THE IMPACT OF TIME MANAGEMENT ON TEACHING EFFECTIVENESS IN HIGHER EDUCATION: STUDENTS' PERSPECTIVES

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Abstract. This study investigates the impact of time management on teaching effectiveness in higher education from students' perspectives in Chinese universities. Effective time management has increasingly been recognized as a critical component of successful teaching, as it enables instructors to organize learning activities, allocate sufficient time for key concepts, and create a more engaging and productive classroom environment. Based on a quantitative research design, data were collected from 200 undergraduate students enrolled at Chinese universities through a structured questionnaire. The proposed research model was analyzed using Structural Equation Modeling (SEM) with AMOS to examine the relationship between time management and teaching effectiveness. The results demonstrate that time management has a significant positive effect on teaching effectiveness, indicating that well-structured lesson planning, appropriate classroom pacing, and efficient use of instructional time enhance students' perceptions of teaching quality, classroom engagement, and learning outcomes. The findings further suggest that instructors' ability to effectively organize and manage classroom time plays a crucial role in fostering a supportive learning environment and improving overall instructional performance. This study contributes to the existing literature by emphasizing students' evaluative perspectives and identifying time management as a key determinant of teaching effectiveness in higher education. The findings also provide practical implications for university administrators and educators by highlighting the importance of strengthening faculty development programs and professional training in time management skills to improve teaching quality and enhance students' learning experiences.
Keywords: *time management, teaching effectiveness, student perspectives, higher education*

Introduction

In the contemporary landscape of higher education, characterized by rapid expansion, intensified academic competition, and increasing demands for quality teaching and learning outcomes, time management has emerged as a pivotal competency for both students and educators (Rehman, 2025). Particularly within the Chinese higher education context, where massification, performance evaluation systems, and global ranking pressures coexist, the efficient allocation and utilization of time resources have become central to achieving educational effectiveness (Xiao et al., 2025). Despite ongoing reforms aimed at improving teaching quality, challenges such as overloaded curricula, administrative burdens on faculty, and students' difficulties in balancing academic and personal commitments persist (Jha, 2025). These challenges highlight an urgent need to better understand how time management practices influence teaching effectiveness, especially from the perspective of students, who are the primary stakeholders and direct recipients of instructional activities. Students together with educators need effective time management skills as they determine teaching outcomes and student academic success (Wolters et al., 2025). Time management stands as a crucial factor in China's educational system because high competition increases the

academic demands directed toward students and their educators to achieve satisfactory results (Fu et al., 2025). This analysis studies how Chinese higher education institutions handle time management effects on educational results and instructor effectiveness. However, while existing discourse acknowledges the importance of time management, there remains limited empirical exploration of how students perceive its impact on teaching effectiveness, particularly in non-Western contexts. This gap suggests the necessity of a more nuanced, student-centered investigation.

Students require effective time management because it helps them balance their academic workload to perform better in their studies (Makiah and Nusron, 2025). Research investigations established that better time management leads to better educational results among students (Masnan et al., 2025). Time management workshops developed with structure produce meaningful improvements in academic self-efficacy levels of university students. Time management training produced lasting positive outcomes that lasted for several months according to research findings in. In the context of online education, particularly during the COVID-19 pandemic, time management skills became even more crucial. Students' adept at managing their time were better able to cope with the transition to online learning environments (Gudoniene et al., 2025). This highlights that time management is not only critical in traditional classroom settings but also plays a key role in adapting to new educational modalities. Nevertheless, prior studies have predominantly focused on student academic performance as the primary outcome variable, often neglecting the indirect pathways through which students' time management may shape their perceptions of teaching effectiveness. Furthermore, much of the existing literature adopts a unidirectional perspective, emphasizing individual student responsibility while overlooking the interactive dynamics between student behaviors and instructional practices (Goh, 2026).

Educational success and standards of teaching need time management capabilities from teachers to achieve effective delivery of lessons. Effective time administration allows instructors to teach curriculum content better while remaining more engaged with students and giving performance assessments on time. Research documents that teaching effectiveness improves when faculty members participate in time management courses. Students assess full-time faculty better than they do adjunct or part-time instructors because of strong time management abilities. Teaching staff who must navigate rising administrative duties in combination with growing class enrollments now strongly need proven time management techniques. Experts agree that time management education within professional training systems proves successful for teaching quality improvement. Despite these insights, existing research on educators' time management tends to rely heavily on self-reported data from teachers or institutional performance metrics, with insufficient attention given to students' evaluative perspectives. Additionally, there is a lack of integrated frameworks that simultaneously consider both student and teacher time management as interacting factors influencing teaching effectiveness. This limitation restricts a comprehensive understanding of how time-related behaviors shape the teaching–learning process. Against this backdrop, the present study aims to examine how time management influences teaching effectiveness in higher education from students' perspectives, with a particular focus on the Chinese context. By centering on students' evaluations, this study seeks to capture how both their own time management practices and their perceptions of instructors' time use jointly shape judgments of teaching quality.

The contributions of this study are threefold. First, it enriches the theoretical understanding of teaching effectiveness by incorporating time management as a multidimensional construct involving both students and educators. Second, it provides empirical evidence from a non-Western higher education system, thereby extending the generalizability of prior findings that are largely based on Western contexts. Third, by foregrounding students' perspectives, the study offers practical implications for curriculum design, faculty development, and institutional policy-making, particularly in integrating time management training into both student support services and teacher professional development programs.

Literature review

Time management

Time management generally refers to the process by which individuals plan, allocate, and control their time to achieve specific goals efficiently and effectively (Wolters et al., 2025). It involves a series of behavioral and cognitive strategies, including goal setting, prioritization, scheduling, and self-monitoring (Patzak et al., 2025). From a theoretical perspective, time management is often conceptualized as a self-regulation skill, closely related to constructs such as self-discipline, motivation, and executive functioning. Scholars have emphasized that effective time management is not merely about managing time itself, but about managing behaviors within time constraints to maximize productivity and outcomes (Alhasani and Orji, 2025). In educational contexts, time management is particularly critical, as both students and educators operate under structured schedules, deadlines, and performance expectations. The assessment students make regarding teaching quality directly reflects their personal time management performance and their instructors' capabilities to manage time effectively (Saleem and Akhtar, 2025). Students highly appreciate clearly organized course schedules together with prompt responses which leads to better overall satisfaction levels. Teachers and students need time management skills significantly according to research evidence about transitioning to online education (Amin et al., 2025). Structured and timely feedback stands essential for improving satisfaction among students and their academic achievements. Several difficulties exist in implementing successful time management systems though their benefits are widely acknowledged. Time management capability of teachers becomes limited when they face large classes with administrative responsibilities and performance standards. Specialized education programs demand powerful time management systems for teachers since these systems protect against burnout while boosting their academic performance. The problems facing teachers demonstrate why schools need to put forward institutional support and systemic changes that back improved time management systems.

A substantial body of empirical research has examined the relationship between time management and student outcomes. Findings consistently indicate that effective time management is positively associated with academic achievement, self-efficacy, and well-being. Students who are able to set clear goals, prioritize tasks, and adhere to study schedules are more likely to complete assignments on time and achieve higher grades. Moreover, time management has been identified as a key predictor of academic resilience, enabling students to cope with heavy workloads and adapt to challenging learning environments. With the rise of digital and online learning, the importance of

time management has become even more pronounced, as students are required to exercise greater autonomy and self-discipline in less structured environments.

Teaching effectiveness in higher education

Teaching effectiveness in higher education generally refers to the extent to which instructors facilitate student learning, engagement, and academic achievement through appropriate pedagogical practices, content delivery, and classroom management (Dai et al., 2025). It is a multidimensional construct that encompasses not only the transmission of knowledge but also the ability to stimulate critical thinking, foster student participation, and create a supportive learning environment (Xu, 2025). From a theoretical standpoint, teaching effectiveness is often grounded in constructivist learning theory, which emphasizes the active role of students in knowledge construction and highlights the importance of interactive and student-centered teaching approaches. Early research on teaching effectiveness primarily relied on observable instructor behaviors, such as clarity of explanation, organization of content, and enthusiasm (Gao, 2025). Over time, the focus has shifted toward more comprehensive evaluation frameworks that integrate multiple dimensions, including instructional design, assessment practices, feedback quality, and teacher–student interaction. For example, Marsh and Groves (1987) developed the widely used Students' Evaluation of Educational Quality (SEEQ) framework, which conceptualizes teaching effectiveness across dimensions such as learning value, instructor enthusiasm, organization, and rapport. This approach underscores the importance of students' perceptions as a key indicator of teaching quality.

A large body of empirical research has examined factors influencing teaching effectiveness in higher education. Findings suggest that effective teaching is closely associated with clear course structure, timely and constructive feedback, and active learning strategies (Li et al., 2025). Instructors who employ diverse teaching methods, encourage student participation, and adapt to learners' needs tend to achieve higher levels of teaching effectiveness. Moreover, the integration of technology in teaching, particularly in blended and online learning environments, has been shown to significantly influence teaching effectiveness by enhancing accessibility, flexibility, and student engagement (Mexhuani, 2025). Student evaluation has become one of the most widely used methods for assessing teaching effectiveness, as students are direct participants in the teaching–learning process. Their perceptions provide valuable insights into instructional quality, classroom experience, and learning outcomes. However, it is also recognized that student evaluations may be influenced by subjective factors such as expectations, motivation, and personal preferences, which necessitates cautious interpretation. In addition to student feedback, peer review and self-reflection are also commonly used to provide a more holistic assessment of teaching effectiveness.

Time management and teaching effectiveness in higher education

The relationship between time management and teaching effectiveness in higher education has attracted increasing scholarly attention, as both constructs are closely linked to educational quality and student learning outcomes. Time management serves as a foundational behavioral mechanism that shapes how teaching activities are planned, delivered, and evaluated, thereby exerting both direct and indirect influences on teaching effectiveness (Bargmann and Kauffeld, 2023). From a theoretical perspective,

this relationship can be understood through self-regulation theory and instructional process models, which suggest that effective use of time enhances goal attainment, instructional clarity, and learning engagement. Existing research indicates that instructors' time management plays a critical role in determining teaching effectiveness (Sahito and Väisänen, 2017). Teachers who effectively allocate time for lesson planning, classroom interaction, and assessment are more likely to deliver well-structured and coherent instruction. Efficient time use enables instructors to balance multiple responsibilities, including teaching, research, and administrative tasks, while maintaining high-quality classroom performance. Empirical studies have shown that timely feedback, appropriate pacing of lectures, and effective classroom time allocation significantly enhance students' learning experiences and satisfaction (Gul et al., 2021). In this sense, time management is not merely an organizational skill but a key component of pedagogical competence.

At the same time, students' time management also contributes to perceived teaching effectiveness. Students who manage their time effectively are better prepared for classes, more engaged in learning activities, and more capable of following instructional progress, which in turn positively influences their evaluation of teaching quality. In contrast, poor time management may lead to incomplete assignments, reduced participation, and lower comprehension, potentially resulting in less favorable perceptions of instructors, regardless of actual teaching quality. This suggests that teaching effectiveness is not solely determined by instructors' behaviors but is co-constructed through the interaction between teaching practices and student learning behaviors. Recent studies have begun to explore this interactive relationship, emphasizing that alignment between teachers' instructional pacing and students' time management capacities is crucial for optimizing learning outcomes (Saleem and Akhtar, 2025). For example, overly fast or slow teaching pace may create mismatches with students' ability to manage their study time, thereby reducing perceived teaching effectiveness. Similarly, the increasing adoption of online and blended learning environments has further highlighted the importance of time management on both sides, as flexible learning structures require greater autonomy and coordination. Teachers require substantial time management expertise to provide beneficial instruction and meet educational standards. When classrooms are time-efficient teachers can both teach all curriculum material properly and actively involve students while giving prompt assessments. The implementation of structured time management approaches leads to meaningful outcomes in educational learning assessments of specialized subjects. The effective management of time enables educators to better implement challenging educational initiatives which leads to better student knowledge absorption and understanding according to study findings.

Research gap

Despite the growing body of literature on time management and teaching effectiveness, several important gaps remain. First, most existing studies examine time management and teaching effectiveness as separate constructs, with limited efforts to integrate them into a unified analytical framework. This fragmentation restricts a comprehensive understanding of how time-related behaviors influence teaching quality. Second, prior research tends to adopt either a teacher-centered or student-centered perspective, while the interactive and co-constructed nature of teaching effectiveness has been largely overlooked. Third, although student evaluations are widely used to

assess teaching effectiveness, there is insufficient empirical evidence on how students' own time management influences their perceptions of teaching quality, potentially biasing evaluation outcomes.

Materials and Methods

The research uses a quantitative design to investigate how effective time management influences teaching effectiveness in higher education. Through quantitative methods the research finds statistics to measure the relationship between teachers' classroom time management abilities and their teaching effectiveness as perceived by students. Unlike prior designs that emphasize student achievement outcomes, this study explicitly treats teaching effectiveness as the primary dependent variable. The collected data will consist of quantitative measurements which will be gathered from surveys given to both educational personnel and students. However, consistent with the research objective, student responses will serve as the main data source for evaluating teaching effectiveness. Educators using surveys must report their time management methods and evaluations of teaching performance and assessments of student contentment about time use in their classes. Student-rated teaching effectiveness will be used as the key outcome variable to examine the impact of time management practices. The target population consists of educational staff working at Chinese higher education institutions which include professors and lecturers operating in different academic disciplines. At the same time, the core analytical sample consists of undergraduate students, as they are the direct evaluators of teaching effectiveness. The research team will utilize stratified random sampling to gain an equal distribution of participants from different academic bodies throughout all departments. The planned quantitative survey questionnaire will gather responses from 200 students which offers substantial dataset for statistical data analysis while ensuring widespread application of the study findings. This sample size is adequate for examining the relationship between time management (independent variable) and teaching effectiveness (dependent variable) using multivariate techniques.

The research instrument for educators will expand its scope to explore their observations about their time management strategies and their effects on teaching effectiveness. Five-point Likert scale measuring responses from 1 (Strongly Disagree) to 5 (Strongly Agree) will assess the variables of time management and teaching effectiveness in *Table 1*. The survey will be sent to respondents via Wenjuanxing. Analysis of the quantitative survey data will use descriptive statistics, Measurement model assessment, and structural equation analysis. The primary objective is to examine the impact of time management (independent variable) on teaching effectiveness (dependent variable). This research evaluates the statistical connections that form between educators' time management methods and their effectiveness when teaching students. Teaching effectiveness, as measured by student evaluations, will be treated as the key outcome variable throughout the analysis. The research will use identified patterns and correlations to measure the influence of educator time management practices on teaching effectiveness rather than secondary outcomes such as academic performance.

Table 1. *Survey items for variables.*

Variables and item code	Item description
Time manegement	My instructor implements a detailed lesson outline which covers the whole

	class duration.
TM1	The teacher successfully controls the duration of class sessions to handle important lesson material.
TM2	The instructor dedicates an adequate period of time to both explain content along with holding group discussions and taking student inquiries.
TM3	The breakdown between lecturing and interactive learning sessions maintained by my teacher appears suitable.
TM4	The lesson duration matches exactly with the schedule which my teacher has set.
TM5	The teacher keeps the classroom free of interruptions while maintaining a policy against devoting unnecessary time to non-curricular matters.
TM6	My instructor implements a detailed lesson outline which covers the whole class duration.
Teaching effectiveness	
TE1	The way my teacher manages time allows both students and instructors to avoid disruptions throughout the lesson.
TE2	My understanding of the lesson content improves whenever my teacher executes time management well.
TE3	Inadequate time management by the teacher causes both hurried and uncompleted educational sessions.
TE4	The proper management of time enables my teacher to create exciting learning environments.
TE5	The way my teacher manages their time directly impacts the way the class structure appears to me in terms of clarity and organization.

Results and Discussion

Descriptive statistics

The final sample consisted of 200 valid responses collected from undergraduate students in several Chinese universities. All respondents had direct experience with classroom teaching and were therefore capable of evaluating teaching effectiveness from a student-centered perspective. As shown in *Table 2*, the gender distribution was relatively balanced, with 48.0% male and 52.0% female respondents, which helps reduce potential gender bias in evaluating teaching effectiveness. In terms of age distribution, the majority of respondents were between 19 and 22 years old, accounting for approximately 73.0% of the total sample. This reflects the typical age range of undergraduate students in Chinese higher education institutions. Regarding academic year, sophomore students accounted for the largest proportion (34.0%), followed by junior students (27.0%), freshman (21.0%), and senior students (18.0%). This indicates that most respondents had sufficient exposure to university teaching practices, enabling them to provide reliable evaluations of teaching effectiveness. In terms of field of study, the sample included students from social sciences (29.0%), engineering (32.0%), business (24.0%), and other disciplines (15.0%). This disciplinary diversity enhances the representativeness and generalizability of the findings. Overall, the demographic characteristics suggest that the sample is appropriate for examining the relationship between time management and teaching effectiveness.

***Table 2**. Descriptive statistics results.*

Category	Frequency (N)	Percentage (%)
Gender		
Male	96	48.0%
Female	104	52.0%
Age		
≤18 years old	18	9.0%
19–20 years old	82	41.0%
21–22 years old	64	32.0%

≥23 years old	36	18.0%
Academic year		
Freshman	42	21.0%
Sophomore	68	34.0%
Junior	54	27.0%
Senior	36	18.0%
Field of study		
Social sciences	58	29.0%
Engineering	64	32.0%
Business	48	24.0%
Others	30	15.0%

Measurement model assessment

To evaluate the measurement model, reliability and validity were assessed using AMOS-based confirmatory factor analysis (CFA). Reliability was examined through Cronbach's alpha and composite reliability (CR), while convergent validity was assessed using standardized factor loadings and average variance extracted (AVE). As presented in *Table 3*, Cronbach's alpha values for both constructs exceed the recommended threshold of 0.70, indicating strong internal consistency. Specifically, time management ($\alpha = 0.912$) and teaching effectiveness ($\alpha = 0.905$) both demonstrate high reliability. Composite reliability values are also above 0.70, further confirming the stability of the measurement model. In terms of convergent validity, the AVE values for time management (0.662) and teaching effectiveness (0.645) are both above the recommended threshold of 0.50, indicating that the constructs explain a substantial proportion of variance in their respective indicators.

Table 3*. Construct reliability and validity.*

Construct	Cronbach's alpha	Composite reliability (CR)	Average variance extracted (AVE)
Time Management (TM)	0.912	0.921	0.662
Teaching Effectiveness (TE)	0.905	0.915	0.645

The impact of time management on teaching effectiveness

To examine the relationship between time management and teaching effectiveness, structural equation modeling (SEM) was conducted using AMOS with maximum likelihood estimation. The model fit was evaluated using multiple fit indices. As shown in *Table 4*, time management has a significant positive effect on teaching effectiveness. The standardized path coefficient is $\beta = 0.635$, with a critical ratio (C.R.) of 14.201 and a p-value less than 0.001, indicating strong statistical significance. This finding supports the hypothesis that effective time management enhances teaching effectiveness from the students' perspective. The magnitude of the coefficient suggests a moderately strong relationship, indicating that time management is an important determinant of teaching quality. Teachers who effectively organize class time, maintain appropriate pacing, and balance instruction with interaction are more likely to be perceived as effective by students. In addition, the model fit indices presented in Table 5a indicate a good fit between the model and the data. The chi-square to degrees of freedom ratio (χ^2/df) is 2.184, which is below the recommended threshold of 3. The comparative fit index (CFI = 0.936) and Tucker–Lewis index (TLI = 0.924) both exceed 0.90, while the root mean square error of approximation (RMSEA = 0.067) is below 0.08.

***Table 4**. Structural model results.*

Path	Standardized Estimate (β)	Standardized Estimate (β)	C.R	T statistics
TM → TE	0.635	0.045	14.201	14.201***

The findings of this study provide strong empirical evidence that time management has a significant and positive impact on teaching effectiveness in higher education, as perceived by students. The structural model results, obtained through AMOS analysis, indicate that time management is not merely a supportive skill but a core determinant of instructional quality, thereby directly addressing the research objective proposed in this study. From a theoretical perspective, this study extends the existing literature by integrating time management into the framework of teaching effectiveness, rather than treating it as an isolated or peripheral variable. Previous studies have predominantly focused on student academic performance or teacher self-reported efficiency, whereas this study highlights the importance of students' evaluative perspectives. The significant path coefficient confirms that effective time allocation enhances instructional clarity, coherence, and engagement, which are central dimensions of teaching effectiveness. This finding aligns with constructivist learning theory, suggesting that well-structured and appropriately paced instruction facilitates better knowledge construction and active learning. Moreover, the results support the notion that teaching effectiveness is co-constructed through the interaction between instructors' behaviors and students' learning experiences. When instructors manage time efficiently, by organizing lessons clearly, maintaining appropriate pacing, and balancing lecture and interaction, students are more likely to remain engaged and develop a clearer understanding of course content. Conversely, poor time management may lead to rushed explanations, incomplete coverage of material, and reduced opportunities for interaction, ultimately lowering students' perceptions of teaching effectiveness.

From a practical standpoint, the findings offer important implications for higher education institutions. First, universities should incorporate time management training into faculty development programs, emphasizing skills such as lesson planning, time allocation, and classroom pacing. Second, institutional policies should aim to reduce excessive administrative burdens on teachers, allowing them to focus more effectively on instructional design and delivery. Third, the findings suggest that student feedback systems should explicitly include time management-related indicators, as these are critical components of teaching quality from the learners' perspective. In addition, the study highlights the importance of aligning instructional time management with students' learning capacities and expectations. Effective teaching requires not only efficient use of time but also sensitivity to students' cognitive load and engagement levels. Therefore, adaptive time management strategies—such as adjusting pacing based on student feedback, may further enhance teaching effectiveness.

Conclusion

This study set out to examine the impact of time management on teaching effectiveness in higher education from students' perspectives, with a particular focus on the Chinese context. By employing a quantitative research design and conducting structural equation modeling (SEM) using AMOS, the study provides empirical evidence on how instructors' time management practices influence students' evaluations of teaching quality. Based on the analysis, several key findings, practical implications,

and future research directions are summarized as follows. First, the empirical results demonstrate that time management has a significant and positive effect on teaching effectiveness. The structural model confirms that effective classroom time allocation, appropriate pacing, and clear instructional organization contribute substantially to students' perceptions of teaching quality. This finding suggests that time management is not merely an auxiliary teaching skill but a central determinant of effective instruction. In particular, when instructors carefully structure lessons, balance lecturing with interaction, and avoid unnecessary time loss, students are more likely to perceive the teaching process as coherent, engaging, and productive. Second, the study highlights that students' perspectives provide valuable insights into teaching effectiveness, especially in relation to time use in the classroom. Unlike traditional evaluations that rely heavily on institutional metrics or teacher self-assessment, this study emphasizes the role of students as direct participants in the teaching–learning process. The findings indicate that students are highly sensitive to issues such as lesson pacing, clarity of time allocation, and opportunities for participation. Therefore, teaching effectiveness is not only determined by instructional content but also by how effectively time is managed during the teaching process. Third, the results support the argument that teaching effectiveness is a dynamic and interactive outcome, shaped by the alignment between instructors' time management practices and students' learning experiences. Effective time management enhances students' engagement and comprehension, while poor time allocation may disrupt learning continuity and reduce instructional clarity. This reinforces the idea that teaching effectiveness should be understood as a co-constructed process rather than a one-sided outcome.

Based on these findings, several practical recommendations can be proposed. First, higher education institutions should strengthen faculty development programs by incorporating systematic training on time management skills. Such training should focus on practical aspects, including lesson planning, classroom pacing, and time allocation for interaction and feedback. By improving these competencies, instructors can enhance both teaching efficiency and effectiveness. Second, universities should optimize institutional policies to reduce excessive administrative burdens on faculty members. Heavy administrative workloads often limit the time and energy that instructors can devote to teaching preparation and delivery. By streamlining administrative processes and providing adequate support, institutions can create conditions that enable teachers to focus more on high-quality instruction. Third, it is recommended that universities improve student evaluation systems by including specific indicators related to time management. For example, evaluation items can assess clarity of lesson structure, pacing of instruction, and effective use of class time. Incorporating these dimensions will provide more comprehensive and actionable feedback for instructors, thereby contributing to continuous improvement in teaching quality. Fourth, instructors themselves should adopt more flexible and adaptive time management strategies. This includes adjusting teaching pace based on student feedback, allocating sufficient time for discussion and interaction, and ensuring that key concepts are adequately explained within the available time. Such practices can help align teaching processes with students' learning needs, ultimately enhancing teaching effectiveness.

Despite its contributions, this study is subject to several limitations. First, the study relies on cross-sectional survey data, which limits the ability to draw causal inferences. Future research could adopt longitudinal designs to examine how time management practices influence teaching effectiveness over time. Second, the sample is limited to

students from Chinese universities, which may restrict the generalizability of the findings to other cultural and educational contexts. Comparative studies across different countries or regions would help to validate and extend the results. Third, the study focuses primarily on perceived teaching effectiveness, which may be influenced by subjective factors such as student expectations and personal preferences. Future research could incorporate additional objective measures, such as learning outcomes or classroom observations, to provide a more comprehensive assessment.

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Conflict of interest

The authors confirm that there is no conflict of interest involved with any parties in this research study.

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