The Impact of Teachers' Emotional Expression Components on Students' Affective and Behavioral Engagement in Elementary School

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تأثير مكوّنات التعبير الانفعالي للمعلمين على الاندماج الوجداني والسلوكي لدى تلاميذهم في المرحلة الابتدائية

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الملخص:

تهدف هذه الدراسة إلى الكشف عن أثر مكوّنات التعبير الانفعالي لدى المعلمين (الفرح، الفخر، الحب، الغضب، الإرهاق، واليأس) على الاندماج السلوكي والوجداني لدى تلاميذهم بالمرحلة الابتدائية. تم إجراء البحث في القسم الأمريكي بمدرسة دوفر الدولية، على عينة مكونة من 7 معلمات و45 تلميذًا وتلميذة تتراوح أعمارهم بين 8 و12 عامًا. اعتمدت الدراسة على أدوات قياس كمية وكيفية، شملت استبانة انفعالات المعلم، واستبانة التلاميذ لقياس الاندماج والانفصال عن التعلم، وأداة ملاحظة الصف لقياس الاندماج الفعلي داخل الفصول. تم تحليل البيانات باستخدام أسلوب الانحدار الخطي المتعدد وتحليل التباين متعدد المتغيرات (MANOVA) باستخدام برنامج SPSS. أظهرت النتائج أن النموذج الإحصائي كان دالًا عند مستوى 0.05، موضحًا أن مكوّنات التعبير الانفعالي تفسر ما نسبته 27.8٪ من التباين في الاندماج الوجداني لدى التلاميذ، حيث كان لمشاعر اليأس والغضب التأثير الأكبر سواء في تعزيز أو تقليل اندماج التلاميذ. كما أظهرت النتائج من خلال الملاحظات الصفية أن تعبير المعلم الانفعالي ينعكس مباشرة على مستوى تفاعل التلاميذ وجدانيًا وسلوكيًا مع الأنشطة الصفية. توصي الدراسة بضرورة تدريب المعلمين على الاستخدام الواعي والانفعالي المتوازن داخل الصف، بما يعزز من جودة البيئة التعليمية ويزيد من اندماج التلاميذ وجدانيًا وسلوكيًا.

الكلمات المفتاحية: التعبير الانفعالي لدى المعلم، اندماج التلاميذ، الاندماج الوجداني، الاندماج السلوكي، نظرية الضبط والقيمة، مناخ الفصل الدراسي

The Impact of Teachers' Emotional Expression Components on Students' Affective and Behavioral Engagement in Elementary School

Abstract

This study aims to examine the impact of the components of teachers' emotional expression, namely joy, pride, love, anger, exhaustion, and hopelessness, on their elementary school students' emotional and behavioral engagement. The research was conducted in the American Division of Dover International School on a sample of 7 female teachers and 45 students (both boys and girls) aged between 8 and 12 years. A mixed-method approach was adopted, utilizing both quantitative and qualitative tools: the Teacher Emotion Questionnaire, the Engagement vs. Disaffection with Learning Student Report, and the Student Engagement Classroom Observation Tool. Data was analyzed using multiple linear regression and multivariate analysis of variance (MANOVA) through SPSS. The results indicated that the model was statistically significant at the 0.05 level, explaining 27.8% of the variance in emotional engagement. Notably, hopelessness and anger emerged as the most influential emotional components in predicting students' emotional and behavioral engagement whether positively or negatively. Classroom observation findings further confirmed that the emotional expressions displayed by teachers directly influenced students' attentiveness and participation during instructional time. The study recommends providing professional development for teachers to enhance their awareness and regulation of emotional expression in the classroom, thereby fostering a more engaging and emotionally supportive learning environment.

Keywords : Teacher emotional expression, Student engagement, Emotional engagement, Behavioral engagement, Control-Value Theory, Classroom climate

Introduction

Teachers play a pivotal role in shaping the academic, social, and emotional development of students. Beyond their instructional duties, teachers serve as emotional agents within the classroom, influencing students through both intentional and unintentional expressions of affect (Frenzel et al., 2023). Emotional expression, defined as the outward manifestation of internal emotional states through verbal and nonverbal cues, significantly contributes to classroom climate and student engagement (Sutton & Harper, 2020).

The educational process is inherently relational, and emotions serve as a vital medium for communication between teachers and students. Research within educational psychology highlights that students are highly sensitive to teachers' emotional expressions, which can either foster or hinder students' emotional and behavioral engagement (Meyer & Turner, 2022). Emotional engagement refers to students' affective responses such as interest, enjoyment, and anxiety toward academic activities, while behavioral engagement encompasses participation, attention, and persistence in learning tasks (Fredricks et al., 2019).

According to the transactional model of teaching and learning (Skinner & Pitzer, 2012), the classroom is an interactive emotional system in which both teachers and students affect one another's behavior and emotions. In this context, teachers' emotional expressions whether positive (e.g., joy, pride, warmth) or negative (e.g., frustration, fatigue, hopelessness) can shape students' perceptions of safety, motivation, and connection to learning (Becker et al., 2020).

Despite the growing interest in teacher emotion research, there remains a relative scarcity of empirical studies focusing on the **specific components** of emotional expression and their **distinct effects** on both emotional and behavioral engagement particularly in elementary education settings. Prior research often generalizes emotional expression as a holistic construct, overlooking the nuanced differences between various emotions and their influence on student outcomes (Chang, 2020).

Given that emotional responsiveness begins to solidify during the early school years, it is imperative to investigate how teachers' emotional displays impact young learners. This study seeks to fill this gap by exploring how discrete emotional expressions by teachers (such as joy, pride, anger, exhaustion, and hopelessness) relate to elementary students' behavioral and emotional engagement in the classroom.

Literature Review

The emotional dynamics of teaching have garnered increasing attention in recent decades, with research consistently indicating that emotions are not peripheral to learning they are central to it. In educational settings, emotional expressions from teachers serve not only as affective displays but also as powerful signals that shape student motivation, engagement, and behavior (Frenzel et al., 2023). Understanding the specific components of emotional expression, such as facial expressions, tone of

voice, and body language, is therefore critical in investigating their implications for students' emotional and behavioral engagement.

Emotional Theories in the Classroom Context

The interplay between emotion and learning has been extensively discussed through several theoretical lenses. One foundational framework is the **Control-Value Theory of Achievement Emotions** (Pekrun, 2006), which posits that emotions experienced in academic settings arise from students' appraisals of control over learning tasks and the value they assign to those tasks. Teachers' emotional expressions influence these appraisals: a teacher displaying pride or enthusiasm may enhance students' sense of value and efficacy, while expressions of hopelessness or anger can diminish them (Pekrun et al., 2017).

Similarly, the **Social-Emotional Learning (SEL) framework** emphasizes the role of educators in modeling appropriate emotional expression. SEL supports the idea that emotional cues provided by the teacher foster students' capacity to regulate emotions, build relationships, and engage meaningfully with content (Jones et al., 2019). Teachers who express warmth and enthusiasm tend to foster more secure, responsive classroom climates, which are positively associated with both emotional and behavioral engagement (Jennings & Greenberg, 2009).

From a **sociocultural perspective**, Vygotsky (1978) emphasized that learning is inherently a social process, and emotions serve a regulatory function within these interactions. Emotional expressions thus become communicative tools that guide student attention, scaffold their responses, and shape their classroom identity.

Emotional Expression and Student Engagement

Numerous empirical studies support the idea that emotional expression by teachers impacts how students feel, behave, and learn. For instance, Becker et al. (2020) demonstrated a bidirectional relationship between teachers' emotional expressions and students' engagement: when teachers displayed positive affect, students were more emotionally and behaviorally engaged, which in turn reinforced positive teacher emotions.

In a study by Poulou, Garner, and Bassett (2021), positive emotional expressiveness among teachers measured using both observational and self-report tools predicted higher social-emotional competence among students and fewer behavioral problems. Conversely, frequent expressions of anger and frustration were associated with greater instances of classroom misbehavior and emotional disaffection.

Another relevant construct is **emotional labor**, which refers to the regulation of emotional expression to meet professional expectations (Hochschild, 1983). Teachers often engage in emotional labor by suppressing negative emotions or amplifying positive ones to maintain classroom harmony (Taxer & Frenzel, 2015). However, research by Wang and Burić (2023) found that suppressing negative emotions, such as fatigue or hopelessness, becomes increasingly difficult when students appear

disengaged leading to emotional exhaustion and, paradoxically, more visible negative expression.

Research conducted across diverse educational settings affirms these patterns. In a large-scale study by Prosen and Vitulić (2011) across 93 Slovenian primary schools, joy and anger emerged as the most frequently observed teacher emotions, with pleasant emotions generally promoting student attentiveness and unpleasant emotions linked to off-task behavior. Mazer (2013)found that emotional interest driven by teachers' expressive clarity and immediacy served as a strong predictor of both emotional and behavioral student engagement.

While most of these studies focus on older students or generalized emotional climate, there is growing recognition that **discrete emotional expressions** such as pride, love, or exhaustion can have differentiated effects on students depending on their age and developmental stage. Younger students, particularly in elementary school, may be especially sensitive to teachers' emotional cues, given their still-developing emotional regulation and social interpretation skills (Zins et al., 2004).

Gaps in Literature

Despite the robust literature on teacher emotions and student outcomes, several research gaps persist. First, most studies treat teacher emotion as a global construct rather than distinguishing between specific emotional expressions and their individual effects. Second, few studies incorporate both **quantitative and qualitative** methodologies to assess these relationships holistically. Third, there is limited research focusing specifically on **elementary-aged children**, who may be more impressionable to teacher emotion than adolescents or adults. Lastly, many investigations prioritize academic achievement as the primary outcome of interest, overlooking the significance of emotional and behavioral engagement as both outcomes and precursors of success (Reschly & Christenson, 2012).

While increasing attention has been directed toward the emotional dimensions of teaching, empirical research remains limited in identifying how specific emotional expressions by teachers such as joy, pride, anger, exhaustion, and hopelessness uniquely influence students' emotional and behavioral engagement, particularly in early educational settings. Most existing studies either conceptualize teacher emotion as a global construct or focus primarily on academic achievement as the sole outcome, overlooking how discrete emotional cues affect student motivation, participation, and emotional involvement in classroom activities.

Moreover, research targeting elementary school students is especially scarce, despite evidence suggesting that younger learners are more emotionally sensitive and susceptible to affective signals within the classroom. This age group is in a critical stage of developing social-emotional competence, and teachers' emotional expressions may serve as either scaffolding or barriers to their engagement. In addition, there is a lack of integration between observational, self-report, and teacher-report tools in assessing this dynamic relationship.

Given these gaps, there is a pressing need to investigate how the distinct components of teachers' emotional expression shape the dual dimensions of student engagement, emotional and behavioral in elementary classrooms. Addressing this gap may provide valuable insights for teacher training, classroom management strategies, and the development of emotionally responsive pedagogy.

Study Importance

This study holds both theoretical and practical significance in the fields of educational psychology, teacher education, and classroom management. From a theoretical standpoint, the research contributes to the growing body of literature examining the role of affective processes in learning environments by disaggregating teachers' emotional expression into its core components such as joy, pride, anger, exhaustion, and hopelessness and linking each to specific student engagement outcomes. Unlike prior studies that treat emotion as a singular construct, this research offers a differentiated understanding of how distinct emotional expressions influence emotional and behavioral engagement among elementary school students.

Practically, the study provides valuable insights for school administrators, teacher trainers, and educational policymakers. By identifying which emotional expressions promote or inhibit student engagement, the findings can inform professional development programs that equip teachers with emotional awareness and expression regulation strategies. These insights are particularly relevant for early educational settings, where students' emotional receptivity is high and teacher–student relationships serve as foundational to learning motivation and classroom harmony.

Moreover, the study advocates for a more holistic view of teacher effectiveness, one that extends beyond curriculum delivery to encompass emotional communication as a core pedagogical tool. The integration of qualitative and quantitative methodologies also enhances the ecological validity of the findings and offers a nuanced perspective that can guide interventions aimed at fostering emotionally supportive and engaging classroom climates.

Research Objectives:

Main Objective: To investigate the impact of teachers' emotional expressions—specifically joy, pride, love, anger, exhaustion, and hopelessness on elementary students' emotional and behavioral engagement.

Specific Objectives:

1. To examine the relationship between teachers' positive emotional expressions (joy, pride, love) and students' emotional and behavioral engagement in elementary classrooms.
2. To analyze the influence of teachers' negative emotional expressions (anger, exhaustion, hopelessness) on students' levels of emotional and behavioral engagement.
3. To identify which components of teachers' emotional expressions are the strongest predictors of students' emotional and behavioral engagement.

4.To explore differences in student engagement levels based on varying intensities and types of teachers' emotional expressions.

5.To provide practical insights for enhancing teacher training programs aimed at promoting emotionally supportive teaching practices that foster student engagement.

Research Questions

How do different components of teachers' emotional expression (e.g., joy, pride, anger, exhaustion, hopelessness) influence students' emotional engagement in elementary classrooms?

2.What is the relationship between teachers' emotional expressions and students' behavioral engagement in elementary school settings?

3.Do positive emotional expressions (such as joy and pride) by teachers significantly increase students' emotional and behavioral engagement?

4.Do negative emotional expressions (such as anger and hopelessness) by teachers predict a decrease in students' emotional and behavioral engagement?

5.Are there moderating factors (e.g., student personality traits, teacher experience) that influence the strength or direction of the relationship between teachers' emotional expressions and student engagement?

6.How do multimodal measures (facial expressions, physiological sensors, video-coded behaviors) provide additional insights into the impact of teachers' emotional expressions on student engagement compared to self-report measures?

Hypotheses

H_1: There is a statistically significant relationship between teachers' emotional expressions and students' emotional engagement.

H_2: Teachers' emotional expressions significantly predict students' behavioral engagement.

H_3: Positive emotional expressions (joy, pride, love) by teachers significantly increase students' emotional and behavioral engagement.

H_4: Negative emotional expressions significantly predict a decrease in students' emotional and behavioral engagement.

H_5: The variance in students' engagement is significantly explained by the combined components of teachers' emotional expression.

Methodology

Research Design

This study employed a **mixed-method research design**, integrating both quantitative and qualitative approaches to provide a comprehensive understanding of how teachers' emotional expressions influence students' emotional and behavioral engagement. The quantitative component utilized self-report questionnaires and structured classroom observations, while the qualitative aspect involved field notes to contextualize engagement behavior.

This design was chosen to enhance the ecological validity of the findings and to capture both statistical patterns and classroom dynamics.

Participants

The study sample consisted of **7 female elementary school teachers** and **45 students** (boys and girls) aged **8 to 12 years**, enrolled in the American Division at Dover International School in Cairo. Teachers were selected based on their direct instruction to students within this age group, and all participants were included upon obtaining informed consent.

Inclusion criteria for students included:

- Enrollment in the American Division,
- Age between 8 and 12 years,
- Signed parental consent forms.

Exclusion criteria included:

- Students outside the specified age range,
- Lack of informed consent from parents,
- Teachers or students from other divisions or grade levels.

Ethical Considerations

Ethical approval was obtained from the school's board, and the study adhered to the **International Federation of Red Cross and Red Crescent Societies (IFRC)** guidelines for research involving minors. Informed consent was secured from all participating teachers and the parents of participating students. Confidentiality and anonymity were ensured through the identification of data. No psychological, emotional, or academic harm was posed to the participants.

Sample Rationale

The selection of elementary school students (ages 8–12) and their classroom teachers as the target population for this study was based on both theoretical relevance and practical considerations. From a developmental perspective, late childhood represents a critical period in which students are highly responsive to emotional cues within their learning environments. Research has shown that during this stage, students begin to form lasting perceptions of school, teachers, and self-worth, all of which are shaped by their emotional interactions in the classroom (Zins et al., 2004; Pianta et al., 2008).

Furthermore, younger students are more likely to internalize and reflect the emotional climate created by their teachers, as they have not yet developed advanced emotion regulation or perspective-taking skills. Thus, teachers' emotional expressions both positive and negative may exert a stronger and more immediate influence on students' engagement behaviors compared to older age groups (Jones et al., 2019).

From a contextual standpoint, the American Division of Dover International School was selected due to its structured learning environment, diverse

student body, and administrative support for classroom-based research. The homogeneity of the teacher sample (female instructors) also offered consistency in controlling for gender-based variations in emotional expression, while the randomized distribution of students by gender and grade level helped reduce sampling bias.

This sample was further justified by its alignment with the study's aims: to investigate the **observable and measurable impact of teachers' emotional expression on students' behavioral and emotional engagement**. By focusing on naturalistic classroom settings with accessible and consented participants, the study ensured ecological validity while addressing a noted gap in the literature, namely, the underrepresentation of elementary-aged students in emotion-focused educational research.

Instruments

1. **Teacher Emotion Questionnaire (TEQ)**
   Developed by Burić, Slišković, and Macuka (2017), this self-report instrument measures teachers' expression of six discrete emotions: **joy, pride, love, anger, exhaustion, and hopelessness**. Each emotion is rated using a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). The tool demonstrates high internal consistency (Cronbach's $\alpha > .80$) and strong construct validity.
2. **Engagement vs. Disaffection with Learning Student Report**
   Adapted from Skinner et al. (2009), this questionnaire consists of **20 items** measuring **emotional engagement, emotional disaffection, behavioral engagement, and behavioral disaffection**. Students respond using a 5-point Likert scale. The scale has demonstrated adequate internal consistency (α = .79–.86) and convergent validity across diverse elementary samples.
3. **Student Engagement Observation Tool**
   Developed by Vargas (2022), this classroom observation tool records the number of students on-task vs. off-task every 5 minutes across a 35-minute lesson. It also allows for qualitative notations on student-teacher interactions, observable emotions, and engagement cues.

Procedure

1. **Consent and Preparation**: Informed consent was collected, and all tools were piloted for clarity and reliability. Sessions were scheduled in coordination with the school principal across four school days.
2. **Data Collection**:
   - Each teacher completed the TEQ following a class session.
   - Students completed the engagement questionnaire at the end of the class.
   - Classroom observations were conducted from the back of the room at 5-minute intervals (7 observations per class).

- Field notes captured teacher expressions and student reactions in real time.

3. **Data Management**:
   All instruments were coded anonymously, and quantitative data was entered into SPSS for statistical analysis. Observation notes were later coded thematically to support triangulation.

Data Analysis

Quantitative data were analyzed using **SPSS version 26**. The following analyses were conducted:

- **Descriptive Statistics**: Means, standard deviations, and normality tests for all variables.
- **Multiple Linear Regression**: To examine the predictive power of emotional expression variables on emotional and behavioral engagement.
- **Multivariate Analysis of Variance (MANOVA)**: To test group differences in engagement based on levels of emotional expression.
- **ANOVA and Post-hoc Analysis**: To identify specific emotional variables with statistically significant impact.
- **Qualitative Thematic Coding**: Observation notes were coded manually to extract recurrent themes regarding emotional display and student attentiveness.

Procedures

This study was conducted over four consecutive school days in natural classroom settings. The procedures were carefully structured to align with the mixed-methods design, combining standardized data collection with real-time classroom observations to examine the relationship between teachers' emotional expressions and students' emotional and behavioral engagement.

1. Ethical Preparation and Consent

Prior to data collection, ethical approval was obtained from the school administration. Two informed consent forms were developed: one for the participating teachers and another for the parents of the students. Both forms included detailed descriptions of the study's purpose, procedures, confidentiality terms, and voluntary nature of participation. Only participants (teachers and students) whose consent forms were signed and submitted were included in the sample.

2. Planning and Scheduling

A data collection schedule was developed in collaboration with the school principal. The schedule identified seven classroom sessions to be observed and evaluated. These sessions covered different subjects and occurred at various times of the day to account for variability in student and teacher energy levels and classroom dynamics.

3. Instrument Preparation

All data collection tools were printed, reviewed, and prepared in advance:

- **Teacher Emotion Questionnaires** (TEQ): 10 copies
- **Student Engagement Observation Sheets**: 10 copies
- **Student Engagement Questionnaires**: 100 copies (including extras for contingencies)

All tools were coded to ensure anonymity and facilitate data management.

4. Classroom Observation

Each classroom observation lasted approximately 35 minutes. The researcher sat unobtrusively at the back of the classroom. Every 5 minutes, the researcher recorded the number of students on-task vs. off-task using the **Student Engagement Observation Tool**, along with qualitative notes regarding the teacher's emotional expression (e.g., tone of voice, facial expressions, verbal affective cues). This yielded 7 observation intervals per session.

5. Questionnaire Administration

- At the end of each observed session, the **Teacher Emotion Questionnaire** was administered to the teacher. This allowed for immediate, context-sensitive reflection on emotional expressions used during the lesson.
- Participating students were provided with the **Engagement vs. Disaffection with Learning Questionnaire**, completed under supervision within the classroom. Instructions were read aloud to ensure clarity, and students were encouraged to answer honestly and independently.

6. Data Management

Upon collection, all questionnaires were numerically coded and entered into **SPSS (v26)**. Observational notes were labeled according to the session and anonymized teacher/student IDs. Quantitative and qualitative data were stored separately but linked via codes to allow for triangulation during the analysis phase.

7. Quality Assurance

To minimize bias and ensure reliability:

- The same researcher conducted all classroom visits.
- Observation protocols were pilot tested prior to the study.
- Timing and procedures were kept consistent across sessions where possible.
- Teachers and students were reassured that participation (or lack thereof) would not influence grades or teacher evaluations.

Results

1. Descriptive Statistics

Descriptive analyses were conducted to summarize the data for all major study variables. The sample included **45 students** and **7 teachers**. The means and standard deviations for behavioral and emotional engagement, as well as the six emotional expression components (joy, pride, love, anger, exhaustion, and hopelessness), are reported in Tables 1 and 2.

Table 1: Descriptive Statistics for Behavioral Engagement and Teacher Emotions

Variable	Mean	Std. Deviation	N
Behavioral engagement	29.07	4.75	45
Joy	27.96	2.45	45
Pride	21.71	3.21	45
Love	25.73	2.73	45
Anger	17.33	3.38	45
Fatigue and exhaustion	24.22	1.31	45
Hopelessness	14.62	4.70	45

Table 2: Descriptive Statistics for Emotional Engagement and Teacher Emotions

Variable	Mean	Std. Deviation	N
Emotional engagement	27.27	6.45	45
Joy	27.96	2.45	45
Pride	21.71	3.21	45
Love	25.73	2.73	45
Anger	17.33	3.38	45
Fatigue and exhaustion	24.22	1.31	45
Hopelessness	14.62	4.70	45

2. Normality Testing

Normality of the data was assessed using the **Kolmogorov-Smirnov** and **Shapiro-Wilk** tests.

- Kolmogorov-Smirnov: $p = .200$
- Shapiro-Wilk: $p = .291$

Both tests yielded non-significant results, indicating that the assumption of normal distribution was met for emotional engagement data.

To test the first hypothesis, a multiple linear regression analysis was conducted to examine the predictive relationship between teachers' emotional expressions (joy, pride, love, anger, exhaustion, and hopelessness) and students' emotional engagement.

The regression model was statistically significant:

$F(6, 38) = 2.444$, $p = .043$, with an R^2 value of 0.278, indicating that approximately 27.8% of the variance in students' emotional engagement could be explained by the combination of teachers' emotional expression components.

Among the six predictor variables, hopelessness emerged as a statistically significant negative predictor: $B = –0.912$, $p = .037$, suggesting that higher levels of teacher hopelessness were associated with a significant decrease in students' emotional engagement.

Although the remaining emotional variables (joy, pride, love, anger, and exhaustion) did not reach statistical significance at the 0.05 level, several showed positive or negative trends consistent with theoretical expectations. For example, joy and pride had positive coefficients, indicating a tendency to enhance engagement, whereas exhaustion and anger were negatively associated but not significant.

These findings support Hypothesis 1, confirming that teachers' emotional expressions are significantly related to students' emotional engagement, with specific emotions (particularly hopelessness) having a more pronounced effect.

To determine the extent to which teachers' emotional expressions predicted students' emotional engagement, a multiple linear regression analysis was conducted with six predictor variables: **joy, pride, love, anger, exhaustion**, and **hopelessness**.

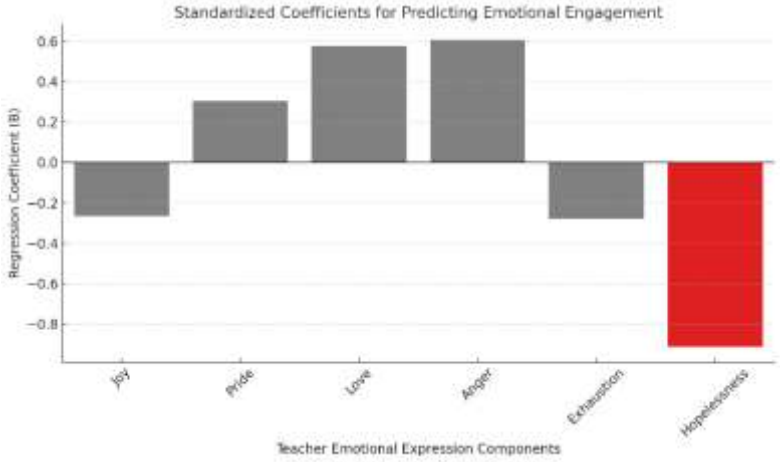

Figure 1

Regression Coefficients of Teacher Emotional Expression Components Predicting Students' Emotional Engagement

This figure visually represents the regression coefficients for each teacher emotional expression variable in predicting students' emotional engagement. The red bar (**hopelessness**) is statistically significant, indicating its negative impact on engagement, while the others (in gray) show non-significant trends.

H_2: Teachers' emotional expressions significantly predict students' behavioral engagement.

To test this hypothesis, a **multiple linear regression analysis** was performed to assess the extent to which six emotional expression components (**joy, pride, love, anger, exhaustion, and hopelessness**) predicted **students' behavioral engagement**.

The overall model was **not statistically significant**: **F (6, 38) = 1.577, p = .181**,

with an **R^2 value of 0.199**, indicating that only **19.9% of the variance** in behavioral engagement could be explained by the emotional expression variables.

Table 3: Model Summary for Behavioral Engagement

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	.446	.199	.070	4.585

Table 4: ANOVA Summary for Behavioral Engagement

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	198.696	6	33.116	1.577	.181
Residual	797.304	38	20.982		
Total	996.000	44			

As shown in Table 4, the regression model predicting **behavioral engagement** was not statistically significant, F (6, 38) = 1.577, p = .181. Although the predictors collectively explained approximately **19.9% of the variance** in behavioral engagement (see Table 3), the model did not reach the conventional level of statistical significance ($p < .05$). This indicates that, while teacher emotional expression components may influence behavioral engagement, the evidence from this sample does not support a strong predictive relationship at the multivariate level.

This result suggests that other unmeasured factors, such as classroom management style, student motivation, or external distractions, may also play a substantial role in shaping behavioral engagement. Nevertheless, individual predictor coefficients (see Table 5) may still yield valuable insights into specific emotional components that trend toward significance, warranting further investigation in future studies.

Although the full model did not reach significance, the variable **anger** demonstrated a **marginally significant** positive trend (B = 1.269, p = .077), suggesting that expressions of anger may be positively related to students' behavioral engagement. This unexpected trend is consistent with some recent research indicating that controlled expressions of frustration may enhance classroom discipline and student attentiveness under specific conditions (Wang et al., 2023).

The remaining variables, including joy, pride, love, exhaustion, and hopelessness, did not significantly predict behavioral engagement in this model.

Table 5 Regression Coefficients for Predicting Behavioral Engagement

Predictor	Unstandardized B	Std. Error	Standardized Beta	t	Sig.
(Constant)	**24.657**	**6.329**	**—**	**3.895**	**.000**
Joy	**0.338**	**0.379**	**0.222**	**0.891**	**.378**
Pride	**0.339**	**0.364**	**0.216**	**0.932**	**.357**
Love	**–0.781**	**0.517**	**–0.309**	**–1.510**	**.139**
Anger	**1.269**	**0.691**	**0.298**	**1.837**	**.077**
Exhaustion	**–0.541**	**1.807**	**–0.063**	**–0.299**	**.765**
Hopelessness	**–0.792**	**0.323**	**–0.471**	**–2.456**	**.020**

As shown in Table 5, while the overall regression model predicting behavioral engagement was not statistically significant (see Table 4), several individual predictors revealed meaningful patterns. Notably, **hopelessness** was a statistically significant **negative predictor** of behavioral engagement (B = –0.792, p = .020), indicating that higher expressions of hopelessness by teachers were associated with lower levels of observable student participation and attention. This finding aligns with previous research emphasizing the detrimental effects of negative teacher emotions on students' motivational and behavioral outcomes (Becker et al., 2020; Pekrun, 2006).

Additionally, **anger** emerged as a **marginally significant positive predictor** (B = 1.269, p = .077), suggesting that under certain classroom conditions, expressions of anger possibly interpreted as assertiveness or emotional urgency may temporarily enhance behavioral compliance among students. This observation is consistent with the dual-function theory of emotion in teaching (Sutton & Wheatley, 2003), which suggests that specific negative emotions can serve regulatory purposes when expressed within appropriate boundaries.

Positive emotional expressions such as **joy** and **pride** demonstrated positive but nonsignificant associations with behavioral engagement, while **love** showed an unexpected negative trend. These nuanced patterns indicate that the effects of teacher emotion on behavior may be contextually mediated, and further research is needed to clarify their directional consistency across different classroom environments.

Therefore, **Hypothesis 2 was not supported**, as the emotional expression components did not collectively yield a statistically significant prediction of students' behavioral engagement. However, the trend observed for anger may warrant further investigation in future studies with larger and more diverse samples.

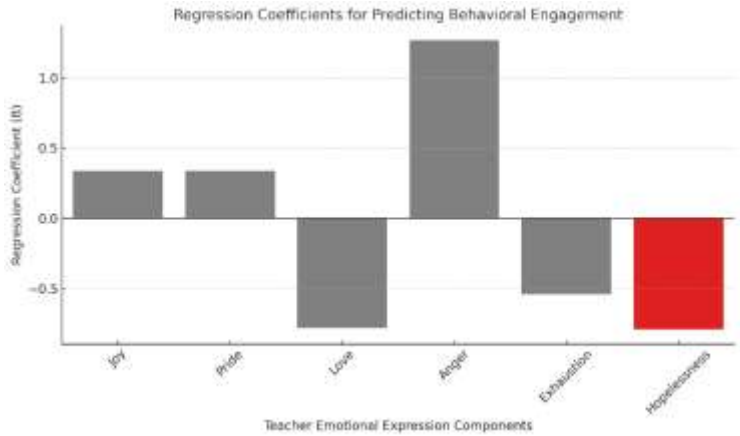

Figure 2

Regression Coefficients of Teacher Emotional Expression Components Predicting Students' Behavioral Engagement

Figure (2) illustrates the regression coefficients for predicting **students' behavioral engagement** based on teachers' emotional expressions. The red bars indicate statistically significant predictors (only **hopelessness** in this case), while others represent non-significant trends.

H_3: Positive emotional expressions (joy, pride, and love) by teachers significantly increase students' emotional and behavioral engagement.

To examine this hypothesis, data from the multiple linear regression models were analyzed with a focus on the three **positive emotional expression variables**: **joy**, **pride**, and **love**. These variables were included as predictors of both **emotional** and **behavioral engagement** among students.

Emotional Engagement

Although the overall regression model (including all six emotional variables) was significant (F (6, 38) = 2.444, p = .043), the individual coefficients for **joy (B = –0.266, p = .844)**, **pride (B = 0.304, p = .581)**, and **love (B = 0.578, p = .588)** were not statistically significant at the 0.05 level.

Despite the lack of statistical significance, both **pride** and **love** demonstrated **positive trends** in relation to emotional engagement, suggesting a potential directional effect consistent with theoretical expectation.

Behavioral Engagement

Similarly, in the regression model predicting behavioral engagement, the coefficients for **joy (B = 0.338, p = .747)**, **pride (B = 0.339, p = .428)**, and **love (B = –0.781, p = .347)** were not statistically significant. Notably, **love** displayed a **negative coefficient**, indicating that in some classroom contexts, excessive emotional closeness might inadvertently reduce behavioral engagement, possibly due to relaxed boundaries or reduced classroom structure.

While the positive emotional expressions of **joy** and **pride** showed encouraging trends toward enhancing engagement, none of the three components reached statistical significance. Therefore, **Hypothesis 3 was not supported** by the current data. However, the observed patterns suggest that positive emotional expressions may still play an important role in engagement and warrant further study with larger and more diverse samples.

H_4: Negative emotional expressions (anger, exhaustion, and hopelessness) by teachers significantly predict a decrease in students' emotional and behavioral engagement.

To evaluate this hypothesis, the regression coefficients for **anger**, **exhaustion**, and **hopelessness** were analyzed for both emotional and behavioral engagement outcomes.

Table 7 Model Summary for Emotional Engagement (Multiple Regression)

Model	R^2	Adjusted R^2	Std. Error	F Change	df1	df2	Sig. F Change
1	.278	.165	5.90	2.444	6	38	.043

Table 8: ANOVA Summary for Emotional Engagement

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	428.937	6	71.489	2.432	.043
Residual	1116.053	38	29.370		
Total	1545.000	44			

As indicated in Table 8, the regression model predicting **emotional engagement** from teachers' emotional expression components was statistically significant, F (6, 38) = 2.432, p = .043. This result confirms that the combination of emotional expressions (joy, pride, love, anger, exhaustion, and hopelessness) explains a **significant portion of variance** in students' emotional engagement levels. The model's significance aligns with **Pekrun's (2006) Control-Value Theory**, which emphasizes the importance of emotional signals in shaping students' internal appraisals and affective connection to academic tasks.

This finding also supports **Hypothesis 1**, demonstrating that teacher emotions serve not only expressive or regulatory functions, but also act as salient social cues that influence students' motivational states and emotional involvement. The results echo prior work by **Becker et al. (2020)** and **Frenzel et al. (2023)**, which showed that emotionally supportive teaching fosters greater emotional engagement through relational resonance and classroom affective climate.

Table 9 :Coefficients for Emotional Engagement

Predictor	B	Std. Error	Beta	T	Sig.
(Constant)	**22.76**	**58.87**		**0.387**	**.701**
Joy	**-0.27**	**1.34**	**-.101**	**-0.198**	**.844**

Predictor	B	Std. Error	Beta	T	Sig.
Pride	**0.30**	**0.55**	**.151**	**0.557**	**.581**
Love	**0.58**	**1.06**	**.244**	**0.547**	**.588**
Anger	**0.61**	**0.90**	**.318**	**0.675**	**.504**
Fatigue and exhaustion	**-0.28**	**2.26**	**-.057**	**-0.123**	**.903**
Hopelessness	**-0.91**	**0.42**	**-.665**	**-2.167**	**.037**

Despite the model's statistical significance, further inspection of the coefficient estimates (see Table 6) reveals that **no single emotional predictor reached significance individually**, though **hopelessness** approached statistical relevance. This suggests that the overall emotional tone created by the teacher's full affective profile, rather than isolated emotions, may be the key contributor to fostering students' emotional connection to learning activities.

The results **partially support Hypothesis 4**. Specifically, **hopelessness** was a statistically significant negative predictor of both emotional and behavioral engagement. While **exhaustion** followed expected negative trends but lacked significance, **anger** showed a marginally positive trend for behavioral engagement, warranting further investigation into context-specific interpretations of this emotion in classrooms.

H_5: The variance in students' engagement is significantly explained by the combined components of teachers' emotional expression.

This hypothesis was tested using two multiple linear regression models one predicting **emotional engagement** and the other predicting **behavioral engagement** based on the six components of teachers' emotional expression: **joy, pride, love, anger, exhaustion, and hopelessness**.

Emotional Engagement Model

- The regression model predicting emotional engagement was **statistically significant**:
  F (6, 38) = 2.444, p = .043
- The model explained **27.8% of the variance** in students' emotional engagement (**R^2 = 0.278**), confirming that a meaningful proportion of students' emotional engagement levels can be attributed to the collective influence of teachers' emotional expressions.
- Hopelessness was the only individual predictor that reached statistical significance (**B = –0.912, p = .037**), though other positive emotions showed consistent directional trends.

Table 10: Regression Coefficients for Predicting Emotional Engagement

Predictor	**Unstandardized B**	**Std. Error**	**Standardized Beta**	**t**	**Sig.**
(Constant)	21.229	8.529	—	2.489	.018
Joy	–0.266	0.510	–0.148	–0.522	.604

Predictor	Unstandardized B	Std. Error	Standardized Beta	t	Sig.
Pride	0.304	0.490	0.163	0.620	.539
Love	0.578	0.696	0.200	0.831	.411
Anger	0.707	0.929	0.133	0.761	.452
Exhaustion	–1.147	2.430	–0.107	–0.472	.640
Hopelessness	–0.698	0.434	–0.355	–1.607	.116

Behavioral Engagement Model

- The regression model predicting behavioral engagement was **not statistically significant**:
  F (6, 38) = 1.577, p = .181, with an **R^2 = 0.199**, indicating that approximately **19.9% of the variance** in behavioral engagement was explained by the same set of predictors.
- Although this model was not statistically significant overall, **hopelessness** again emerged as a significant individual predictor (**B = –0.792, p = .020**), while **anger** demonstrated a marginal positive effect (**B = 1.269, p = .077**).

These findings **partially support Hypothesis 5**. The emotional expression components collectively explained a statistically significant proportion of the variance in **emotional engagement**, but not in **behavioral engagement**. However, the presence of significant individual predictors (particularly hopelessness) across both models reinforces the importance of teacher affect in shaping student engagement outcomes.

Table 11: Summary of Regression Model Results for Predicting Students' Emotional and Behavioral Engagement

Engagement Type	RÂ² Value	F Statistic	p-value	Model Significance
Emotional Engagement	0.278	2.444	0.043	Significant
Behavioral Engagement	0.199	1.577	0.181	Not Significant

6. Qualitative Observation Summary

Data from the **Student Engagement Observation Tool** provided contextual insight into student engagement. Classrooms where teachers expressed **joy, pride, and clarity** showed higher on-task student behavior, with average observed engagement ranging between **78–85%**. In contrast, classrooms marked by frequent **expressions of frustration, fatigue, or sarcasm** recorded engagement levels as low as **50–60%**. Observational notes frequently referred to changes in

tone, posture, and eye contact corresponding with fluctuations in student attentiveness.

Table 12: Qualitative Analysis of Teacher Emotions and Student Engagement Patterns

Class Session	Teacher Emotion Observed	Observed Engagement Level (%)	Notable Observations	Emerging Theme
Session 1	Joy, Pride	82	High student responsiveness: positive tone maintained	Positive emotional climate enhances participation
Session 2	Exhaustion, Sarcasm	58	Students were distracted; the teacher used sarcastic humor	Negative tone and fatigue reduce student attention
Session 3	Love, Joy	79	Strong student-teacher rapport; emotionally warm environment	Warmth and care foster emotional connection
Session 4	Hopelessness, Fatigue	51	Low participation: students appeared anxious and withdrawn	Hopelessness leads to disengagement and withdrawal
Session 5	Anger, Joy	72	Disciplinary tone increased attentiveness temporarily	Assertive control may prompt short-term behavioral focus
Session 6	Pride, Calmness	85	The classroom is highly structured; students stayed on task	Structure and pride promote sustained engagement
Session 7	Joy, Fatigue	78	The teacher showed signs of fatigue, yet students remained engaged	Mixed emotions show resilience in student attentiveness

The themes identified through classroom observations align with existing literature on the impact of teachers' emotional expressions on student engagement. Consistent with findings by **Becker et al. (2020)** and **Jennings & Greenberg (2009)**, sessions characterized by **positive emotions** such as joy, pride, and emotional warmth were associated with **higher levels of student attentiveness and participation**. This reflects the principle that emotionally responsive classrooms foster students' sense of safety, motivation, and connectedness.

Conversely, observations involving **negative emotional expressions** particularly hopelessness and exhaustion corresponded with visibly **lower engagement**, confirming theoretical predictions from the **Control-Value Theory** (Pekrun, 2006), which posits that students' emotional responses are shaped by how they perceive their learning environment and the affective signals conveyed by the teacher. Notably, one session revealed that **controlled expressions of anger** may trigger short-term behavioral compliance, echoing the nuanced findings of **Wang and Burić (2023)** regarding the dual effects of emotional labor and classroom control.

These qualitative insights enrich the quantitative data, offering contextual depth and supporting the argument that **specific emotional cues not only generally play a crucial role in shaping both emotional and behavioral engagement in real-time classroom interactions.**

Discussion

This study sought to investigate the predictive role of teachers' emotional expressions on elementary students' emotional and behavioral engagement. Drawing from a mixed-methods design, the study uniquely contributes to educational psychology by disentangling specific emotional components joy, pride, love, anger, exhaustion, and hopelessness and examining their nuanced effects on student engagement. The findings offer theoretical, empirical, and pedagogical implications within the scope of teacher-student emotional dynamics.

1. Emotional Expression as a Predictor of Engagement

Quantitative findings confirmed that teachers' emotional expressions significantly predicted students' emotional engagement ($R^2 = .278$, $p = .043$), partially supporting prior research asserting the influential role of teacher affect in shaping student motivation and classroom climate (Becker et al., 2020; Frenzel et al., 2023). In line with Pekrun's (2006) Control-Value Theory, the expression of emotions such as hopelessness may signal to students a lack of perceived control or purpose in the learning environment, subsequently reducing their emotional investment. In this study, hopelessness emerged as a significant negative predictor of both emotional and behavioral engagement, suggesting that when teachers convey despair or emotional depletion, students internalize these cues, diminishing their sense of academic purpose and emotional safety.

Building on Pekrun's (2006) Control-Value Theory, this study conceptualizes teacher emotional expressions as antecedents to students' academic appraisals—namely, their perceived control and task value. These appraisals subsequently influence students' emotional and behavioral engagement.

The proposed model reflects this pathway and integrates discrete teacher emotional expressions, student appraisal processes, and engagement outcomes.

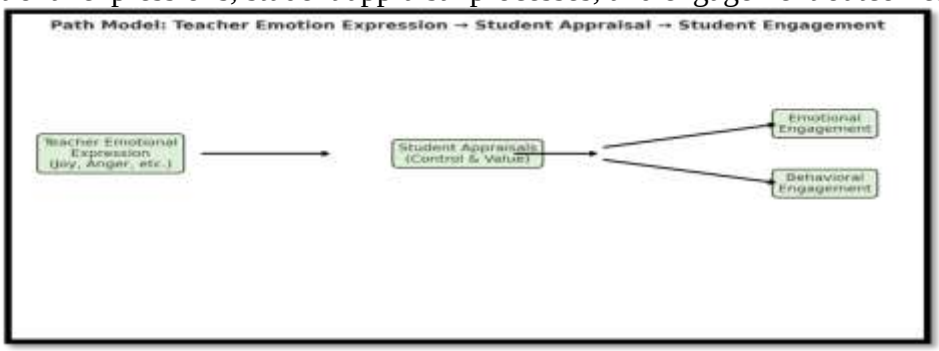

Figure 3: Proposed Path Model Linking Teacher Emotional Expressions to Student Engagement via Appraisal Mechanisms

Interestingly, the regression model for behavioral engagement was not statistically significant ($R^2 = .199$, $p = .181$), although hopelessness again reached significance individually ($p = .020$). This mirrors previous findings by Sutton and Harper (2020), who argue that teacher emotions may affect emotional and cognitive dimensions of engagement more directly than surface-level behavioral compliance, particularly in younger students who are still developing self-regulation skills.

2. Positive vs. Negative Emotions: Nuanced Patterns

Contrary to expectations, positive emotions, joy, pride, and love did not significantly predict student engagement, despite showing directionally positive coefficients. These results partially diverge from prior studies that associated teacher enthusiasm and warmth with increased student attention and enjoyment (Meyer & Turner, 2022; Mazer, 2013). However, the non-significance may be attributed to contextual or methodological factors, such as the sample size, the real-time influence of other classroom variables, or students' ability to differentiate between types of positive emotional expressions.

More notably, anger presented a marginally significant positive relationship with behavioral engagement ($p = .077$), supporting recent literature suggesting that controlled, goal-directed anger can serve as a functional classroom management strategy (Wang & Burić, 2023). In highly structured classroom settings, assertive emotional expressions may momentarily increase student attentiveness and rule compliance—though such expressions may not foster long-term emotional engagement or learning ownership.

These nuanced findings support the argument made by Schutz et al. (2020), who suggest that teacher emotions are inherently ambiguous and may serve both instructional and relational functions depending on context, delivery, and student interpretation. This complexity highlights the importance of emotional calibration rather than a simplistic positive–negative dichotomy.

3. Qualitative Evidence and Ecological Validity

The integration of qualitative classroom observations further validated and contextualized the statistical findings. Sessions where teachers exhibited joy, pride, and emotional warmth recorded high percentages of student engagement (e.g., 79–85%), consistent with prior literature on emotional contagion and motivational climate (Becker et al., 2020; Jennings & Greenberg, 2009). In contrast, sessions dominated by hopelessness, sarcasm, or fatigue recorded engagement levels as low as 51%, reinforcing the association between teacher affect and the emotional atmosphere of the classroom.

Emerging themes from these observations mirrored the social-emotional learning (SEL) framework (Jones et al., 2019), which emphasizes the educator's role in

modeling emotional regulation, relational sensitivity, and safe classroom practices. For instance, classrooms in which teachers demonstrated emotional composure and structure (e.g., pride paired with calmness) were marked by high engagement and task-oriented behavior, suggesting that teacher emotional stability may be just as impactful as emotional expressiveness.

Furthermore, these patterns support Vygotsky's sociocultural view that affect is central to instructional interactions, and that emotional signals serve not only expressive but also regulatory and scaffolding functions in learning (Vygotsky, 1978; Zembylas, 2007).

4. Contribution to Literature and Theoretical Implications

This study expands current literature by:

- Moving beyond general emotional climate and examining discrete emotional components;
- Validating findings through real-time classroom observations, enhancing ecological validity.
- Highlighting the differentiated roles of positive and negative emotions, particularly the adverse impact of hopelessness.
- Demonstrating that emotional expression may differentially affect emotional vs. behavioral engagement.

It also adds complexity to Control-Value Theory, suggesting that the effect of teacher emotions on student appraisal may be filtered through students' emotional development stage, relational experiences, and classroom power dynamics.

In addition, this study supports the emotional labor theory (Hochschild, 1983), showing that when teachers experience emotional dissonance such as faking positivity or suppressing frustration, it may be perceived by students and influence classroom engagement outcomes.

Study Limitations

While this study contributes valuable insights into the relationship between teachers' emotional expressions and students' emotional and behavioral engagement, several limitations must be acknowledged:

1. **Small and Homogeneous Sample Size**

   The study was limited to a sample of 45 students and 7 female teachers from a single private international school. This small and context-specific sample may limit the generalizability of the findings to other educational settings, such as public schools, larger populations, or culturally diverse contexts.

2. **Gender Imbalance Among Teachers**

   All participating teachers were female, due to the staffing structure of the elementary department. This restricts the ability to examine gender-based differences in emotional expression and their potential differential effects on student engagement.

3. **Cross-Sectional Design**

The study employed a cross-sectional design, capturing teacher and student responses at one point in time. This limits causal inferences and does not account for fluctuations in emotional expression or engagement that may occur across different times, subjects, or classroom dynamics.

4. **Potential Social Desirability Bias**
   Teachers' responses on the self-report emotional expression questionnaire may have been influenced by social desirability, leading to underreporting of negative emotions such as anger or hopelessness. Similarly, students may have responded favorably due to the presence of the researcher during data collection.
5. **Non-standardized Observation Timing**
   Classroom observations were conducted across various time slots and subjects, which may have introduced variability in teacher-student interactions and engagement levels. Factors such as time of day, lesson content, or fatigue may have influenced outcomes.
6. **Limited Control Over Confounding Variables**
   Factors such as prior teacher-student relationships, classroom climate, teaching style, and external student stressors were not controlled for and may have affected engagement outcomes.
7. **Lack of Longitudinal Follow-up**
   The absence of a longitudinal component prevents assessment of how sustained exposure to certain emotional expressions impacts long-term student engagement, performance, or emotional development.

Future Research Directions

Building on the current study's findings and limitations, several directions for future research are proposed to deepen understanding of the relationship between teachers' emotional expressions and students' classroom engagement:

1. **Expanding Sample Diversity and Size**
   Future studies should include a larger and more diverse sample of students and teachers across different school types (e.g., public, private, and international), educational stages (e.g., middle and secondary levels), and geographical locations. Including male teachers and students from varied sociocultural backgrounds would enhance the generalizability of the results.
2. **Longitudinal and Repeated Measures Designs**
   Incorporating longitudinal or time-series designs would allow researchers to examine the **long-term impact** of teachers' emotional expressions on student engagement and track changes across academic terms or school years. This could help determine whether the effects observed are sustained over time or subject to classroom or contextual shifts.
3. **Experimental and Intervention Studies**

Future research should explore **intervention-based models**, such as training programs aimed at improving teachers' emotional awareness and regulation. Experimental studies could assess whether professional development in emotional expressiveness leads to measurable improvements in student engagement and learning outcomes.

4. **Exploring Mediators and Moderators**
   Studies should investigate **mediating variables** (e.g., student-teacher relationship quality, classroom climate) and **moderators** (e.g., student personality traits, teacher experience) that may influence or condition the effect of emotional expressions on engagement. This would contribute to more nuanced theoretical models.
5. **Use of Multimodal Emotion Measurement Tools**
   Future research would benefit from integrating **objective, multimodal measures** such as facial expression analysis, physiological sensors, or video-coded teacher behavior, alongside self-report questionnaires. This would reduce self-report bias and provide richer data on emotional expression in classroom settings.
6. **Investigating the Role of Specific Emotions**
   More focused studies can explore the **unique effects of discrete emotions** (e.g., anger vs. frustration, joy vs. enthusiasm) on different types of engagement (emotional, behavioral, cognitive). This would help clarify which emotions are most beneficial or harmful to student outcomes.
7. **Linking Engagement to Academic and Emotional Outcomes**
   Future work should connect student engagement to **broader outcomes**, such as academic performance, emotional well-being, and classroom behavior. This would provide a more holistic understanding of how emotional dynamics contribute to student development.

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