Examining the Impact of University Teaching Quality on Learning Engagement: A Cross-sectional Study in Vietnam

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ABSTRACT
This study aims to explore the impact of teaching quality on learning engagement, with the objective of crafting a framework for enhancing educational quality management in higher education institutions. To achieve this goal, the study employed a theoretical model of education assessment originating from Western contexts and applied it to a research sample from Vietnam. By adapting two measurement tools and testing methodologies, the study assesses the relationship between teaching quality and academic engagement. Our study involves 244 graduate students and alumni from a Vietnamese university, with an average age of 41.8 (SD = 6.41), comprising 166 female students (68%). Results from factor analysis, reliability analysis, and correlation analysis underscore the reliability and validity of our scale for measuring course experience as a proxy for teaching quality. Furthermore, hierarchical multiple regression analysis reveals a significant correlation between course experience, reflecting the quality of teaching activities, and students' learning engagement. Discussions of the research limitations and future research directions are also indicated in this paper.

1. INTRODUCTION

Understanding learning engagement and the impact of teaching quality on its development is a critical concern in higher education. Learning engagement is a multifaceted construct encompassing vigor, dedication, and absorption (Schaufeli & Bakker, 2003). These dimensions reflect the extent to which students are actively involved and participate in their learning activities. This engagement manifests in how students respond to and interact with learning tasks, materials, and other related activities (Boekaerts, 2016). The literature suggests that learning engagement is a pivotal factor influencing students' academic performance (Wu et al., 2020). Consequently, enhancing learning engagement is widely recognized as a desirable objective in educational institutions, notably higher education.

Despite its recognized importance, research on learning engagement remains scarce in Vietnam. Most studies have primarily focused on the contrasting phenomenon of burnout, often viewed as the antithesis of learning engagement (Vu & Bosmans, 2021). However, it is crucial to acknowledge that learning engagement possesses unique characteristics that warrant dedicated investigation. Recent scholarly attention has begun to highlight the necessity of understanding these distinctive aspects to foster a more comprehensive approach to improving educational outcomes. Therefore, there is a pressing need to expand research efforts in Vietnam to explore and enhance learning engagement, considering its vital role in students' academic success.

To enhance learning engagement in higher education, it is crucial to examine the various factors that contribute to its development thoroughly. Research has identified a wide range of influencing factors, including the use of ICT resources, the reputation of the university, and the quality of its teaching staff (Almarghani & Mijatovic, 2017). Teaching quality stands out as a particularly influential factor in fostering learning engagement (Van de Grift et al., 2017).

Several aspects of teaching quality have been shown to enhance learning engagement significantly. These include teachers' ability to create a safe and supportive learning environment, implement intensive and interactive teaching practices, and manage classrooms effectively (Van de Grift et al., 2017). Such findings underscore the importance of adopting a holistic approach to evaluating teaching quality in higher education.

Despite the progress in identifying critical aspects of teaching quality, there remains a pressing need for a more comprehensive and nuanced approach to examining this crucial factor. This need is especially acute in Vietnam, where the higher education sector is experiencing rapid growth and an increasing demand for rigorous assessment of educational quality. Addressing this demand involves expanding research on teaching quality and integrating these insights into practical strategies for improving educational outcomes.

In summary, understanding and improving learning engagement requires a multifaceted exploration of the contributing factors, particularly emphasizing the pivotal role of teaching quality. We can better support student engagement and academic success by advancing our evaluation methods and research in this area, particularly in rapidly developing educational contexts like Vietnam.

In Vietnam, research specifically examining the relationship between teaching quality and learning engagement remains limited. The current study, therefore, is dedicated to addressing this research gap by undertaking a comprehensive investigation into two key components: teaching quality as a protective factor and student learning engagement as an outcome. This research aims to elucidate the intricate dynamics between teaching quality and learning engagement, exploring how teaching quality impacts student engagement.

By delving deeply into these critical components, the study aspires to provide valuable insights into how teaching quality influences student engagement within the Vietnamese higher education context. This investigation will highlight the aspects of teaching quality that are most effective in fostering learning engagement and offer practical recommendations for educators and policymakers to enhance educational practices.

Furthermore, this research seeks to contribute to the broader academic discourse by offering evidence-based insights that can inform strategies to improve teaching and learning outcomes. By focusing on the Vietnamese higher education system, which is experiencing rapid development and transformation, the study aims to address the unique challenges and opportunities present in this context. Ultimately, this research endeavors to bridge the existing knowledge gap and support the advancement of educational quality and student engagement in Vietnam.

2. LITERATURE REVIEW

2.1. Teaching quality

Ensuring teaching quality stands as a paramount factor, wielding a pivotal influence over the overall quality of higher education. Recognizing this, the majority of university and college educational institutions have dedicated efforts to develop and refine frameworks for assuring teaching quality within their internal educational processes (Barrie & Ginns, 2007). Central to the establishment of such frameworks is the construction of a theoretical model comprising factors that epitomize the quality of higher education (Ramsden, 1991). An eminent example of such a theoretical construct, widely adopted globally, is the framework delineated by Ramsden (1991) and Wilson et al. (1997). According to Ramsden (1991) and Wilson et al. (1997), the teaching quality of a course can be delineated through various specific facets. These specific facets include:

(1) Good Teaching: This content pertains to the lecturer's teaching activities, such as fostering learner motivation, facilitating comprehension of the material, and delivering constructive feedback to enhance student learning.

(2) Clear Goals and Standards: This content pertains to establishing clear expectations and standards for students.

(3) Appropriate Assessment: This content embodies the essence of the course's assessment, delineating whether it relies solely on memory recall or incorporates higher-order thinking skills to address learning challenges and real-world situations.

(4) Appropriate Workload: This content pertains to the extent of workload learners are required to manage throughout the course.

(5) Emphasis on Independence Scale: This content pertains to the degree of autonomy granted to students in selecting their coursework and assignments.

(6) Generic Skills: This content encompasses the essential skills learners must develop, including problem-solving, critical analysis, teamwork, writing proficiency, effective communication, strategic planning, and adaptability to novel situations.

These dimensions indicative of course teaching quality have seen widespread adoption globally (Jansen et al., 2013), which underlines its potential applicability in assessing teaching dynamics within Vietnamese educational settings. However, there remains a limited understanding of how these dimensions are used to evaluate teaching quality in Vietnamese higher education. Consequently, this study aims to assess the applicability of Ramsden's (1991)' and Wilson et al.'s (1997)' dimensions of teaching quality within the Vietnamese higher education context.

2.2. Teaching quality and its link to learning engagement

Previous research indicates a strong correlation between teaching quality in higher education institutions and students' levels of engagement in learning (Yin & Ke, 2017). According to Yin and Ke (2017), higher teaching quality correlates positively with increased academic engagement. This engagement is characterized by students' commitment to learning, their involvement in research, and their enthusiastic absorption of new knowledge (Alrashidi et al., 2016; Carmona-Halty et al., 2019). Therefore, evaluating teaching quality can be approached by examining its relationship with students' engagement in learning activities. This investigation is anticipated to address previous limitations in assessing educational quality in higher education institutions, which often focus solely on the relationship between teaching activities and students' satisfaction with learning outcomes. The assumed direct correlation between teaching quality and student satisfaction with learning is currently under scrutiny due to recent findings suggesting that satisfaction may be influenced by factors beyond teaching quality alone (Barrie & Ginns, 2007; Prosser & Barrie, 2003; Richardson, 2005).

Building upon a theoretical framework for evaluating teaching quality and its hypothesized link with learning engagement in Western contexts, two research questions emerge. Firstly, can Ramsden's (1991) theoretical model be effectively applied in Vietnam? Secondly, is there a tangible relationship between the quality of teaching activities and the level of engagement in learning and research within educational institutions, whether university or college? Unfortunately, to date, there has been scant research conducted to provide both theoretical and practical evidence to address these inquiries. These gaps could impede the development and enhancement of governance frameworks in higher education, crucial for meeting the societal demand for high-quality human resources - a distinctive mandate of higher educational institutions. The author asserted this because one prerequisite for ensuring the efficacy of educational quality management models in these institutions lies in comprehensive information gathering. Access to accurate and comprehensive data regarding the quality of teaching activities, deemed pivotal within these educational settings, is paramount.

Motivated by the need to bridge this theoretical and practical divide, this cross-sectional study was conducted to explore the relationship between course/subject experience and learning engagement within a sample of graduate students from a university in Hanoi, Vietnam. Drawing upon previous research highlighting the widespread adoption of theoretical models of teaching activities in educational settings, as proposed by Ramsden (1991) (Jansen et al., 2013; Ginns et al., 2013; Ginns et al., 2007), the study anticipated empirical support for this model in the Vietnamese context. Furthermore, it is hypothesized that aspects of teaching quality serve as meaningful indicators of student engagement (e.g., Van de Grift et al., 2017). The goal is to contribute to the development of alternative methods for gathering and evaluating information concerning quality within higher education institutions. (e.g., Yin & Ke, 2017).

To address the aforementioned hypotheses, the methodological challenges inherent in investigating the subject of the present study were addressed. Notably, in Vietnam, there persists a dearth of standardized research instruments for assessing teaching quality within higher education institutions and colleges. Hence, two scales originally developed in Western contexts were adapted for use in a Vietnamese research setting: the Course Experience Questionnaire devised by Ramsden (1991), and the Learning Engagement measure formulated by Schaufeli et al. (2003).

The Course Experience Questionnaire (CEQ) was used to evaluate teaching quality as it reflects the key dimensions of teaching quality, for example the six dimensions listed above (Ramsden 1991; Wilson et al., 1997). The CEQ has been widely applied across cultures, including Western cultures, for example in the Netherlands (Jansen et al., 2010) and non-Western cultures, such as China (Yin & Wang, 2015). Given the extensive use of the ECR in academic fields (Eley, 2001, Jansen et al., 2010; McInnis et al., 2001), the ECR was employed to evaluate teaching quality in the current study.

Employing the customized scales, the author would embark on a comprehensive statistical inquiry aimed at elucidating the intricate relationship between course experience and learning engagement. Moreover, the potential confounding factors stemming from demographic variables, including age and gender, were meticulously integrated into the research framework. Incorporating these variables, the author can ensure a rigorous analysis that disentangles the true impact of our independent variables namely, course experience and student learning engagement within the overarching model currently under scrutiny. This methodological rigor not only enhances the validity of our findings but also provides a nuanced understanding of the dynamics at play within the educational context under investigation.

3. MATERIALS AND METHODS

Translation procedure

To ensure accurate translation of the Course Experience Questionnaire (Ramsden,1991; Wilson et al.,1997) and the Utrecht Work Engagement Scale (Schaufeli et al., 2003), we implemented the forward-backward translation method proposed by Beaton et al. (2000). This rigorous process involved a committee consisting of the author group, a proficient Vietnamese translator, and an esteemed professor of Educational Psychology from an English-speaking university. Following the completion of the final translation, we conducted a pilot study involving eight graduate students. During this pilot phase, we solicited feedback from participants regarding the clarity of the translated text and the familiarity of the situations presented in the scale questions. As a result of this iterative process, the translations were deemed easily comprehensible, and the depicted situations were largely recognizable to the students. Subsequently, the author devised a comprehensive questionnaire incorporating the Course Experience Questionnaire and the Utrecht Work Engagement Scale to administer in our official research survey, facilitating the collection of data for further analysis.

Participants

The survey participants comprise master's students who had successfully completed at least one subject or course within their master academic program or had already finished their master's program. A total of 244 students and alumni participated in this survey, boasting an average age of 41.8 years (standard deviation = 6.41), with female students constituting the majority with 166 participants, accounting for 68% of the total cohort.

Measures

Course experience questionnaire (CEQ)

The Course Experience Questionnaire, initially devised by Ramsden (1991) and subsequently refined by Wilson et al. (1997), is a comprehensive instrument designed to evaluate various facets of course experience. This scale encompasses six subscales: Good Teaching, Clear Goals and Standards, Appropriate Assessment, Appropriate Workload, Emphasis on Independence Scale and Generic Skills, each targeting distinct dimensions of learning experience. All questions within these sub-scales are structured with identical response options, utilizing a Likert scale ranging from 0 (completely disagree) to 4 (completely agree).

Learning engagement

The Utrecht Work Engagement Scale (UWES) (Schaufeli et al., 2003) is a comprehensive instrument tailored to gauge various dimensions of learning engagement. The UWES is free for use for non-commercial scientific research (Schaufeli & Bakker, 2003). Comprising three distinct sub-scales including Vigorous, Dedication, and Absorption, this scale delves into the multifaceted aspects of engagement within the learning process. All questions within these sub-scales adhere to a uniform response format, employing a Likert scale spanning from 1 (never) to 7 (always), facilitating nuanced assessment across the spectrum of learning engagement experiences.

Data analysis

This study employs confirmatory factor analysis to scrutinize the structural integrity of both the Course Experience Scale and the Learning Engagement Scale. Benchmarks for evaluating factor structure integrity adhere to established criteria, including CFI ≥ .90, RMSEA ≤ .08, and SRMR ≤ .08 (Brown, 2014; Byrne, 2013). However, given the exploratory nature of our research, we adopt an analytical model that satisfies at least two out of these three standards (Putnick & Bornstein, 2016).

Given the Likert-scale nature of the data in both the Experience Scale (with 5 levels) and the Learning Engagement Scale (with 7 levels), the author employed Maximum Likelihood Estimation with robust standard error analysis (Rosseel, 2012). Confirmatory factor analysis is executed utilizing the Lavaan analysis package (Rosseel, 2012). Additionally, the author evaluated the internal consistency of questionnaire items within each sub-scale by calculating Cronbach's Alpha coefficient, with values exceeding .70 deemed acceptable for measurement reliability (Field, 2012). Furthermore, hierarchical multiple regression analysis is employed to explore the predictive relationship between course experience variables and learning engagement variables. In Model 1, age and gender variables are considered as covariates. Subsequently, Model 2 incorporates both age, gender variables, and the primary research variables. It was anticipated that Model 2 demonstrated meaningful variance compared to Model 1, allowing us to assess the unique influence of course experience variables on learning engagement indicators after controlling age and gender variables. In addition to these advanced analyses, descriptive statistics such as mean scores, percentages, and standard deviations are also computed. All analyses are conducted within the RStudio environment.

4. RESULTS AND DISCUSSION

4.1. Results

Confirmatory Factor Analysis for the Course Experience Questionnaire

Table 1. Confirmatory Factor Analysis for the Course Experience Questionnaire and the Utrecht Work Engagement Scale

	Model	χ^2	CFI	RMSEA	SRMR
CEQ	6 factor-structure model	2133.52[***]	.66	.11	.19
	5 factor-structure_1	685.32[***]	.81	.09	.15
	5 factor-structure_2	685.32[***]	.92	.07	.07
UWES	3 factor-structure	85.36	.93	.10	.04

(Note: χ^2: chi-square; CFI: Comparative Fit Index; RMSEA: Root Mean Square Error of Approximation; SRMR: Standardized Root Mean Square Residual; CEQ: Course Experience Questionnaire; UWES: Utrecht Work Engagement Scale)

The findings from the factor analysis reveals that the current research data do not support the 6-factor structure proposed for the CEQ scale. Particularly, the factor "Emphasizing Independence" is recommended for exclusion from the initial six-factor structure. Consequently, a five-factor CEQ model (5-factor model_1) was maintained. However, subsequent analysis indicated the necessity of removing one question from the "Clear Objectives and Standards" factor and another question from the "Appropriate Study Workload" factor. Accordingly, these two questions were eliminated, resulting in the refinement of the Clear Goals and Standards factor and the Appropriate Study Workload factor. Ultimately, the second 5-factor structural model of the CEQ (5-factor model_2), which incorporates the removal of the aforementioned items, emerged as the most appropriate model for subsequent analysis.

Confirmatory Factor Analysis for the Utrecht Work Engagement Scale

The factor analysis results for the Learning Engagement Scale demonstrates that two-thirds of the model fit criteria are satisfied, with a Comparative Fit Index (CFI) of .93 and a Standardized Root Mean Square Residual (SRMR) of .04 (see more in Table 1). Based on these results, it is concluded that the three-factor structure of the UWES is suitable for subsequent analyses.

Reliability and Validity Analysis

Reliability and Validity Analysis for the Course Experience Questionnaire

Table 2. Results of descriptive statistics and correlation analysis for study variables

	1.	2.	3.	4.	5.	6.	7.	8.
1. GT	-	.78***	.82***	-.06	.26***	.50***	.62***	.53***
2. CG		-	.79***	-.01	.20***	.48***	.53***	.48***
3. GK			-	-.01	.26***	.50***	.61***	.52***
4. AA				-	.56***	-.03	.00	-.06
5. AW					-	.23***	.29***	.19**
6. VI						-	.83***	.82***
7. DE							-	.85***
8. AB								-
N	244	244	244	244	244	244	244	244
M	20.77	10.4	21.18	7.10	8.39	14.05	15.00	14.23
(SD)	(3.13)	(1.58)	(2.93)	(2.63)	(2.82)	(2.84)	(2.71)	(2.76)
Min-Max	6-24	2-12	5-24	0-12	0-12	7-18	8-18	8-18
⟨	.91	.72	.88	.65	.81	.88	.93	.87

(Note: GT: Good Teaching; CG: Clear Goals and Standards; GK: Generic Skills; AA: Appropriate Assessment; AW: Appropriate Workload; VI: Vigor; DE: Dedication; AB: Absorption)

$^{**}p < .01, ^{***}p < .001$

The Cronbach's Alpha analysis results indicate that all subscales of the CEQ demonstrate appropriate internal consistency of questionnaire items, except for the Appropriate Evaluation subscale ($\alpha = .65$). Additionally, Pearson correlation analysis (bivariate correlation) reveals positive correlations among all CEQ subscales and with the UWES's subscales, except for the Appropriate Assessment subscale (see Table 2). In light of these results, the Appropriate Assessment subscale was excluded from further analyses to uphold the reliability of the results.

Reliability and Validity Analysis for the Utrecht Work Engagement Scale

The results of both Cronbach's Alpha analysis and Pearson correlation analysis (bivariate correlation) indicate that all sub-scales of the UWES exhibit Cronbach's Alpha coefficients at suitable levels and demonstrate significant correlations with each other, as well as with the CEQ sub-scales (excluding the Appropriate Judgment scale) (Table 2). Therefore, all the subscales of the UWES were included for further investigation.

The relationship between teaching quality and learning engagement

Table 3 showcases the findings from hierarchical multiple regression analyses, where the outcome variables encompass three dimensions of learning engagement: Strong Learning, Learning Commitment, and Absorption of Learning Content. The predictor variables are manifestations of learning experiences. The results in Table 3 illustrate that, after mitigating the confounding effects of Age and Gender variables within the model, various expressions of course or subject experience exhibited different coefficients that influence the students' average scores across dimensions of learning engagement. Notably, course or subject experience emerged as robust predictors of Academic Commitment and Dedication. Specifically, when considered independently, Age and Gender variables accounted for minimal variation in Academic Engagement. However, when the CEQ scale variables were incorporated, they significantly enhanced the explanatory power for learning engagement. For instance, the CEQ subscales elucidated 28%, 43%, and 32% of the variance in academic engagement, as assessed by the Strong Learning, Commitment, and Dedication subscales, respectively, along with the Absorption of learning.

Table 3 presents the results of the hierarchical multiple regression model analysis with the output variables being three aspects of learning engagement, including Vigorous, Dedication, and Absorption and the predictors are

different aspects of course experiences. Table 3 shows that, after eliminating the confounding effects on the model of the variables Age and Gender, different course experience yielded different coefficients on the average scores of the students' learning engagement. The course experience was the strongest indicator for Dedication. Overall, if the variables Age and Gender were considered separately, these variables explained very little of the variation in Academic Engagement. However, when adding the variables of the CEQ scale, the sub-scales better explained learning engagement. For example, the CEQ subscales explained 28%, 43%, and 32% of the variation in academic engagement as measured by the Vigorous, Dedication, and Absorption subscales, respectively.

Table 3. Results of Hierarchical Regression Analysis on the Relationship Between Course Experiences and Learning Engagement

	Vigorous			Dedication			Absorption		
	β	R^2	ΔR^2	β	R^2	ΔR^2	β	R^2	ΔR^2
Model 1		.03			.06			.06	
Age	.08			.11			.05		
Gender	-.14			-.19			-.22***		
Model 2		.28	.25		.43	.37		.32	.26
Age	.01			.02			-.03		
Gender	-.09			-.13*			-.17**		
Good Teaching	.17			.32**			.26*		
Clear Goals and Standards:	.18+			.02			.11		
Generic Skills	.16			.26**			.16		
Appropriate Workload	.11++			.13*			.07		

(Note: β: standardized regression coefficient; ΔR^2: R^2 chang)

$^+p = .08, ^{++}p = .07, ^*p < .05, ^{**}p < .01, ^{***}p < .001$

4.2. Discussion

This study aims to offer insights into teaching quality within higher education institutions. To achieve this goal, the author implemented a teaching quality evaluation model at a graduate training facility within a university and examined its potential impact on the students' academic engagement. The analytical outcomes have addressed the core research question at hand: whether such a model can be effectively applied in Vietnam and, if so, how it influences learners' engagement within the institution. Our findings reveal strong support for the viability of the proposed model, indicating its potential to enhance both learning and research engagement among students within educational settings. Through this study, the study endeavored to contribute to the ongoing discourse concerning university pedagogical practices, ultimately striving for the advancement of educational quality and student engagement in higher education institutions.

In the realm of higher education, ensuring the quality of teaching activities stands out as a pivotal factor warranting attention. This emphasis stems from the recognition that high-quality teaching activities directly correlate with enhanced learning outcomes among students (Hatch, 2010; Leamnson, 1999). Teaching activities encompass a myriad of components, including pedagogical skills, adeptness in setting and attaining learning objectives, and the ability to craft meaningful learning tasks for students (Ramsden, 1991). Building upon this understanding, Ramsden (1991) developed a comprehensive model for evaluating teaching activities. This model advocates for a learner-centric approach, emphasizing the cultivation of effective teaching methodologies, the establishment of clear standards and objectives, cultivation of transferable skills, promotion of learner autonomy, and adoption of strategies that foster robust assessment practices and tailor exercises to suit students' needs. Drawing upon these principles,

Ramsden (1991) formulates a multi-dimensional scale to assess teaching quality, characterized by a six-factor structure, as elucidated in the preceding analysis.

Drawing from the established 6-factor structure, the current study has adapted Ramsden's model to align with practical contexts in Vietnam. The analysis outcomes indicate a substantial replication of Ramsden's model within the study sample, with 5 out of 6 factors effectively reproduced. Notably, the appropriate evaluation structure was proposed for removal from the teaching quality evaluation model, consistent with international research findings indicating its limited alignment with Ramsden's proposed model (1991). Concurrently, the research findings regarding the factor structure of the CEQ align with previous global studies, affirming the scale's widespread applicability in assessing teaching (Jansen et al., 2013). These analytical outcomes underscore the reliability of the study findings, further corroborated by rigorous assessments of scale reliability and validity. Specifically, all items within corresponding subscales consistently reflect their intended constructs, as confirmed by Cronbach's Alpha coefficient analysis. This consistency extends across all subscales of the Course Experiences Questionnaire, with the exception of the Appropriate Appreciation subscale. Importantly, these subscales demonstrate an accurate measurement of their intended constructs, as evidenced by positive interrelationships within the CEQ scale and with the learning engagement subscales of the UWES scale.

The statistical analyses results, coupled with the elucidated explanations, provide a robust foundation for affirming the validity of this study's findings. Consequently, the observation regarding the replicability of Ramsden's teaching quality assessment model within the present research sample in Vietnam suggests the viability of integrating this assessment model into the higher education governance framework in Vietnam.

Finally, to ascertain whether the manifestations of teaching quality are linked to the promotion of learning activities, the study investigated the relationship between these dimensions of teaching quality and learners' engagement in learning outcomes. Given the absence of a dedicated scale for evaluating learners' engagement in learning, the study initially adapted the short version of the UWES Learning Engagement scale developed by Schaufeli and colleagues (2003). The outcomes of hierarchical multiple regression analysis revealed that, even after controlling confounding variables, course experience emerged as a distinct predictor of learner engagement. In other words, as per the analysis results derived from data collected using two standardized scales (e.g., CEQ and UWES), enhanced course experiences attributable to teaching activities correlate positively with increased engagement in learning. Furthermore, these findings align with previous research investigating the relationship between course experiences and learning engagement, as evidenced by studies such as Yin and Ke (2017).

The discovery of a robust and impactful influence of course experience on the cultivation of learner engagement underscores the capability of this theoretical model to encompass fundamental facets of teaching activity quality. This comprehensive coverage enables the model to effectively detect and strongly signal shifts in learners' engagement in the learning process. Such findings highlight the imperative and practical utility of applying the teaching assessment model within higher education institutions. Specifically, this model can be directly employed to evaluate teaching quality across higher education institutions.

Limitations and future research directions

One limitation of this study pertains to its reliance on a relatively small sample size. Nevertheless, the robustness of the research findings is underscored by the reliability and validity of the subscales. Moving forward, future research endeavors could explore evaluating the scales within a larger sample, conducive to factor analysis. This could involve ensuring a sample size exceeding 300 with a respondent-to-question ratio of at least 1:5, as recommended by Comrey and Lee (2013) and Hair et al. (2021). While the current study adhered to this guideline, enlarging the sample size could not only enhance regional representation but also bolster statistical power, thereby lending stronger support to the study's findings.

Moreover, although this study contributes valuable insights towards augmenting the teaching quality framework by showcasing the efficacy of the assessment tool in ensuring teaching quality, it falls short in establishing cutoff points for the scale to evaluate teaching activity quality. For instance, delineating cutoff points (levels, threshold values) to classify teaching activities as low, medium, or high quality is pivotal for implementing strategies aimed at ensuring teaching quality. These cutoff points serve as early warning indicators, facilitating corrective actions in instances of low-quality measures during routine audits. To address this gap, future research could utilize Item

Response Theory Model analysis (IRT) to ascertain these cutoff points. Recent studies highlight the efficacy of IRT in ensuring the reliability of clinical scores for scales (e.g., Terluin et al., 2021).

5. CONCLUSION

The findings of this study advocate for the integration of a model for evaluating teaching quality within higher education institutions. It is imperative that the assessment of teaching activity quality relies on standardized assessment tools, as this ensures the reliability and validity of the results they yield. Moreover, the assessment of teaching quality should be founded upon the multifaceted nature of teaching activities. Simultaneously, it is crucial that the assessment of teaching quality also considers the causal relationship between the multifactorial structure of teaching activities and the heightened engagement and commitment to learning among students.

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