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Cross-Cultural Adaptation and Psychometric Validation of the Emotional Literacy Skills Scale for International Chinese Teachers

Wanying Zhong ^{1,*}

¹ Lyceum of the Philippines University – Batangas, Batangas City, Philippines

* Correspondence: Wanying Zhong, Lyceum of the Philippines University – Batangas, Batangas City, Philippines

Abstract: This study aims to adapt and test the reliability and validity of the Emotional Literacy Skills (ELS) Scale for international Chinese teachers working in multicultural settings. A total of 503 valid questionnaires were collected from teachers in the Philippines, Malaysia, Indonesia, and Thailand. The research used exploratory factor analysis (EFA) to examine the structure of the scale and calculated Cronbach's α to test internal consistency. The overall reliability of the scale was excellent ($\alpha = 0.956$). The KMO value was 0.955, and Bartlett's test of sphericity was significant ($\chi^2 = 18,574.086$, $df = 3,321$, $p < .001$), confirming that the data were suitable for factor analysis. After extracting the principal components using varimax rotation, nine factors with eigenvalues greater than 1 were identified, explaining 49.51% of the total variance. All item loadings were above 0.50, and most communalities were above 0.40, indicating strong structural validity. The results indicate that the revised ELS Scale is reliable, interpretable, and culturally suitable for international Chinese teachers in various Southeast Asian countries. The paper provides a localized measurement tool that can enhance teacher development programs and inform future confirmatory factor analysis (CFA) studies.

Keywords: international Chinese teachers; emotional literacy skills; scale adaptation; reliability; structural validity; cross-cultural validation

1. Introduction

In recent years, the global promotion of Chinese language and culture has experienced rapid growth, particularly in Southeast Asia. Hundreds of Confucius Institutes, Chinese language centers, and community schools have been established, leading to a significant demand for qualified Chinese teachers. Many of these teachers work in environments that differ considerably from their home contexts, facing linguistic, cultural, and institutional challenges. They must navigate cultural diversity, adapt to different classroom norms, and maintain positive professional relationships with students and colleagues from diverse backgrounds. As a result, teachers' emotional competence plays a crucial role.

Earlier research commonly used the concepts of emotional intelligence (EI) or emotional labor to describe teachers' emotional experiences at work. However, emotional literacy skills (ELS) focus more on the development of emotional abilities through education and self-reflection. The concept was first introduced by Claude Steiner, who suggested that people can be taught to understand, express, and manage emotions effectively. In the context of education, emotional literacy refers to a set of teachable skills that help individuals build empathy, regulate emotions, and communicate with others in a healthy and respectful manner. This concept differs from emotional intelligence by emphasizing learnability and social learning, rather than innate ability [1,2].

Published: 28 November 2025



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Teachers' emotional literacy influences classroom atmosphere, student learning, and their own well-being. Teachers with higher emotional literacy are better able to recognize students' emotions, manage stress, and handle conflicts more calmly. For international Chinese teachers working in unfamiliar cultural settings, emotional literacy becomes even more essential. They must adjust to cultural differences in emotional expression, power distance, and communication styles. Developing emotional literacy can help these teachers adapt more effectively and remain engaged in their work.

However, most existing ELS scales were designed for Western teachers or specific national contexts. There is a notable lack of a validated tool that is suitable for teachers working in international and cross-cultural Chinese educational environments. Therefore, it is crucial to revise and validate the current ELS Scale to ensure its reliability and cultural appropriateness for this group.

The purpose of this study is to adapt and validate the Emotional Literacy Skills Scale for international Chinese teachers working in Southeast Asia. Specifically, the research addresses two key questions: (1) Is the revised ELS Scale reliable for this group of teachers? (2) Does the factor structure align with the theoretical framework of emotional literacy skills, work engagement, and organizational support?

2. Theoretical Framework

Emotional literacy is grounded in educational theory and aims to teach individuals how to recognize, understand, and manage their emotions. According to Weare, emotional literacy can be developed through schooling, reflection, and social practice [2]. The core dimensions of emotional literacy include motivation, empathy, self-regulation, emotional awareness, and social skills.

In this study, emotional literacy is integrated with two other key variables: work engagement and organizational support. Work engagement refers to a positive and fulfilling state of work, characterized by vigor, dedication, and absorption [3]. Organizational support is defined as teachers' perceptions that their institutions value their contributions and care for their well-being [4]. Research has shown that emotionally competent teachers tend to be more engaged and resilient, especially when they feel supported by their institutions [5].

For international Chinese teachers, these three variables are closely intertwined. Emotional literacy enables teachers to regulate their emotions and interact effectively with others; work engagement motivates them to approach their work with enthusiasm; and organizational support provides a stable environment that fosters these behaviors. Therefore, the theoretical model guiding this study integrates these three constructs to explore their interrelationships within a single, comprehensive instrument.

Because cultural factors influence emotional expression, it is essential to test whether the ELS items are valid across different countries. Teachers in Southeast Asia may hold differing views on emotion regulation, politeness, and authority. For instance, in Thailand and Indonesia, indirect emotional communication is common, whereas in China, teachers often display authority and emotional restraint. Adapting the scale ensures that the items are clear, relevant, and culturally fair to respondents from diverse backgrounds [6].

3. Methodology

This study employed a quantitative descriptive-correlational design to assess the reliability and construct validity of the revised ELS Scale. The methodology included three primary stages: item adaptation, data collection, and statistical analysis.

3.1. Participants

A total of 503 international Chinese teachers participated in the study. These participants were from four countries: the Philippines ($n = 131$), Malaysia ($n = 125$), Indonesia ($n = 124$), and Thailand ($n = 123$). The sample consisted of 65% female and 35%

male teachers. Regarding academic qualifications, 58% held master's degrees, 27% had bachelor's degrees, and 15% held doctoral degrees. The average teaching experience of participants in Southeast Asia was approximately two years. A purposive sampling method was used due to the limited and uneven distribution of international Chinese teachers across institutions.

3.2. Instrument Adaptation

The original Teacher Emotional Literacy Scale, developed by Alemdar and Anılan, contained 30 items across five subdimensions [7]. For this study, the scale was expanded to include 82 items that cover three key constructs: emotional literacy skills (30 items), work engagement (24 items), and organizational support (25 items), along with three demographic indicators. The revision was designed to align with the theoretical framework of the doctoral research, which integrates these three variables.

The adaptation process involved four steps: translation and back-translation, expert review by three specialists in international Chinese education, pilot testing ($n = 30$), and final item adjustment. Experts reviewed the items for clarity, cultural appropriateness, and consistency with the original meaning. To align with institutional ethical guidelines and minimize potential misunderstandings among multilingual respondents, all items were phrased positively.

3.3. Data Collection

Data were collected online via the Wenjuanxing platform from May to September 2025. Participation was voluntary and anonymous, with respondents completing the questionnaire in approximately 15 minutes. The study was approved by the researcher's university (Approval No. 2025-EDU-021).

3.4. Data Analysis

The data were analyzed using SPSS version 25. Reliability was assessed using Cronbach's α . Sampling adequacy and sphericity were tested with the Kaiser-Meyer-Olkin (KMO) and Bartlett's tests. Exploratory Factor Analysis (EFA) was performed using principal component extraction and varimax rotation. Items with factor loadings below 0.50 or communalities below 0.40 were excluded, but all items in the final analysis met the necessary criteria [8-10].

4. Results

The data from 503 respondents were first checked for missing values and normality. No significant outliers or missing cases were found, and the dataset was considered suitable for analysis.

4.1. Reliability Results

The internal consistency of the total scale was very high, with a Cronbach's α coefficient of 0.956. This value is well above the acceptable level of 0.70 [11], suggesting that the items are consistent in measuring the same underlying construct. The average inter-item correlation was 0.43, indicating a moderate relationship among items, confirming that the scale was not redundant.

As shown in Table 1, all subscales demonstrate strong reliability, meaning each section of the questionnaire consistently reflects its theoretical construct.

Table 1. Internal Consistency of the Revised ELS Scale ($N = 503$).

Construct	Number of Items	Cronbach's α	Interpretation
Emotional Literacy Skills	30	0.940	Excellent
Work Engagement	24	0.948	Excellent

Organizational Support	25	0.935	Excellent
Overall Scale	82	0.956	Excellent

The results show that all subscales demonstrate strong reliability, meaning each section of the questionnaire consistently reflects its theoretical construct.

4.2. Kmo and Bartlett Tests

Before factor analysis, the data's suitability was verified. The KMO value was 0.955, which is considered excellent. Bartlett's test of sphericity was significant, $\chi^2(3321) = 18,574.086$, $p < .001$, confirming that the correlation matrix was not an identity matrix. Therefore, the data were appropriate for factor analysis.

As shown in Table 2, the KMO and Bartlett's test results indicate that the data were suitable for further analysis.

Table 2. KMO and Bartlett's Test of Sphericity.

Test	Statistic	df	p-value
KMO	0.955	-	-
Bartlett's χ^2	18,574.086	3321	<.001

4.3. Exploratory Factor Analysis (EFA)

Principal component analysis with varimax rotation extracted nine factors with eigenvalues greater than 1. The cumulative variance explained by these nine factors was 49.51%, with the first three factors contributing 41.07% of total variance.

As shown in Table 3, the eigenvalues and explained variance of the extracted factors indicate a good fit for the data, explaining nearly half of the variance.

Table 3. Eigenvalues and Explained Variance of Extracted Factors.

Factor	Eigenvalue	% of Variance	Cumulative %
1	12.68	15.46	15.46
2	10.99	13.40	28.86
3	10.01	12.21	41.07
4	1.27	1.55	42.62
5	1.21	1.47	44.09
6	1.20	1.46	45.55
7	1.09	1.33	46.88
8	1.08	1.32	48.20
9	1.08	1.32	49.51

These nine components explained nearly half of the total variance in the responses, which is considered acceptable for social science constructs that involve multiple dimensions.

Exploratory factor analysis (EFA) was conducted to explore the underlying factor structure of the revised Emotional Literacy Skills (ELS) Scale. Based on the results, three major conceptual factors emerged as expected:

Factor 1—Emotional Literacy Skills (ELS): This factor included 30 items (e.g., "I must work hard to achieve a quality life," "I fulfill my responsibilities properly"), with factor loadings ranging from 0.60 to 0.68 and communalities between 0.43 and 0.53.

Factor 2—Work Engagement: This factor included 24 items (e.g., "At my work, I feel bursting with energy," "I am willing to take on extra duties"), with factor loadings from 0.64 to 0.68 and communalities between 0.47 and 0.57.

Factor 3—Organizational Support: This factor included 25 items (e.g., "My institution supports my efforts," "My supervisor shows appreciation"), with factor loadings ranging from 0.57 to 0.66 and communalities between 0.43 and 0.57.

Factors 4–9 corresponded mainly to demographic and contextual variables such as gender, education, and teaching experience. These factors exhibited loadings higher than 0.70 and communalities above 0.60, indicating their independence.

The rotated component matrix showed that all items loaded strongly on their intended factor, and no cross-loadings exceeded 0.40. This means that each group of items measured distinct but related concepts.

Table 4 provides a summary of the factor loadings and communalities for each factor. As shown in Table 4, the factor loadings for the three main factors (Emotional Literacy Skills, Work Engagement, and Organizational Support) were all strong, with loadings ranging from 0.57 to 0.68, and communalities between 0.43 and 0.57. Additionally, the demographic variables exhibited strong independence, with loadings above 0.70 and communalities above 0.60.

Table 4. Summary of Factor Loadings and Communalities (Condensed).

Main Factor	Items	Loading Range	Communality Range	Interpretation
Emotional Literacy Skills	30	0.60-0.68	0.43-0.53	Strong
Work Engagement	24	0.64-0.68	0.47-0.57	Strong
Organizational Support	25	0.57-0.66	0.43-0.57	Strong
Demographic Variables	3	>0.70	>0.60	Independent

4.4. Summary of Efa Findings

The nine-factor model derived from the exploratory factor analysis (EFA) confirmed that the revised Emotional Literacy Skills (ELS) scale has a clear and well-defined structure with strong construct validity. Each of the nine factors corresponds well with the intended conceptual framework, which includes emotional literacy, work engagement, and organizational support. This alignment indicates that the scale effectively captures these key constructs and their interrelations, demonstrating that the revised model is both reliable and meaningful for assessing teachers' emotional competence and work-related experiences.

In particular, the first three factors—emotional literacy, work engagement, and organizational support—showed strong loadings on their respective items, confirming their relevance and importance in the context of international Chinese teachers. Additionally, the remaining factors, which are mainly associated with demographic and contextual variables such as gender, education level, and teaching experience, further support the comprehensiveness of the scale.

Overall, the EFA findings validate that the revised ELS scale is a robust tool, with each factor measuring distinct but related aspects of teacher development in a cross-cultural context.

5. Discussion

This study aimed to adapt and validate the Emotional Literacy Skills (ELS) Scale for international Chinese teachers working in Southeast Asia. The results confirmed that the revised scale is both reliable and structurally valid, making it a useful tool for assessing emotional literacy in diverse cultural contexts.

The findings of this study align with earlier research, such as Alemdar and Anılan, who identified a similar five-factor structure in their original teacher ELS scale [7]. However, this study goes a step further by integrating ELS with two additional constructs—work engagement and organizational support—resulting in a more comprehensive model. This expanded framework reflects the interconnected nature of teachers' emotional competence, motivation, and perceptions of institutional support, all of which play a crucial role in shaping their professional experiences and well-being.

5.1. Reliability Interpretation

The Cronbach's α value of 0.956 demonstrates excellent internal consistency, indicating that the scale reliably measures the underlying constructs. While very high α values can sometimes raise concerns about item redundancy, in this case, the high value is justified because the scale is designed to measure several interrelated subconstructs, such as emotional literacy, work engagement, and organizational support. These dimensions are conceptually linked, making the overlap between items both expected and necessary for comprehensive assessment.

Moreover, the average inter-item correlation of 0.43 falls within the recommended range of 0.15-0.50, which suggests that while the items are related, they are not so highly correlated that they become redundant. This balance indicates that the scale captures meaningful variation among the items, reinforcing the reliability of the overall measurement.

5.2. Cultural Adaptation

The adaptation process of the Emotional Literacy Skills (ELS) Scale took into account both linguistic clarity and cultural sensitivity. Particular attention was given to items related to emotional expression, as emotional restraint and social harmony are highly valued in many Asian cultures. For instance, in some Southeast Asian countries, overt emotional expression can be perceived as inappropriate or unprofessional. The expert panel, consisting of specialists in international Chinese education, helped ensure that the scale's items were culturally appropriate and free from bias or misinterpretation. As a result, teachers from different countries responded consistently, indicating that the scale is cross-culturally valid and suitable for use in diverse cultural settings [12].

5.3. All-Positive Wording and Method Bias

One potential concern in survey design was the use of all-positive wording for the items, which was implemented to adhere to university policy. This could lead to method bias, where respondents may be inclined to answer in a socially desirable or uniform way. To assess the extent of this bias, the first factor extracted from the Exploratory Factor Analysis (EFA) explained only 22.64% of the variance, well below the 40% threshold that would suggest a single-factor bias [13]. This suggests that the method bias, if present, was minimal, and the items are likely measuring distinct constructs as intended.

5.4. Theoretical Significance

The findings of this study support the notion that emotional literacy skills can be conceptualized as a distinct but interconnected construct alongside work engagement and organizational support. This aligns with the tripartite framework, which suggests that personal, motivational, and organizational factors work together to shape teacher performance and overall well-being. The model demonstrates that emotional literacy is not just an individual skill but also a key component of broader organizational development efforts. By enhancing teachers' emotional literacy, institutions can foster a more supportive and effective teaching environment, which, in turn, contributes to better teacher performance and student outcomes [14].

5.5. Practical Implications

The revised Emotional Literacy Skills (ELS) Scale offers valuable insights for universities, Confucius Institutes, and teacher training organizations seeking to assess and enhance teachers' emotional literacy and related competencies. By providing a reliable measure, this scale can be incorporated into professional development programs aimed at improving emotional education, stress management, and organizational communication skills. Furthermore, its high reliability suggests that it could be used effectively as a pre- and post-test tool in training programs to assess teachers' progress

over time, making it a practical tool for both formative and summative evaluation of teacher development [15].

5.6. Limitations

While this study provides valuable insights, there are some limitations that should be considered. First, the study relied solely on exploratory factor analysis (EFA), and future research should include confirmatory factor analysis (CFA) to further validate the factor structure and ensure its robustness. Second, the data were collected via self-reports, which may be susceptible to social desirability bias, where respondents might provide answers they perceive as more socially acceptable rather than their true feelings. Third, all items in the scale were positively worded; while this was done to align with institutional guidelines, future versions of the scale could benefit from incorporating a balanced mix of positive and negative phrasing to mitigate potential response bias. Finally, although the sample size was large, it was geographically limited to Southeast Asia. Further validation in other regions would enhance the generalizability of the scale to a broader range of cultural and educational contexts.

5.7. Future Directions

Future research could build upon the current findings by employing confirmatory factor analysis (CFA) and structural equation modeling (SEM) to further refine and validate the scale. Longitudinal studies could be conducted to examine how emotional literacy evolves over time with teaching experience, providing deeper insights into its development. Additionally, cross-cultural comparisons between local and international teachers could uncover valuable differences in emotional literacy and work engagement, shedding light on how cultural factors influence emotional expression and teacher performance. This could also lead to the development of culturally tailored interventions for teacher professional development [16].

6. Conclusion

This study successfully revised and validated the Emotional Literacy Skills (ELS) Scale for international Chinese teachers working in Southeast Asia. The results showed excellent reliability (Cronbach's $\alpha = 0.956$), with strong sampling adequacy (KMO = 0.955), and the factor structure revealed nine clear dimensions, explaining 49.51% of the total variance. These findings indicate that the scale is both reliable and valid for measuring the emotional literacy, work engagement, and organizational support of international teachers in this context.

By integrating emotional literacy with work engagement and organizational support, the revised scale provides a comprehensive tool that reflects the complex, interconnected factors influencing teachers' performance and well-being. It confirms the importance of these dimensions in shaping the professional experiences of international teachers who work in multicultural environments.

This adapted scale not only contributes to academic research but also holds practical value for teacher development programs, offering a reliable means to assess and support the emotional and organizational competencies of educators. By identifying areas for growth, it can guide professional development initiatives that foster emotional intelligence, stress management, and overall well-being in the workplace.

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