, while both PTE and ATT provided another different picture. Table 1 provides means and standard deviations for all study variables. Overall means, as shown in Table 1, indicated that all subjects generally reported strong levels of enjoyment  $M = 2.10$  ( $SD = 0.80$ ). Students were found to hold a positive attitude towards the teacher  $M = 2.10$  ( $SD = 0.60$ ). As such, participants rarely experience anxiety  $M = 3.80$  ( $SD = 0.80$ ) and boredom  $M = 3.83$  ( $SD = 0.81$ ).

**Table 1:** Descriptive Statistics of Perceived Teacher's  
 Enjoyment, Anxiety, Boredom, and Attitude towards the Teacher

Study variables	N	Minimum	Maximum	M	SD
PTE	760	1.00	5.00	2.10	.80
PTA	760	1.00	5.00	3.80	.80
PTB	760	1.00	5.00	3.83	.88
ATT	760	1.00	4.38	2.10	.64
Valid N (listwise)	760				

The current research proposed that PTE, PTA and PTB and their ATT should be related to how they think their teachers actually feel. In addition, it was hypothesized that all three predictors uniquely, statistically and significantly contribute to predict students' ATT. They also account for a large amount of variance in the dependent variables. To test these hypotheses, A Pearson product-moment correlation was conducted to examine the relationship between study variables. Moreover, a multiple linear regression was run, with PTE, PTA and PTB as the independent variables, and ATT as the dependent variable.

### 5.2 Correlation between perceived teacher enjoyment, anxiety, boredom and students' attitude towards the teacher

Table 3 below is the correlation matrix that presents a complete list of correlation coefficients for every combination between all study variables (PTE, PTA, PTB, and ATT). Not surprisingly, PTE was negatively and significantly related to PTA,  $r(756) = -.17, p < .01$  and PTB  $r(756) = -.40, p < .01$ . In addition, PTA was found to be negatively and significantly related with PTB  $r(756) = .32, p < .01$ . As expected, the Pearson correlation analyses showed that all the three predictors of PTE, PTA, and PTB correlated significantly with students' ATT  $r(756) = .39, p < .01, r(756) = -.16, p < .01,$  and  $r(756) = -.36, p < .01$  respectively.

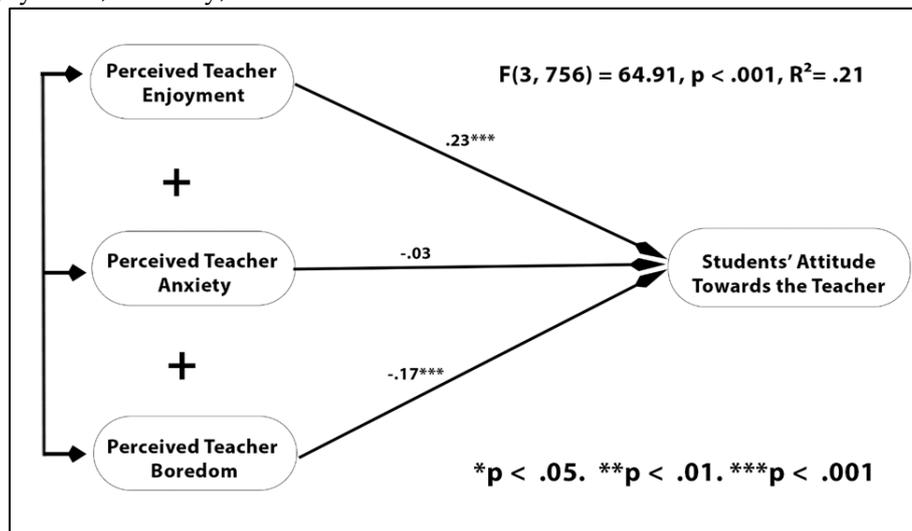
**Table 3:** Pearson Product–Moment Correlations among the Study Variables (N = 760)

Variables	PTE	PTA	PTB
PTA	-.17**		
PTB	-.40**	.32**	
ATT	.39**	-.16**	-.36**

\*\* . Correlation is significant at the 0.01 level (2-tailed).

### 5.3 Regression of Students' Attitude towards the Teacher on Perceived Teacher's Enjoyment, Anxiety and Boredom

**Figure 9:** The Joint Predictive Effects of Perceived Teacher' Enjoyment, Anxiety, and Boredom on Students' Attitude towards the Teacher



To predict students' ATT based on PTE, PTA and PTB, a multiple regression analysis was calculated. Variance Inflation Factor (VIF), which detects [multi-collinearity](#) ([correlation](#) between predictors in a model) in regression ranged between 1.11 and 1.28, which does not exceed the problematic amount cutting off point of 5 (Chatterjee & Simonoff, 2013; James et al., 2013; O'Brien, 2007), and tolerance ranged between .78 and .90. This indicates that there was a small amount of [collinearity](#) among the individual variables, which increased the reliability of regression results. The current regression model was significant,  $F(3, 756) = 64.91, p < .001$ , explaining 21% ( $R^2 = .21$ ) of the variance in the outcome variable (students' ATT). Importantly, both PTE ( $\beta = .29, t = 8.27, p < .001$ ) and PTB ( $\beta = -.24, t = -6.42, p < .001$ ) contributed uniquely and significantly to the overall model. Unexpectedly, PTA, on the other hand, was not a significant predictor ( $\beta = -.04, t = -1.10, p = .27$ ) (see Table 4). Put differently, PTA offered nothing uniquely in terms of predicting students' ATT.

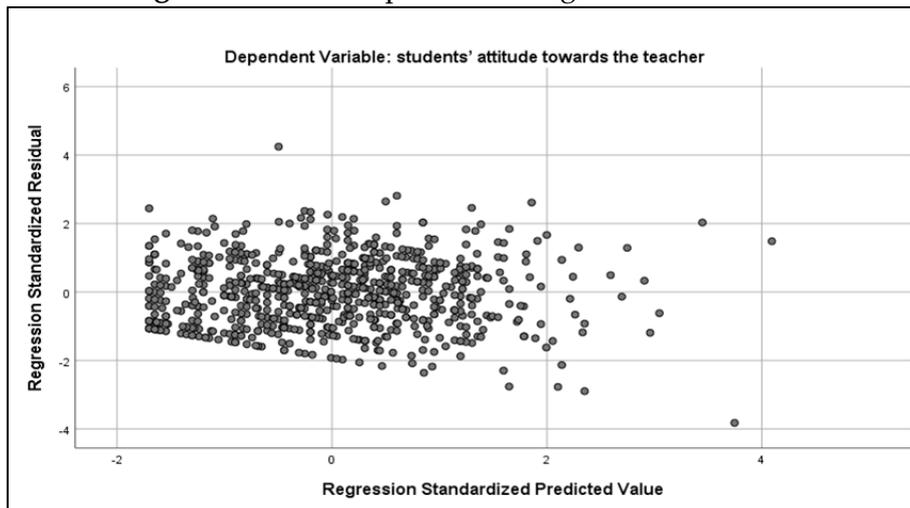
**Table 4:** Multiple Regression Analysis for the Study Variables

Predictors	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.38	.16		15.30	.000
Perceived teacher's enjoyment	.23	.03	.29	8.27	.000
Perceived teacher's anxiety	-.03	.03	-.04	-1.10	.272
Perceived teacher's boredom	-.17	.03	-.24	-6.42	.000

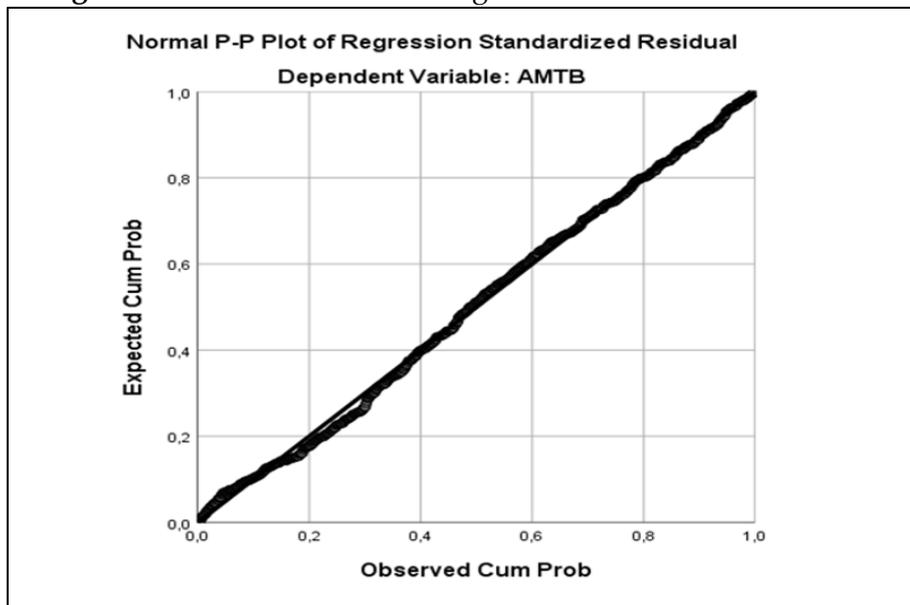
a. Dependent Variable: students' attitude towards the teacher

Furthermore, a DW statistic test for autocorrelation was 1.77, which, as the previous tests in this study, suggested that DW test values are not cause for concern indicating no autocorrelation in the regression model. As such, a scatterplot (Figure 10) was created to examine the assumption of homoscedasticity of the residuals. A roughly rectangular distribution with most of the scores clustered in the center, which indicated no violation of the linearity assumption. A P-P plot indicated a normal distribution of the residual value (Figure 11).

**Figure 10:** A Scatterplot of the Regression Residuals



**Figure 11:** Normal P-P Plot of Regression Standardized Residual



## 6. Discussion

The first research question addressed perceived teacher levels of academic emotions of enjoyment, anxiety and boredom. Consistent with our expectation, results show that teachers experience a high level of positive emotion (i.e. enjoyment)  $M = 2.15$  ( $SD = 0.81$ ). Students were also found to hold a positive attitude toward the teacher  $M = 2.10$  ( $SD = 0.60$ ). As such, participants rarely experienced anxiety  $M = 3.80$  ( $SD = 0.80$ ) and boredom  $M = 3.58$  ( $SD = 0.80$ ). Besides, consistent with previous research on the high prevalence of positive emotions than negative emotions in academic settings (Jiang & Dewaele, 2019; Li, 2021; Li & Dewaele, 2021), the current study confirmed such a pattern and thus provided insights into the pervasiveness of both positive and negative emotions.

The second and the third research questions were devoted to depicting students' attitudes towards the teacher based on perceived teacher emotions of enjoyment, anxiety and boredom. Some of the most notable findings of this study were that there was a significant positive relationship between perceived teacher enjoyment and the attitude towards the teacher. In turn, there was a significant relationship between both boredom and anxiety and the attitude towards the teacher. However, when they were used in a regression model, perceived teacher anxiety offered nothing unique in terms of predicting students' attitude towards the teacher.

These results suggest that students showed a preference for teachers who feel a sense of enjoyment, and thus hold a positive attitude towards them. Conversely, students become disengaged themselves and lose interest in the classroom when they perceive their teachers as bored. This confirms the idea that a bored teacher can have a negative impact on the classroom setting and student learning outcomes. The findings in this study align with previous studies on the impact of students' perceptions on their attitude towards happy teachers (Moskowitz & Dewaele, 2021) and teachers who experience a sense of enjoyment (Dewaele & Dewaele, 2020). That is, demonstrating enjoyment for teachers' subject matter can positively influence students' attitudes and behaviors towards learning. When they perceive that their teacher is enjoying the subject matter, students may be more likely to participate in class and take an active role in their own learning.

### 6.1 Theoretical and Pedagogical Implications

Theoretical and practical implications can be drawn from the current work. The findings in this study contribute to the growing body of research on the relationship between students' and teachers' emotions during interactions. This can help further develop models and theories about the emotional dynamics of teaching and learning. Another theoretical implication that should be considered includes the formulation and the construction of future hypotheses regarding the contribution of teachers' emotions in predicting students' emotions.

The practical implications of this study's results are targeted mainly towards teachers. As the findings indicate that in classroom settings, when emotions such as

enjoyment, anxiety, boredom co-occur, enjoyment emerges as the strongest (positive) emotional predictor of students' emotions. Giving more importance to enjoyment is a true key to a more effective relationship between teachers and students. This actually helps teachers develop strategies that are more effective for managing emotions in the classroom, create a positive and supportive learning environment through displaying a sense of enjoyment, enthusiasm and passion while teaching.

More importantly, taken together, these results suggest that teacher-student emotional relationship boundary is crucial in the emotional events that teachers go through to develop a positive personal relationship with their students in the classroom. Teachers' emotional boundaries are often the most delicate, which requires an effective role from the teacher, through creating an emotionally safe environment (Aultman et al., 2009) using appropriate norms and standards (Shutz, 2014).

## 6.2 Limitations and Future Directions

Needless to say that the findings of the present research made a noteworthy contribution to the paucity of empirical studies on the issue investigated, which has filled an important gap in the teacher-student emotions literature. In addition to the theoretical and practical contributions of the current study are some limitations that may direct future research. First, generalized emotional traits were assessed rather than subject-specific emotions, disregarding the assumptions of domain specificity of academic emotions (Goetz et al., 2007). That is, participants were from five different disciplines in which English was the language of instruction. Although the notion of context-specific effects of emotions was respected (conducting the study in one single context), the view that advocates that emotions be organized in domain-specific ways was not taken into consideration. As such, three academic emotions, which are of critical importance to students and teachers (Pekrun et al., 2002), were assessed in this study (i.e. enjoyment, anxiety and boredom). A related limitation is the generalizability of findings may be limited to these three emotions. For future studies, it would also be important to consider the other academic emotions (e.g., anger, hope, and hopelessness) to be included in regression models to see the extent to which they explain variance in students' emotions. Finally, another limitation of existing research has to do with the students-perceived teacher emotions, neglecting teachers' self-reported emotions. Certainly, the aim of the current research was to see how students see and perceive teachers' emotion. Yet, future research may investigate teachers' self-reported emotions correspondence to students' self-reported emotions and their attitude towards the teacher.

## 7. Conclusion

The present study aimed to evaluate the impact of teachers' perceived emotional states, such as enjoyment, anxiety, and boredom, on students' emotions and attitude towards their teachers. The study also aimed to find out how PTE, PTA and PTB predict their ATT. The study yielded that teachers (in the eyes of their students) generally reported

strong levels of enjoyment, and low threshold of anxiety and boredom. As such, PTE, PTA and PTB correlated significantly with students' ATT  $r(756) = .39, p < .01$ ,  $r(756) = -.16, p < .01$ , and  $r(756) = -.36, p < .01$  respectively. Furthermore, the regression model explained 21% ( $R^2 = .21$ ) of the variance in the outcome variable (students' attitude towards the teacher), with PTE and PTB contributed uniquely and significantly to the overall model. PTA, on the other hand, was not a significant predictor.

Crucially, despite the great importance of teachers' emotions impact on learners' academic achievement and emotions in higher education, studies about the issue investigated are hardly available. Thus, the present research makes a noteworthy contribution to the paucity of empirical studies on the role of teachers' emotions. According to our present state of knowledge, this is the first study to explore perceived teachers' emotions of enjoyment, anxiety and boredom impact on their attitude towards the teacher in more detail as the majority of previous studies on this front were conducted in nonacademic settings (Becker et al., 2014) used solely one single emotion variable in the analytic model (see Dewaele et al., 2022; Pekrun et al., 2014; Pinxten et al., 2014; Moskowitz & Dewaele, 2021).

### **Conflict of Interest Statement**

The authors declare no conflicts of interest.

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