Research Paper

An Evaluation of the Psychometric Properties of the Long and Short Forms of the Teacher Sense of Efficacy Scale in Vietnamese

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ABSTRACT

Assessing teacher self-efficacy is crucial for understanding its impact on teaching effectiveness. However, reliable and valid measurements used to evaluate teacher self-efficacy remain limited in Vietnam. This study conducted a comprehensive evaluation of the psychometric properties of both the short and long versions of the Teacher Sense of Efficacy Scale (TSES) to address this gap. A total of 806 (M_{age} = 19.7, SD = 1.38; 83.5% females) student teachers participated in the study. Results suggested strong internal consistency and stability for both versions of the TSES. Additionally, both versions showed adequate convergent, divergent, and criterion validity. Overall, the findings support the use of both the long and short versions of the TSES for assessing teacher self-efficacy, including general teacher self-efficacy and specific dimensions such as teaching engagement, absorption and management in Vietnamese teachers. Limitations and future research directions were discussed.

Keywords: *Vietnamese, Teachers, Self-Efficacy, Engagement, Reliability, Validity*

Teacher self-efficacy, defined as teachers' beliefs in their ability to influence student engagement and learning outcomes, plays a pivotal role in shaping the educational landscape (Bandura, 1977). Research has consistently shown that teacher self-efficacy influences student achievement and engagement, as teachers with higher efficacy beliefs tend to implement more effective instructional practices and persist through challenges in the classroom (Klassen & Tze, 2014; Martin et al., 2012). Evaluating teacher self-efficacy is crucial for understanding the impact teachers have on student learning, motivation, and overall academic success (Kim & Seo, 2018; Mojavezie & Tamiz, 2012; Tschannen-Moran & Barr, 2004). In the global context, assessing teacher self-efficacy helps identify areas for professional development and guides policy decisions aimed at improving educational quality, ensuring teachers are well-supported in their roles (Bangs & Frost, 2012).

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Regarding Vietnam, where the education system is undergoing significant reforms toward more student-centered learning and modern teaching methodologies, evaluating teacher self-efficacy is even more critical (Ho & Dimmock, 2023). Teachers in Vietnam are facing new challenges as they adapt to these changes, making it essential to assess their self-efficacy to ensure they are equipped to meet these demands (Nguyen et al., 2008). Understanding their efficacy can help address gaps in training, support teachers' professional growth, which in turn, improve student outcomes, for example facilitating student learning, improving student motivation and their overall academic success (Kim & Seo, 2018; Mojavezie & Tamiz, 2012; Thorsnes et al., 2020; Tschannen-Moran & Barr, 2004).

Despite its significance, the evaluation of teacher self-efficacy currently faces a methodological limitation in Vietnam (e.g., Henson, 2001). Specifically, there is a lack of culturally adapted and validated measurement tools specifically designed to assess teacher self-efficacy in the country. For example, most prior research did not provide information about cultural relevant and semantic equivalence about measures of teacher self-efficacy (Ho et al., 2023; Tran, 2015). To address this gap, the present study aims to validate the Teacher Sense of Efficacy Scale (TSES) in the Vietnamese context. The primary research question is whether the TSES can function as a reliable and valid instrument for assessing teacher self-efficacy in Vietnam. By evaluating the TSES's effectiveness within this cultural setting, the study seeks to improve the accuracy and relevance of teacher self-efficacy assessments, thereby contributing valuable insights to Vietnamese teacher self-efficacy.

The Teacher self-efficacy Scale Scale

The Teacher Self Efficacy Scale (TSES), also called the Ohio State Teacher self-efficacy Scale (OSTES), developed by Tschannen-Moran and Hoy (2001), is a widely recognized and robust tool designed to measure teachers' self-efficacy (Duan et al., 2024). According to Tschannen-Moran and Hoy (2001), the TSES assesses three key dimensions of teaching efficacy: instructional strategies, classroom management, and student engagement. These dimensions reflect essential aspects of teaching effectiveness, ranging from how well teachers manage classroom behaviors and implement lessons to their ability to motivate and engage students in learning (Tschannen-Moran & Hoy, 2001). The TSES includes both long and short forms, making it adaptable for various research needs (Tschannen-Moran & Hoy, 2001).

Prior research showed that the TSES has been used in Vietnam, yet the psychometric properties of this measure in the Vietnamese context remain unclear (Ho et al., 2023; Tran, 2015). Specifically, there was limited information regarding the semantic equivalence between the original and translated versions of the scale, largely due to the lack of detailed documentation on the forward-backward translation process. This may create a risk that participants may interpret the questions differently from their intended meaning, potentially distorting the original content of the scale (Sousa & Rojjanasrirat, 2011). Such translation discrepancies can result in inaccurate measurement outcomes, compromising the validity of the assessment and leading to misleading conclusions.

Notably, while some researchers use the short version of the Teacher Sense of Efficacy Scale (TSES) and others rely on the long version, no studies have systematically compared the appropriateness of both forms for assessing teacher self-efficacy in Vietnam (e.g., Ho et al., 2023; Tran, 2015). This raises the question of which version is more suitable, or whether both versions can be effectively utilized to measure teacher self-efficacy. It might be

necessary to test both the long and short forms of the scale, given that different researchers may prefer one format over the other depending on their study's objectives and constraints (Quansah et al., 2024; Ruan et al., 2015). The long form of the TSES, consisting of 24 items, offers a more comprehensive assessment of teacher self-efficacy by covering a broader range of scenarios and behaviors related to instructional strategies, classroom management, and student engagement (Tschannen-Moran & Hoy, 2001). This is particularly useful in studies requiring detailed, nuanced data (Guy, 2010). However, the short form, with its 12 items, provides a more efficient measure of teacher self-efficacy, making it ideal for large-scale surveys, time-sensitive research, or studies where respondent burden is a concern (Rolstad et al., 2011). Testing both forms can ensure that whichever version is used, it remains reliable, valid, and culturally relevant in the Vietnamese context. Furthermore, researchers can compare the psychometric properties of both forms to determine which is more suitable for their specific research designs and purposes. However, evidence on the validity of both the long and short versions remains limited so far, creating a gap in their application for evaluating teacher self-efficacy in the Vietnamese context.

Additionally, there is a lack of data on the scale's stability over time, both long version and short version, which complicates its use in longitudinal research in Vietnam (e.g., Ho et al., 2023; Tran, 2015). This is particularly significant, as longitudinal studies are essential for understanding the causal relationship between teacher self-efficacy and their future teaching performance (Holzberger et al., 2013).

In sum, assessing teachers' self-efficacy in Vietnam is essential, yet remains challenging due to the lack of a reliable and validated measurement tool. The Teacher Sense of Efficacy Scale (TSES) holds promise for effectively evaluating teachers' confidence in their teaching abilities (Bandura, 1977). However, despite its use in Vietnam, there is still limited comprehensive data on the scale's psychometric properties in this context. Therefore, it is crucial to provide more comprehensive data on its psychometric properties, which in turn enables research to offer more reliable and valid insights into teacher self-efficacy in Vietnam.

The present study
The present study aimed to evaluate the psychometric properties of the Teacher Sense of Efficacy Scale (TSES), focusing on its semantic equivalence, reliability, and validity. Regarding semantic equivalence, the study assessed the content equivalence between the original language (English) and the target language (Vietnamese) to ensure accurate translation and cultural relevance. The study also examined whether the original three-factor structure model of the TSES could be replicated in the Vietnamese context. Given that both second-order and unidimensional factor structures have been explored in non-Western countries (e.g., Nie et al., 2012), the present study also evaluated both the second-order and unidimensional factor structure models.

For reliability, the internal consistency of each TSES subscale, as well as the unidimensional scale and the second-order scale were analyzed. Additionally, the stability of the scale's scores over time was assessed through examining the subscales and the total scale of the TSES.

Regarding validity, convergent, divergent and criterion validity of the TSES were investigated. For convergent validity, the relationships between the subscales and between

each subscale and the total scores were evaluated. It was expected that the subscales would be highly correlated together and that each subscale would strongly correlate with the total scales. Addtionally, divergent validity was considered evaluating the relation between the TSES and an external construct, which is teaching engagement. Finally, criterion validity was examined exploring the links between the TSES subscales and the unidimension scale with a measure of teaching engagement. It was hypothesized that both the subscales and the unidimensional scale would be significantly and positively associated with teaching engagement.

METHODS

Participants

The study sample consisted of 806 students enrolled at a teacher training university in Vietnam. The participants had an average age of 19.7 years ($SD = 1.38$), and the majority were female (83.5%). Of the participants, 20.3% were studying educational sciences, 39.8% were in social sciences programs, and another 39.8% were pursuing natural sciences.

Measures

Teacher self efficacy

Teacher self efficacy was measured by the Teacher Sense of Efficacy Scale (TSES), developed by Tschannen-Moran and Hoy (2001). The TSES is used to assess teachers' or student teachers' confidence in their ability to perform general teaching tasks, such as instructional strategies (e.g., "*Can answer difficult questions from students*"), classroom management (e.g., "*Can control disruptive behavior in the classroom*"), and student engagement (e.g., "*Know how to motivate students when they lose interest in learning*"). The TSES was administered twice, with a four-month interval between two time points, to assess test-retest reliability.

Teaching engagement

Teaching engagement was evaluated by the Utrecht Work Engagement Scale (UWES), developed by Schaufeli et al (2002). According to Schaufeli et al (2002), the UWES is a scale used to assess the engagement with learning activities of university students. This scale was used to assess the engagement in teaching in their internship of student teachers. This scale has been validated with students from colleges and universities to assess their academic engagement (Nguyen, 2024). To ensure the appropriateness of both format and content, specifically adapting the items from assessing academic engagement in students to measuring engagement in teaching activities among student teachers, we adjusted the language accordingly. For example, an original item assessing academic engagement, such as "*At my job, I feel strong and vigorous*" was modified to "*When I'm teaching, I feel strong and vigorous*". Cronbach's alpha analysis showed excellent internal consistency for the Vigorous ($\alpha = .90$), Absorption ($\alpha = .90$) subscales, and good for the Dedication subscale ($\alpha = .86$).

Translation and back-translation procedure

The TSES was translated and back-transalated following the forward and back translation procedure proposed by Beaton et al (2000). More specifically, the original TSES was first translated into Vietnamese by two bilingual researchers. Then a panel of experts, including educational researchers, teachers, and language experts, reviewed the Vietnamese version. The panel provided feedback on the clarity, comprehensiveness, and cultural appropriateness of the items. The Vietnamese version was then back-translated into English by two other

different bilingual researchers. Any discrepancies between the original English version and the back-translated English version were then discussed and resolved to ensure conceptual equivalence by the panel. The experts concluded that there was semantic equivalence between the source language (English) and the target language (Vietnamese). A pilot test with 5 teacher students also show that the items and words were easy to understand.

Analytic Plan

Preliminary results using descriptive statistics were used to provide an overview of the data and initial insights into the distribution and central tendencies of the responses. Internal consistency was assessed using Cronbach's alpha analysis ($.90 \leq \alpha$: excellent; $.80 \leq \alpha < .90$: good; $.70 \leq \alpha < .80$: acceptable; $.60 \leq \alpha < .70$: questionable; $\alpha < .50$: unacceptable (Cronbach, 1951; Field et al., 2012).

Confirmatory factor analysis (CFA) was used to evaluate the fit of the proposed models of the TSES. The maximum likelihood estimation with robust standard errors (Huber-White) and the Full Information Maximum Likelihood (FIML) method were employed to account for the non-normal distribution of Likert-type data and missing data (Rosseel, 2012). Model fit was evaluated using established criteria: a CFI/TLI of $\geq .90$ was considered an acceptable fit, with CFI/TLI $\geq .95$ indicating a good model fit, while RMSEA $\leq .080$, and SRMR $\leq .10$ were also used to determine model adequacy (Brown, 2014; Byrne, 2013).

To test the stability of the TSES over time, a correlation analysis will be conducted to examine test-retest reliability. Additionally, the study will use correlation analysis to evaluate convergent validity by examining the relationships between the TSES subscales and the total score, as well as criterion validity by exploring the associations between TSES scores and the measure of teaching engagement (American Educational Research Association, 2018).

Pearson correlation analysis was used for the test-retest, convergent, divergent and criterion validity. The evaluation criteria were $.10 \leq r < .30$: small; $.30 \leq r < .50$: medium; $r \geq .50$: large) (Cohen, 2013). Sum scores were calculated for the subscales and the total scale of the SEST. The *lavaan* package was used for confirmatory factor analysis (Rosseel, 2012). All analyses were conducted in the R environment.

RESULTS

Descriptive statistics

In total, 806 student teachers participated in the current study. However, not all the participants completed all the questions in the survey. Given this, we treated the missing data as random. Descriptive statistics also show that the variables follow a non-normal distribution, which is typical for Likert-type questions. More details on the statistics are shown in Table 1.

Confirmatory Factor Analysis

First Confirmatory Factor Analysis (CFA) was conducted to evaluate the structural models of both the long and short forms of the Teacher Sense of Efficacy Scale (TSES). Three models were tested: a three-factor model, a second-order model, and a single-factor model. Results indicated that both the three-factor and single-factor models fit the data well for both the long and short forms of the TSES. However, in the second-order model, the Engagement factor exhibited negative variance, a common indicator of a Heywood case. To address this,

the variance of the Engagement factor was constrained to a small positive value (0.001) for a second CFA. After this adjustment, the negative variance issue was resolved, and the second-order model fit the data for both the long and short forms.

Considering the fit indices of CFI and TLI, it showed that the short form of the TSES had a better model fit compared to the long form. Additionally, the single-factor model exhibited lower CFI and TLI values compared to the ones of the other models for both forms. However, since the CFI and TLI values were marginally below the acceptable thresholds (e.g., .90), the single-factor structure of the long form was still accepted, alongside the other factor structures for both forms of the TSES. As a result, all three models, all of which are the three-factor model, the single-factor model, and the second-order factor model, were deemed appropriate for both the long and short forms of the TSES. Table 2 shows the fit indices for the CFA models.

Table 1. Descriptive Analysis, Cronbach's Alpha and Test-retest for all the Study Variables

	TSES (long version)				TSES (short version)				UWES		
	T_TSES	EN	MA	IN	T_TSES	EN	MA	IN	VI	DE	AB
N	782	794	791	794	790	796	797	796	794	798	797
M (SD)	156.67	52.10	51.27	53.07	78.61	26.34	25.56	26.65	24.02	21.96	22.63
	(32.41)	(10.92)	(11.32)	(11/31)	(16.43)	(5.36)	(5.86)	(5.97)	(6.31)	(4.91)	(6.38)
Min-Max	57-216	20-72	17-72	20-72	28-108	9-36	7-36	10-36	0-36	0-36	0-36
Skewness	-0.71	-.67	-.57	-.77	-0.68	-.69	-.56	-.72	-.34	-.57	-.32
Kurtosis	-0.20	-.24	-.51	-.11	-0.30	-.20	-.49	-.20	.16	.50	.03
α	.98	.94	.95	.95	.96	.90	.90	.92	.90	.86	.92
Test-retest	.26*	.24*	.30***	.27*	.27*	.19+	.37***	.25*	-	-	-

Note. TSES: Teacher Sense of Self-Efficacy Scale; T_TSES: the total scale of the Teacher Self Efficacy Scale; EN: Engagement subscale; MA: Management subscale; IN: Instruction subscale; UWES: the Utrecht Work Engagement Scale; VI: Vigor; DE: Dedication; AB: Absorption.
*** $p < .001$, * $p < .05$, + $p = .05$

Table 2. Confirmatory Factor Analysis for the Long and Short Version of the Teacher Self Efficacy Scale

	TSES (long version)				TSES (short version)			
	CFI	TLI	RMSEA	SRMR	CFI	TLI	RMSEA	SRMR
Three-factor model	.91	.90	.08	.04	.96	.95	.07	.03
Single-factor model	.89	.88	.08	.04	.94	.93	.08	.03
Second-order factor model	.91	.90	.08	.04	.96	.95	.07	.03

Note. TSES: Teacher Sense of Self-Efficacy Scale; CFI: Comparative Fit Index; TLI: Tucker-Lewis Index ; RMSEA: Root Mean Square Error of Approximation; SRMR: Standardized Root Mean Square Residual.

Reliability analyses

Cronbach's alpha analysis was conducted for both the total TSES scale and its individual subscales. The Cronbach Alpha coefficients were all at an excellent level. This suggests that all the items of the TSES consistently reflected the single-factor structure of the total scale. Additionally, the items within each subscale demonstrated consistency in representing their respective factors. Results for the Cronbach's alpha are presented in Table 1.

To assess the stability of the total TSES scale and its corresponding subscale over time, a test-retest analysis was performed. Results showed statistically significant positive correlations between the first and second measurements (Time point 1 vs. Time point 2), both for the total scale and for the subscales (Engagement, Management, and Instruction). This indicates that the TSES, as well as its subscales, demonstrated stable measurement results over time. The test-retest results are also presented in Table 1.

Convergent, Divergent and Criterion Validity

Convergent validity was assessed through Pearson correlation analysis between the TSES subscales, which are Engagement, Management, and Instruction and the total TSES scale (for both long and short versions). Results indicated strong, positive, and statistically significant correlations among the subscales, as well as between each subscale and the total scale. These results demonstrated that the subscales are closely related to each other and to the overall teacher self-efficacy construct, supporting the convergent validity of the TSES. The detailed correlation coefficients are presented in Table 3.

Divergent validity was assessed by analyzing the correlations between the TSES (both the total scale and subscales for both the long and short versions) and the UWES subscales (Vigor, Dedication, and Absorption). The results indicated moderate correlations between the TSES and UWES subscales, with correlation coefficients ranging from .40 to .50. This suggests that, while the two scales are related, the TSES measures distinct aspects of teacher self-efficacy compared to the general teaching engagement assessed by the UWES. In contrast, the TSES total scale and its subscales for both long and short versions showed strong internal correlations, with coefficients ranging from .82 to .99, further confirming their distinctiveness from the UWES subscales. These findings indicate good divergent validity, as presented in Table 3.

Lastly, criterion validity was confirmed through significant, moderate correlations, with coefficients ranging from .40 to .50, between the TSES (both the total scale and subscales for both the long and short versions) and the UWES subscales. This indicated that the TSES was significantly related to an external measure of teaching engagement. The moderate strength of these associations supported the criterion validity of the TSES in measuring teacher self-efficacy. Detailed results for criterion validity are presented in Table 3.

Table 3. Correlation Across the main Study Variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. L_TSES	-	.98***	.97***	.96***	.99***	.96***	.93***	.95***	.50***	.49***	.46***
2. L_EN		-	.93***	.92***	.97***	.97***	.89***	.91***	.50***	.49***	.46***
3. L_MA			-	.88***	.97***	.91***	.98***	.87***	.49***	.47***	.46***
4. L_IN				-	.95***	.89***	.83***	.98***	.46***	.45***	.40***
5. S_TSES					-	.96***	.95***	.95***	.50***	.49***	.46***
6. S_EN						-	.87***	.88***	.49***	.49***	.45***
7. S_MA							-	.82***	.47***	.45***	.45***
8. S_IN								-	.45***	.45***	.40***
9. VI									-	.85***	.92***
10. DE										-	.82***
11. AB											-

Note. L_TSES: the total scale of the long version of the Teacher Sense of Self-Efficacy Scale; L_EN: long version of the Engagemnt subscale; L_MA: long version of the Management subscale; L_IN: long version of the Instruction subscale; S_EN: short version of the Engagemnt subscale; S_MA: short version of the Management subscale; S_IN: short version of the Instruction subscale; VI: the Vigorous subscale of the Utrecht Work Engagement Scale; DE: the Dedication subscale of the Utrecht Work Engagement Scale; AB: the Absorption subscale of the Utrecht Work Engagement Scale.
***$p < .001$.

DISCUSSION

The present study aimed to evaluate the psychometric properties of both the long and short versions of the TSES in Vietnamese. The first step involved ensuring semantic equivalence between the original TSES and its Vietnamese translation in order to ensure that the translated version retained the same meaning as the original. Following this, the internal

structures of the TSES were examined, including its unidimensional, three-factor, and second-order factor structure models for both the long and short versions. Reliability was assessed evaluating internal consistency and the stability of the measurement results over time for both versions. Lastly, the study assessed the TSES's ability to measure the intended construct through analyses of convergent, divergent, and criterion validity, further establishing its validity in the Vietnamese educational context.

First, the results of the forward and back-translation process established linguistic equivalence between the source language (English) and the target language (Vietnamese) for the TSES. This confirms both semantic and cultural content equivalence, maitaining the content validity of the Vietnamese TSES at a conceptual level in Vietnam. Therefore, the equivalence enhances the validity and relevance of the TSES in assessing the self-efficacy of Vietnamese teachers.

Next, construct validity was assessed using confirmatory factor analysis (CFA). Tschannen-Moran and Hoy (2001) originally proposed a three-factor structure for the TSES, applicable to both the long and short forms, and subsequent research has supported its use for measuring general teaching self-efficacy. In this study, we tested the three factor structural models of the Vietnamese TSES, for both long and short forms. Results of the CFAs supported both the single-factor structure and three-factor structure models for both versions of the TSES.

However, in the second-order factor structure model, the CFA revealed a negative variance for the Engagement factor, indicating a potential Heywood case, which suggests model misspecification. To address this, the variance of the Engagement factor was fixed to a small positive value (e.g., 0.001). Despite this constraint, the model still demonstrated sufficient fit, implying that the negative variance was likely a result of model misspecification rather than an inherent issue with the factor itself. Constraining the variance in this way allows for continued analysis without compromising model estimation (Kline, 2015). Since the Engagement factor conceptually aligns with the overall structure of teacher self-efficacy, this adjustment preserves the model's integrity while resolving the variance issue.

As a result, all three factor structure models of the Vietnamese TSES, for both the long and short forms, were supported by the study's data. These findings are consistent with prior research, indicating that, as in Western and non-Western contexts, the unidimensional, second-order, and three-factor structures of the TSES can be reliably replicated in the Vietnamese teacher population (Fives & Buehl, 2009; Karami et al., 2021; Klassen & Tze, 2014). However, it is worth noting that, compared to the long form, the short form appears to better capture the latent constructs of teacher self-efficacy in Vietnam. Though providing the structure validity of both versions, the current study suggested that both scales maintain their psychometric integrity in the Vietnamese context, allowing for their use in various research and practical settings depending on the specific needs of research or institutions.

After evaluating the factor structure, we examined the reliability of the total scale and subscales of the Vietnamese TSES in both its long and short forms. Results indicated that all of the items of the Vietnamese TSES consistently represented the overall scale, while also reliably reflecting their respective subscales. Furthermore, the test-retest analysis confirmed that the long and short forms of the Vietnamese TSES maintained stability over time. Results suggested that the items in the Vietnamese TSES consistently reflected both the total

scale and the three-factor structure. Additionally, the measurement results for both the total scale and the subscales were stable over time, supporting the robustness of the scale's reliability.

Next, this study evaluated the convergent, divergent, and criterion validity of both the long and short forms of the Vietnamese TSES. The findings supported the validity of both scales. Specifically, the strong correlations between the total and subscales of the TSES in both forms indicated convergent validity, as these scales consistently measure the related concept of teacher self-efficacy. This result aligned with prior research on the convergent validity of the TSES (Nie et al., 2012). Moreover, the divergent validity of both the long and short forms of the TSES was evidenced by weaker correlations between the TSES (both its total and subscales) and the teaching engagement scale of UWES. The relation was supported by prior research finding, which reveal the link between both constructs of teacher self-efficacy and their teaching engagement (Li et al., 2022). Therefore, the results supported the divergent validity of the TSES.

Finally, the criterion validity of the Vietnamese TSES, in both its long and short forms, was suggested through a strong relationship between teacher self-efficacy, as measured by the Vietnamese TSES, and indicators of teaching engagement, for example vigor, dedication and absorption in teaching. This relationship is theoretically grounded in Bakker's job demands-resources model, which posits that self-efficacy acts as a personal resource that enhances teachers' engagement in their professional activities (Demerouti et al., 2001). Teachers with a high self-efficacy are more likely to set ambitious goals, and remain engaged in their teaching (Granziera & Perera, 2019). Therefore, it is suggested that self-efficacy plays an important role in predicting teaching engagement, further supporting the criterion validity of both versions of the Vietnamese TSES.

In sum, the analyses of convergent, discriminant, and criterion validity suggested that both the long and short forms of the TSES effectively measure what they are intended to measure, which is teachers' self-efficacy in teaching. A key contribution of this study, compared to previous research, is its evaluation of both the long and short versions of the TSES, offering a comparative assessment of each scale's ability to measure teacher self-efficacy.

While this study provided valuable insights into the psychometric properties of the Vietnamese TSES in both its long and short forms, it also has several limitations. First, the study focused primarily on student teachers and did not extend to professional teachers. Since student teachers often lack practical teaching experience, they may not fully grasp the complexities of the pedagogical scenarios outlined in the Vietnamese TSES, which could impact their responses (Al-Awidi & Alghazo, 2012; Han et al., 2017). Although the study successfully established the factor structure, reliability, and validity of the Vietnamese TSES, future research should include experienced teachers to provide a more comprehensive evaluation of the scale's psychometric properties. For instance, investigating how experienced teachers' self-efficacy predicts their actual teaching performance could offer valuable insights into the predictive validity of the Vietnamese TSES (Bates et al., 2011).

Another limitation was the exclusive reliance on self-reported data, which may restrict the ability to fully understand the motivational factors behind the participants' responses. The current study used both versions of the TSES, with the long version encompassing a broader range of pedagogical situations than the short version. Given the relatively limited teaching

experience of student teachers, they may have found it easier to respond to the questions on the short version, leading to greater support for the short version compared to the long version of the Vietnamese TSES. However, this assumption cannot be definitively confirmed through only self-reported data, which is the case of the current study. To address this limitation, future research should incorporate a combination of self-reports, interviews, and observations to gain deeper insights into how participants' experiences influence on their responses to both forms of the Vietnamese TSES, providing more robust evidence to clarify this issue (Hauer et al., 2010).

CONCLUSION

The current study suggested that the Vietnamese TSES is both semantically equivalent and culturally appropriate compared to the original scale. Educators, teachers, and researchers can confidently use either the long or short form of the TSES to assess general teacher self-efficacy, as well as specific components, for example, self-efficacy in classroom management, student engagement, and instructional practices. The findings indicate that both versions of the TSES are reliable and stable, accurately measuring the intended constructs to be measured. In conclusion, both the long and short versions of the TSES are well-suited for evaluating teacher self-efficacy within the Vietnamese context.

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