

# Investigation and Research on the Impact of Teachers' Emotions on Students' Concentration

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**Abstract:** Previous studies on classroom concentration were conducted from the perspective of teachers, without considering students' real feelings. This study, starting from students' feelings of classroom concentration, sent out questionnaires to undergraduates of different levels and natures of schools. Through analysis and research, it was found that teachers' emotions indirectly affect students' concentration through students' individual emotions and classroom atmosphere. On this basis, it is suggested that teachers can improve classroom concentration through the correct emotional expression.

**Keywords:** Teachers' emotions; Students' individual emotions; Classroom atmosphere; Classroom concentration

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## 1. Introduction

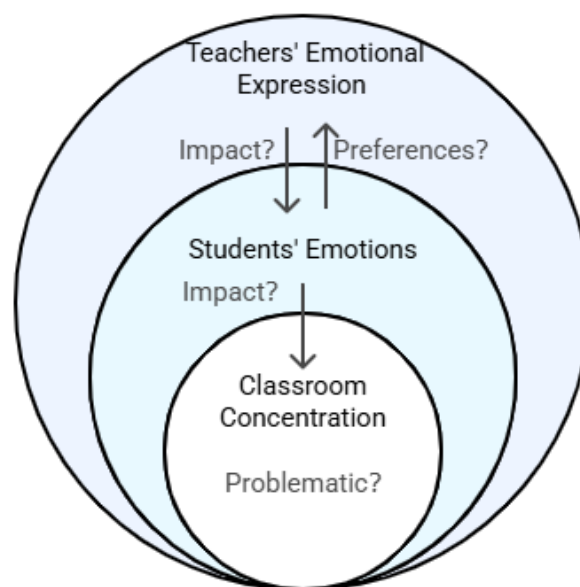
Classroom concentration is the ability to focus attention on learning activities, essential for efficiency, understanding content logic, integrating knowledge, and completing tasks. Its opposite—distraction—hinders knowledge absorption and innovation. Improving it is a vital teaching skill studied by scholars<sup>[1-5]</sup>. For example, Xu *et al.* identified factors affecting concentration and improvement strategies via learning attitude changes<sup>[4]</sup>; Wang and Zhang analyzed physiological reasons and suggested content/method adjustments<sup>[1]</sup>; Zhao highlighted its role in cultivating craftsmanship. These studies emphasize concentration's importance and explore influencing factors (physiology, psychology, content, methods)<sup>[3]</sup>. Other scholars examined the classroom atmosphere's impact<sup>[2,6-10]</sup>. Xu and Yang proposed atmosphere control to improve concentration; they built an emotion management model using psychological contracts<sup>[2]</sup>; Qiu found that teachers' negative emotions directly harm teaching effectiveness. Crucially, these prior studies adopted the teacher's perspective<sup>[9]</sup>.

This study uniquely investigates how teacher emotions affect student concentration from the student's perspective. We surveyed undergraduates across grades and diverse institution types. The analysis identifies: (1) How student concentration is affected in class; (2) Links between concentration, student emotions, and teacher emotions; (3) Specific teacher emotional expressions impacting student emotions (positive/negative). Based on this, we propose strategies for teachers to: (a) Use positive emotion to foster student positivity and thereby boost

concentration; (b) Minimize negative emotions (teacher/student) to prevent bad atmospheres, reduced course engagement, and impaired concentration.

## 2. Survey design and sample

In order to explore the impact of classroom teachers' emotions on student concentration, a survey was conducted from the perspective of students. In the questionnaire design, it is necessary to consider whether the research on classroom concentration is meaningful, that is, whether the problem of classroom concentration is common, whether it is serious, and whether there is a need for research; whether classroom concentration is affected by the emotions of teachers and students. Therefore, the questionnaire design involves four types of questions, and the logical relationship between them is shown in **Figure 1**.



**Figure 1.** The logic of questionnaire design

These four types of questions include: (1) The extent to which students' concentration is affected. (2) Whether students' emotions affect their concentration in class. (3) Whether teachers' emotional expressions affect students' individual emotions. Which emotional expressions of teachers can promote students' positive emotions, and which emotional expressions can lead to students' negative emotions, thus affecting their concentration. (4) Which emotional expressions of teachers do students like.

Each question category consists of several questions and has corresponding options for students to choose from. Therefore, the content of the questionnaire is shown in **Table 1**.

**Table 1.** Questionnaire content table

Question type	Question	Options
Impact of concentration	<b>Q1:</b> How often do you think you get distracted in class?	A. Almost never; B. Occasionally; C. Often; D. Always.
Do students' personal emotions affect their concentration?	<b>Q2:</b> To what extent do you think your emotions (such as anxiety, excitement) affect your concentration in class?	A. Very large; B. Relatively large; C. Average; D. Smaller.
	<b>Q3:</b> When you feel the classroom atmosphere is relaxed and pleasant, how long do you usually stay focused?	A. The whole class; B. More than 30 minutes; C. 15–30 minutes; D. Less than 15 minutes.
Does the teacher's emotional expression affect students' emotions?	<b>Q4:</b> Which of the following factors do you think mainly affect students' classroom emotions? (Multiple questions)	A. Teacher's attitude; B. Difficulty of course content; C. Interaction with classmates; D. One's own psychological state.
	<b>Q5:</b> How much do you think the level of positive emotions in teachers affects your ability to concentrate?	A. Very large; B. Large; C. Average; D. Small; E. No impact.
	<b>Q6:</b> How does your concentration change when your teacher displays enthusiasm or humor?	A. Significantly increased; B. Slightly increased; C. No change; D. Slightly decreased.
What expressions of teachers' emotions do students like?	<b>Q7:</b> What teacher behaviors might distract you from your focus due to emotional transmission?	A. Speaking too fast; B. Speaking too loud or too softly; C. Criticizing students frequently; D. Having a cold expression.
	<b>Q8:</b> Please rank the importance of teachers' emotional expressions (from most important to least important)	A. Enthusiastic and positive; D. Humorous and witty; C. Peaceful and stable; B. Serious and responsible.
	<b>Q9:</b> How do you think teachers should improve students' concentration through emotion management? (Multiple questions)	A. Keep smiling and maintain eye contact; B. Encourage students at the right time; C. Flexibly adjust the teaching pace; D. Avoid public criticism.

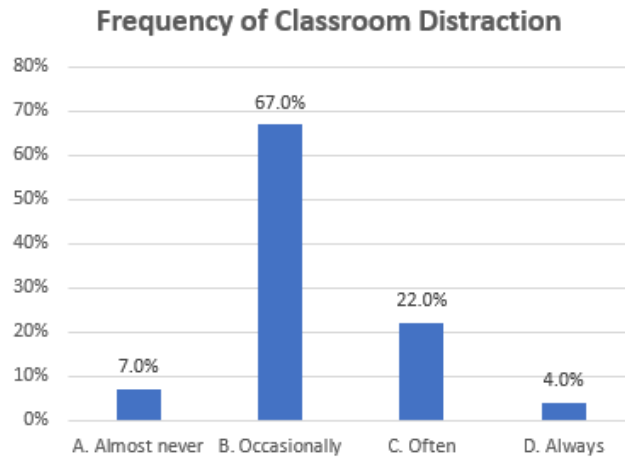
The study includes freshmen to seniors from four distinct Nanning, Guangxi universities (normal, vocational normal, police, private), reflecting broad representation.

The data samples collected are 265, including 107 from normal universities, 73 from vocational normal colleges, 50 from police colleges, and 35 from private colleges.

### 3. Key findings

The responses to the four types of questions are analyzed through statistics.

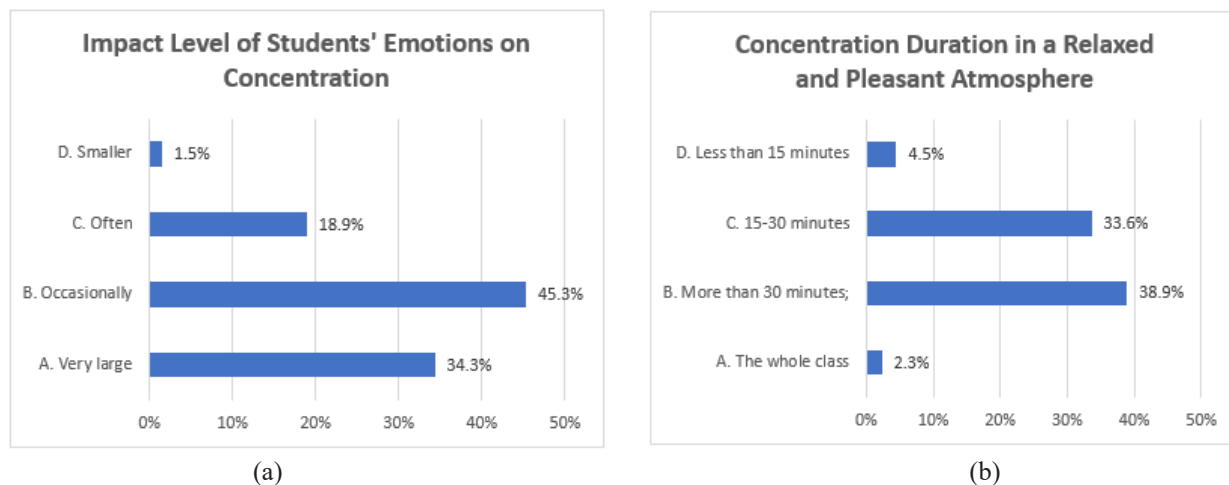
(1) Degree of concentration impact. The answers to question **Q1** in the questionnaire were statistically analyzed to obtain the proportion of students who selected each item, and a bar graph was drawn, as shown in **Figure 2**.



**Figure 2.** Frequency of classroom distraction

Only 7% of students are almost never distracted, while 93% of students have their attention affected, including 4 % who are always distracted, 22% who are often distracted, and 67% who are occasionally distracted. This survey result is consistent with the survey results by Xu *et al.* <sup>[4]</sup>, indicating that the problem of classroom concentration is a common phenomenon in colleges and universities. Therefore, from the perspective of students, research on classroom concentration is necessary and valuable.

(2) Impact of students' individual emotions on concentration. The proportion of responses to questions **Q2** (How much influence do students' emotions have on their concentration in class) and **Q3** (How long does students' concentration last when they feel the classroom atmosphere is relaxed and pleasant) were statistically analyzed, as shown in **Figures 3** (a) and (b).



**Figure 3.** Impact of students' individual emotions on their concentration

The statistical results show that 79 % of students believe that classroom emotions have an impact on concentration (34.3% of students chose “very big” and 45.3% chose “big”), and 23% of students believe that a pleasant classroom atmosphere can maintain concentration throughout the class, and 38.9% of students believe that a pleasant classroom atmosphere can maintain concentration for more than 30 minutes. This shows that students' classroom concentration is affected by personal emotions and overall emotions (classroom atmosphere). Positive emotions or atmosphere have the effect of promoting concentration.



(3) Impact of teachers' emotional expression on students' emotions. Based on responses to **Q4** ("Which factors mainly affect students' classroom emotions?" – multiple selection allowed), the following distribution was observed: Teacher attitude (emotional expression) emerged as the predominant factor, selected by 51.7% of respondents (137 occurrences); Difficulty of course content was identified by 45.3% (120 occurrences); Students' own psychological state accounted for 39.6% (105 occurrences); Peer interaction represented 37.0% (98 occurrences).

These results demonstrate that teachers' emotional expressions exert decisive influence on students' classroom emotions. The findings validate the significance of investigating pedagogical emotional expression as: A meaningful research focus given its dominant impact; A directly modifiable factor through targeted training; A controllable variable for optimizing classroom concentration.

The evidence confirms that intentional refinement of teachers' emotional expression represents a viable pathway for enhancing student engagement outcomes.

Statistical analysis of responses to questionnaire item **Q5** ("How much influence do you think the teacher's positive emotions have on your concentration?") revealed that 44.9% of students selected Very large and 32.5% selected Large. Combined with **Q6** results, this demonstrates strong agreement: 77.4% of students affirm teachers' positive emotions significantly impact concentration, while 97% report actual concentration improvement when teachers demonstrate enthusiasm or humor.

(4) Students' preferred teachers' emotional expressions.

**Q7** findings: 81% flagged fast speech (conveys nervousness/impatience), 75% cited volume extremes (indicates emotional instability), and 69% noted frequent criticism (triggers anxiety/resistance) as concentration-disrupting behaviors.

**Q8** analysis: Emotional expression rankings: Enthusiastic/positive (3.05); Humorous/witty (2.93); Serious/responsible (2.47); Peaceful/stable (1.94).

**Q9** results (**Table 2**):

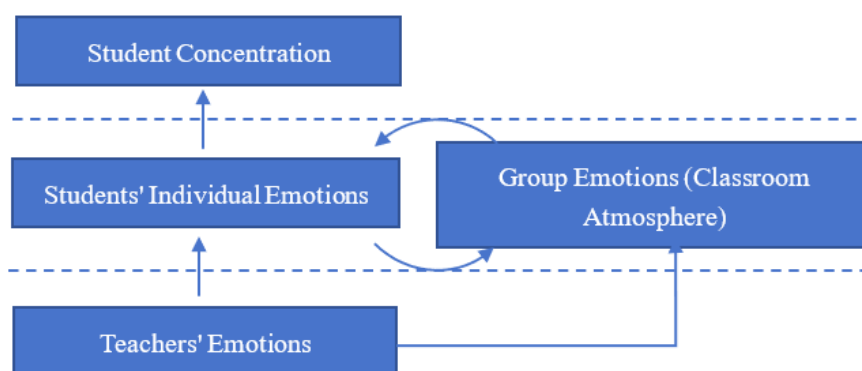
**Table 2.** Students' suggested teachers' emotion management strategies

Options	Description	Number of selections	Percentage
B	Encourage students at the right time	226	85.3%
C	Flexibly adjust the teaching rhythm	223	84.2%
A	Keep smiling and making eye contact	170	64.2%
D	Avoid public criticism	145	54.7%

Top emotion management strategies: Timely encouragement (85.3% – core strategy); Smiling/eye contact (64.2% – vital nonverbal tool); Avoiding public criticism (54.7% – reduces negativity).

## 4. Impact pathways and mechanisms

Through data analysis, under the premise of excluding physiological, psychological, and environmental factors, from the students' perspective, the teacher's emotions, students' individual emotions, students' group emotions (classroom atmosphere) in the classroom have the following relationship with students' concentration, as shown in **Figure 4**.



**Figure 4.** Ways in which teachers' and students' emotions affect concentration

Student emotions directly impact concentration (Q2: 79% agree). While a pleasant classroom atmosphere significantly boosts concentration (Q3: > 95% agree), it acts indirectly: it improves individual emotions, which then enhance concentration. Concentration, being an individual behavior, is directly driven by emotions, making the atmosphere's influence necessarily indirect.

Classroom atmosphere reflects the collective emotions of the students. For example, frequent individual criticism creates a negative atmosphere (Q7: 69% report reduced concentration), which lowers other students' emotions and thus their concentration.

Teachers' emotions affect student concentration in two ways:

Pathway 1: Teacher expression directed at individuals influences their emotions, thereby impacting their concentration (Q4: 51% cite teacher attitude as a factor). Encouragement, for instance, boosts positive emotions and focus.

Pathway 2: Teachers' overall emotional expression (e.g., enthusiasm) affects the classroom atmosphere, which then influences individual emotions and, ultimately, concentration (supported by Q6–Q9).

## 5. Tips for teachers to express emotions in class

Beyond knowledge transfer, classroom teaching involves teacher emotion transfer, which indirectly affects concentration and thus knowledge transfer efficiency/effectiveness. As natural beings, teachers inevitably experience diverse emotions<sup>[9]</sup>. While non-classroom-related emotions can typically be self-adjusted pre-class, classroom interactions also trigger emotions: student engagement (e.g., active interaction, task completion) fosters teacher positivity, whereas disruptions (e.g., chatting, sleeping, low engagement) generate negativity.

Appropriate teacher emotional expression promotes student positivity and concentration; poor emotion management spreads negativity, creating adverse classroom atmospheres and impairing effectiveness.

To enhance concentration, schools should support teachers in achieving appropriate emotional expression, while teachers should adopt: (1) Systematic support: Training in classroom emotion scenarios + mental health support system for unresolved negative emotions. (2) Management strategies: Timely encouragement/public praise for progress; Constructive (not public) feedback on errors; use "I observed..." phrasing focused on behavior (not personality) + improvement suggestions; Private corrections to avoid group negativity. (3) Expression techniques: Nonverbal: Smiling, enthusiastic demeanor; Verbal: Positive/affirmative language; open-ended questions; Engagement: Relevant cases/humor; interactive games; controlled humor timing; Professionalism: Fairness; consistent routines; separation of personal emotions.

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## Disclosure statement

The author declares no conflict of interest.

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