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ARTICLE

Measuring English Foreign Trade Correspondence Writing Self-Efficacy: Scale Development and Validation

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ABSTRACT

With the growing importance of English as a global lingua franca in international trade, the ability to write effective foreign trade correspondence has become an essential skill. However, beyond acquiring knowledge and skills, learners' self-efficacy—their confidence in applying business knowledge, navigating cultural differences, following letter formatting conventions, and using the English language appropriately plays a decisive role in their performance. Despite its importance, little research has systematically examined self-efficacy in this domain. This study aimed to create and validate the Self-efficacy Scale for English Foreign Trade Correspondence Writing. Exploratory factor analysis, conducted with 399 participants, identified four key dimensions: Business Knowledge, Cultural Awareness, Letter Formatting, and Language Proficiency, which were consistent with the proposed dimensions derived from the elements of Foreign Trade Correspondence. Confirmatory factor analysis, involving 690 participants, indicated a strong fit between the proposed factor structure and the data. The scale demonstrated convergent validity, discriminant validity, and criterion-related validity. However, the study acknowledged limitations, including sample bias from a single institution, the cross-sectional study design and lack of predictive validity evidence. Future research should aim to increase sample diversity and employ a longitudinal design to assess test-retest reliability. Additionally, practical tests and performance data should be included to

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validate the scale's predictive validity. Overall, the Self-efficacy Scale for English Foreign Trade Correspondence Writing exhibited robust psychometric properties and can be used to measure individuals' self-efficacy levels in this area.
Keywords: Foreign Trade Correspondence; Writing Self-Efficacy; Scale Development; Scale Validation

1. Introduction

International trade is crucial to the global economy, particularly in the current era of globalization [1]. It encompasses the cross-border exchange of goods, services, and capital, enabling nations to utilize their comparative advantages and engage in the global market. For countries such as China, with strong manufacturing sectors, international trade is vital for economic growth, industrial development, and job creation.

The importance of international trade goes beyond economic factors, promoting economic interdependence among nations and establishing networks of mutually beneficial relationships. As countries aim to protect the wealth generated from trade, trading partners often exhibit less confrontational behavior compared to non-trading nations [2]. Through trade, countries become interconnected and reliant on each other's resources, expertise, and markets. This interdependence fosters cooperation, strengthens diplomatic relations, and contributes to global stability and peace.

In the realm of communication, effective interaction is vital for successful international trade [3, 4]. Verbal exchanges, such as phone calls and online meetings, facilitate real-time discussions, detail clarification, and relationship-building between trading partners. However, written correspondence, especially trade letters or foreign business correspondence, holds a unique significance in international trade communication.

Foreign business correspondence offers a formal and well-documented method of communication between trading parties, presenting several advantages over verbal exchanges. First, it provides a clear record of agreements, negotiations, and commitments, which serves as a reference for future interactions. This record-keeping function is crucial for maintaining transparency, resolving disputes, and ensuring accountability.

Second, such correspondence has legal validity. These documents often contain contractual terms, conditions, and obligations that carry legal force. In the event of dispute or misunderstanding, trade correspondence serves as evidence of the parties' intentions and agreements, thereby supporting the fair and just resolution.

Moreover, written correspondence allows thoughtful consideration by both parties. Unlike verbal communication, which can be fleeting and prone to misinterpretation, written communication enables careful deliberation and revision. This thorough nature promotes clarity, precision, and accuracy in conveying information, reducing the chances of misunderstandings.

Additionally, foreign business correspondence overcomes the challenges posed by global time differences. In international trade, partners often operate in different time zones, making real-time communication difficult. Written correspondence overcomes time zone barriers, enabling parties to exchange information and negotiate terms at their convenience, thus enhancing efficiency and productivity in international trade.

Given the prominence of English as the primary language for international business communication, proficiency in English business correspondence is essential for individuals involved in global trade [5]. To address this need, educational institutions in mainland China have begun offering specialized courses in "English Writing for International Trade Correspondence" within English majors, business English majors, and international trade programs. These courses aim to improve students' skills in writing business correspondence in English preparing them to succeed in the global job market.

A crucial factor influencing students' academic performance is their sense of efficacy, or their belief in their ability to accomplish specific tasks [6–8]. In the context of business English correspondence writing, assesing efficacy requires a reliable and valid measurement scale. Self-efficacy is not a generalized trait but is specific to a particular context, domain, and task [9–11]. This specificity can significantly impact the prediction of academic outcomes, offering insights that broader assessments of self-belief cannot provide [12]. Therefore, it is essential to construct a tailored scale that accurately

measures efficacy in business English correspondence writing, considering the unique requirements and challenges of this area.

Establishing a mesuarement tool for efficacy in English trade correspondence writing offers numerous benefits to various stakeholders. Educators can use this tool to accurately assess students' proficiency, identify their strengths and weaknesses, and tailor instructional strategies accordingly. This scale helps design targeted interventions to address specific areas of improvement, thereby enhancing students' overall performance in writing English trade correspondence.

Additionally, the scale advances research in business English education. With a standardized measure of efficacy, researchers can explore the relationship between proficiency in English trade correspondence writing and other factors such as cultural competence and business outcomes. This research can lead to a deeper understanding of the role of language proficiency in international trade and inform the development of effective teaching methods and curriculum designs.

Overall, developing a scale for evaluating efficacy in English trade correspondence writing meets the specific needs of students in international trade communication. It improves educational outcomes and prepares competent professionals who can excel in the global marketplace. By promoting effective communication and proficiency in English trade correspondence writing, this scale supports the growth of international trade, facilitates successful business relationships and drives global economic development.

2. Literature Review

2.1. Self-Efficacy

Bandura defines self-efficacy as individuals' assessment of their ability to organize and carry out actions needed to achieve specific tasks or performances [9]. In social cognitive theory, self-efficacy is believed to influence behaviors and environments and is shaped by them [9]. Bandura categorized the formation of self-efficacy into four different sources: mastery experiences, vicarious experiences, social persuasion, and emotional and physiological states [10].

Bandura also posits that self-efficacy is a domain-specific concept that is closely tied to specific activity domains [10]. This implies that self-efficacy beliefs can fluctuate depending on the context and tasks involved. In other words, individuals may exhibit varying levels of self-efficacy for different activities or domains, and these beliefs can shift based on specific situations and challenges encountered in those areas. Therefore, it is essential to recognize that self-efficacy cannot be universally measured across all goals [13]. Assessing self-efficacy necessitates tailoring scales to the specific domain of study, as a generalized measure would lack predictive and explanatory power. Self-efficacy scales must align with the specific performance domain to produce meaningful and insightful results [10].

Writing self-efficacy, or one's beliefs about their own writing capabilities, is an important construct that has been widely studied in educational research. Several instruments have been developed to measure English writing self-efficacy, each with its own unique features and applications. While existing English writing self-efficacy scales [14–16] provide valuable insights, the unique demands of English foreign trade correspondence writing warrant the development of a specialized measure. The lack of dedicated instruments in this domain represents a gap in the literature that should be addressed to support the growth and success of individuals and organizations engaged in international trade and commerce.

2.2. Foreign Trade Correspondence

Foreign trade correspondence, also known as international trade correspondence, is the written communication exchanged between businesses involved in global trade. It serves as a vital tool for conducting international business transactions, negotiating deals, and establishing and maintaining relationships with suppliers, customers, and partners around the world.

Foreign trade correspondence is closely related to the special field of knowledge [17], therefore, foreign trade correspondence in the context of foreign trade includes trade-specific content, such as product details, pricing, shipping arrangements, and legal terms. It also often includes elevated or specialized words and phrases that are specific to the business domain (e.g., inquiry, quotation and counteroffer). It addresses the specific requirements and considerations of international trade activities. For instance, abbreviations of business correspondence (e.g., FOB = Free On Boar, L/C =

Letter of Credit, ETA = Estimated Time of Arrival and ETD = Estimated Time of Departure) have a special system in expression different from the one of daily English. In business correspondence, they are very often used to save space and time. In business English, most abbreviations have the fixed meanings.

What's more, foreign trade correspondence often follows a standardized format, including elements like letterhead, date, salutation, body, conclusion, closing, and signature[18]. This format ensures consistency and professionalism in communication.

Additionally, foreign trade correspondence requires an understanding of cultural norms and sensitivities, especially when communicating with individuals from different cultural backgrounds[19]. It is essential to be aware of cultural differences in communication styles, greetings, and forms of address to ensure respectful and appropriate communication. For instance, cultural norms greatly influence the level of directness or indirectness in communication. Some cultures value direct, straightforward communication (e.g., USA and UK) while others prefer a more indirect and nuanced approach (e.g., China and Japan). This can impact the style and tone of the correspondence.

Finally, it is essential to consider both the accuracy of the language used and the requirements of the writing purpose. To begin with, just like any other form of writing, the writing of foreign trade correspondence in English requires correct spelling, tense usage, and voice selection. Additionally, within international trade correspondence, the use of fixed sentence patterns to express intentions and viewpoints is quite common due to the specific purposes and demands of business writing. This practice helps ensure the accuracy, clarity, and professionalism of the letters.

Previous studies on foreign trade correspondence have focused on several key areas related to translation[20–22], language Features[23–25], impact of online learning toward students' academic performance[26], genre awareness[27], abbreviations in modern business correspondence[28], teaching reform and design[29–31], discourse[32, 33] and modal verbs and politeness[34].

However, one that lacks sufficient research in the existing literature is the effectiveness of specific measurement tools or assessments designed to evaluate students' self-efficacy in foreign trade English correspondence writing. While previous studies have investigated various aspects related to this domain, there is limited evidence on the efficacy of reliable and comprehensive assessment instruments specifically tailored to this skill set. Therefore, research should prioritize the development and validation of assessment tools that can provide a standardized and objective measure of students' competence in foreign trade English correspondence writing, thereby enhancing their sense of efficacy and confidence in this area.

Based on the analysis of the features of foreign trade correspondence, namely, content aspect, format aspect, cultural aspect and language aspect**,** English Foreign Trade Correspondence Writing Self-efficacy is proposed to refer to an individual's belief and assessment of their confidence and ability in composing correspondence related to foreign trade in English. This encompasses multiple dimensions. First, it involves proficiency in the English, including vocabulary, grammar, and spelling. Second, it entails cultural awareness, encompassing understanding different cultural backgrounds and etiquette pertinent to foreign trade correspondence, and confidence in navigating cross-cultural communication. Third, it encompasses familiarity with formatting requirements and norms for various forms of correspondence such as letters and emails. Lastly, it involves a deep understanding of the business content and professional knowledge relevant to foreign trade, along with the confidence to effectively express such content. These dimensions collectively represent the writer's competence and assurance across different facets of English foreign trade correspondence writing.

3. Methods

3.1. Ethical Considerations

This study was conducted in accordance with the ethical standards outlined in the Declaration of Helsinki. The research ethics application was submitted to the working unit and received ethical approval with the review number "QGXYLL20230016". The online survey platform Wenjuanxing (Questionnaire Star) was used to distribute the questionnaires, which included an embedded digital informed consent form that provided details on the research purpose, procedures, methods, and contact

information. Participants were explicitly informed of their rights and ability to withdraw without penalty. Only those who agreed to participate could access the questionnaire. To protect the privacy of the participants, the current study did not collect any identifiable data, and all responses are stored securely on a password-protected computer accessible only to the Principal Investigator, used solely for academic purposes.

3.2. Participants and Data Cleaning

This study adopted a convenience sampling method to collect data. The questionnaire link was disseminated through various channels, including the research advisor forwarding it in the teachers' WeChat office group and the researchers posting it on social platforms such as WeChat and QQ groups. A total of 450 participants took part in the first round of data collection. After data cleaning using a response time threshold of 2 seconds per item, 399 valid questionnaires were retained. The initial dataset was used for exploratory factor analysis (EFA). The second round of data collection, aimed primarily at confirmatory factor analysis (CFA), received 750 responses. After applying the same data cleaning criterion, 690 valid questionnaires were obtained. The specific demographic information was presented in **Table 1.**

Table 1. Demographic information for EFA dataset and CFA dataset.

Demographic Variable		EFA Dataset		CFA Dataset	
		No.	**Percentage (%)**	**No.**	**Percentage (%)**
Grade	Year of 2019	4	1	9	1.3
	Year of 2020	30	7.5	42	6.1
	Year of 2021	5	1.3	206	29.9
	Year of 2022	359	90	296	42.9
	Year of 2023	1	0.3	137	19.9
Birthplace	Urban	95	23.8	173	25.1
	Rural	304	76.2	517	74.9
Gender	Male	48	12	125	18.1
	Female	351	88	565	81.9
Total		**399**	**100**	**690**	**100**

3.3. Measures

3.3.1. Self-Efficacy Scale for English Foreign Trade Correspondence Writing

The scale developed and validated in this study is named the Self-efficacy Scale for English Foreign Trade Correspondence Writing (SSEFTCW). It consists of four dimensions: cultural awareness, language proficiency, letter formatting, and business knowledge. Each dimension includes four items. All items are scored positively, meaning that higher scores indicate higher self-efficacy in English foreign trade correspondence writing. The scale adopts a five-point Likert scale format, with a scoring rule of 1 indicating "strongly disagree" and 5 indicating "strongly agree." The specific details regarding the item generation and content validity testing would be elaborated upon in the results section.

3.3.2. Adapted Questionnaire of English Self-Efficacy

To validate the criterion-related validity of the Self-efficacy Scale for English Foreign Trade Correspondence Writing, this study administered two additional scales related to English writing self-efficacy along with the scale. These scales were distributed simultaneously to obtain concurrent validity. The two additional scales are Adapted Questionnaire of English Self-efficacy (AQES) and Genre-based Second Language (L2) Writing Self-efficacy Scale (BSLWSS).

The 13-item Adapted Questionnaire of English Self-Efficacy by En-Chong L.[35] was based on the Questionnaire of English Self-Efficacy[36]. The Questionnaire of English Self-Efficacy[36] is a self-efficacy scale that assesses students' self-efficacy in four domains of language learning: listening, speaking, reading, and writing. However, for the purpose of this study, only the items related to the writing con-

struct were used because self-efficacy is specific to different domains[9–11]. Adaptations were made by adding additional items describing writing techniques for composing the short paragraph assignments were included in the questionnaire. Participants were asked to rate their beliefs about their writing self-efficacy on a 5-point Likert scale, ranging from 1 (I cannot do it at all) to 5 (I can do it well). Higher scores on the self-efficacy scale indicate a higher level of self-efficacy in English writing for students.

3.3.3. Genre-Based Second Language (L2) Writing Self-Efficacy Scale

Genre-based second language (L2) writing self-efficacy scale (BSLWSS)[37] consists of four dimensions: Linguistic Self-Efficacy (5 items), Classroom Performance Self-Efficacy (4 items), Genre-Based Performance Self-Efficacy (4 items), and Self-Regulatory Self-Efficacy (3 items). A 7-point Likert scale was adopted. The scale ranges from 1 (not at all true of me) to 7 (very true of me). Participants can assess their level of agreement based on the statements presented in the items.

3.4. Analytical Procedure

This study utilized JASP software to perform item analysis and exploratory factor analysis (EFA) on the initial dataset. To validate the factor structure model derived from the EFA with actual data, the authors then employed AMOS 26 software for confirmatory factor analysis (CFA) on a subsequent dataset.

During the item analysis phase, participants in the first dataset were split into high-scoring (top 27%) and low-scoring (bottom 27%) groups based on their scale scores. Independent samples t-tests were conducted to determine significant differences in total scale item scores between these groups, thereby assessing item discrimination. Additionally, item-total correlations were calculated to measure the relationship between each item and the total scale score, evaluating each item's contribution to the overall scale. Cronbach's Alpha Coefficient was computed to assess the scale's internal consistency. The researchers also examined the "revised item-to-total correlations" and "Cronbach's Alpha if item deleted" values, concluding that removing any item did not significantly enhance the scale's internal consistency.

To identify the number of underlying factors, the researchers employed the parallel analysis method available in JASP (Jeffrey's Amazing Statistics Program) software. This technique involves comparing the eigenvalues of the actual dataset with those from random data to determine the statistically significant factors present in the actual dataset. Before proceeding with the exploratory factor analysis (EFA), they conducted the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test of sphericity to ensure the data was suitable for EFA.

Following the EFA, the researchers used the second dataset for confirmatory factor analysis (CFA) to validate the factor structure model identified in the EFA. During the CFA, the current study utilized fit indices to assess the model fit against established standards. Furthermore, the scale's convergent validity, discriminant validity, and criterion-related validity were evaluated using the second dataset.

4. Results

4.1. Item Generation

Based on the elements of foreign trade correspondence, which include content, format, cultural, and language aspects, the author initially developed the dimensions for the Self-efficacy Scale for English Foreign Trade Correspondence Writing. In addition, following the recommendations of Rattray and Jones[38], two instructors who teach the "English Foreign Trade Correspondence" course were interviewed. These interviews primarily focused on the key content, format requirements, cultural differences, and language standards pertinent to English foreign trade correspondence writing. Potential additional aspects, if any, would be also gathered for further analysis. Each interview lasted around 40 minutes.

The author transcribed the interviews using "Xunfei Tingjian" (IFLYREC) software and organized the data using MAXQDA software to categorize representative and recurring content. This involved merging synonymous phrases while preserving those with similar meanings. Furthermore, the derived dimensions and items were compared with existing English writing self-efficacy scales. This process resulted in a 4-dimensional scale consisting of 17 items: cultural awareness, language proficiency, letter formatting, and business knowledge.

4.2. Content Validity

This research enlisted the expertise of five experienced English educators to assess the dimensions and items of the scale. Their primary focus was to determine the relevance of each item to the targeted concept and its appropriateness in reflecting that concept, and representativeness of the item, in other words the extent to which the scale items comprehensively cover the intended domain or concept, ensuring the inclusion of any crucial elements that may have been overlooked. Furthermore, these experts assessed the clarity and comprehensibility of each item, scrutinizing the wording to ensure respondents' ability to understand and answer accurately. To conclude, the evaluation encompassed the representativeness, clarity, and relevance of each item in relation to its corresponding content dimension. A 4-point rating scale was employed, with ratings ranging from 1 to 4: 1 = not relevant/clear/representative, 2 = weakly relevant/clear/representative, 3 = moderately relevant/clear/representative, and 4 = highly relevant/clear/representative.

The Item-Level Content Validity Index (I–CVI) for each item was calculated by dividing the number of experts who rated it as 3 or 4 (indicating good relevant/clear/representative) by the total number of participating experts. The Scale-Level Content Validity Index (S–CVI), expressed as S–CVI/Ave, was determined by averaging the I–CVIs for all items in the scale. The values of both I–CVI and S–CVI range from 0 to 1. An I–CVI > 0.79 signifies relevant/clear/representative, while scores between 0.70 and 0.79 indicate the need for revisions, and values below 0.70 suggest the elimination of items[39]. Similarly, S–CVI is computed based on the proportion of items in the tool rated as "very relevant/clear/representative"[39].

In terms of relevance and clarity, aside from Language Proficiency 4 and Letter Format 3, each of which one expert deemed irrelevant or unclear (I–CVI = 0.80 > 0.79), the relevance and clarity scores for all other items are greater than or equal to three (I–CVI = 1 > 0.79). Therefore, S–CVI = 0.98, indicating that all items are considered highly relevant and clear.

However, as for the item representativeness, Language Proficiency 4 and Letter Format 3 each had one expert deem them irrelevant (I–CVI = 0.80 > 0.79), while Language Proficiency 5 had two experts consider it not representative (I–CVI = 0.6 < 0.79)[39]. Therefore, in subsequent analyses, Language Proficiency 5 was removed. Consequently, S–CVI = 0.98, indicating that the remaining items are deemed representative.

To conclude, a total of 17 representative items were extracted and categorized into four categories. Upon receiving feedback from experts, the dimensions remained unchanged, but "Language Proficiency 5" was removed. As a result, 16-item scale including four dimensions were formed, each consisting of four representative items in the initial scale.

4.3. Item Discrimination

To assess the quality of the items, the researcher conducted an independent samples t-test between the highest score group and the lowest score group using the first set of data. If there is a significant difference in the total scores of the items between the high score group and the low score group, it can demonstrate that the scale has good discriminatory power and can effectively differentiate individuals in terms of the measured characteristics. The author first calculated the total scores for 16 items and defined the highest 27% as the highest score group (Total Score = 63.8462) and the lowest 27% as the lowest score group (Total Score = 45.8233).

The results of the independent samples t-test between the two groups indicate that all item differences are significant at a 95% confidence interval, suggesting that the scale items have good discriminatory power. The observed significant differences between the two groups indicate that the items are able to effectively differentiate individuals with higher scores from those with lower scores.

4.4. Item-Total Correlations

Subsequently, the author utilized item-total correlations to evaluate the correlation between each item and the overall scale score. These correlations were obtained by determining the correlation coefficient between an individual item and the total score across all items. In general, high item-total correlations indicate a more robust association between the item and the construct being assessed, implying that the item plays a more significant role in capturing the intended construct. The findings revealed that the item-total correlation coefficients ranged from 0.791 to 0.887, reflecting relatively high positive correlations between the items and the total

score. This result implies that the items adequately capture the underlying latent variable of interest.

4.5. Reliability Statistics

Finally, the author found that the Cronbach's Alpha Coefficient for the 16 items of the scale was 0.972, indicating that the scale had very high internal consistency.

The author further observed the "Corrected Item-Total Correlation" and the "Cronbach's Alpha if Item Deleted". The results showed that there was no need to delete any items from the scale, as deleting any one item would not significantly improve the internal consistency of the scale.

4.6. Exploratory Factor Analysis

To determine the number of latent factors, the current study employed the parallel analysis method. To assess the suitability of the data for factor analysis, the author conducted the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of Sphericity. The results of Bartlett's test conducted on the formal questionnaire showed $\chi 2\ (120) = 7898.988$, $p < 0.001$. Therefore, the current study rejected the null hypothesis, indicating the presence of common factors in the correlation matrix representing the population. Additionally, the KMO test yielded a result of KMO = 0.955, which is greater than 0.9, suggesting that the questionnaire is highly suitable for factor analysis.

Following this, the current study proceeded to eliminate unsuitable items based on the following criteria: (1) factor loading less than 0.40; (2) communality less than 0.30; (3) cross-loading on two or more factors greater than 0.30; (4) the number of items per factor being less than or equal to 2. The data indicated that item LP2 had a cross-loading below 0.4, and therefore, this item was removed from further analysis.

Exploratory Factor Analysis was conducted on the remaining 15 items. Based on parallel analysis in **Table 2** and scree plot as shown in **Figure 1**, a comprehensive assessment suggests the presence of four factors. These four factors account for variances of 24.2%, 21.4%, 19.9%, and 15.5%, respectively, totaling an explained variance of 81%. This indicates that they effectively explain the observed variability in the data. The 15 items exhibit high factor loading's on their respective factors, with the highest loading being 0.931 and the lowest loading being 0.669. The communalities of the four factors range from 0.696 to 0.909.

The exploratory factor analysis, supported by the results of parallel factor analysis and the scree plot, revealed the presence of four distinct factors in relation to English foreign trade correspondence writing. These factors have been assigned the following names: Factor 1, termed "Business Knowledge (Cronbach's Alpha Coefficient = 0.960)", comprises four items that pertain to a comprehensive understanding of business practices and principles within the context of foreign trade. Factor 2, labeled as "Cultural Awareness (Cronbach's Alpha Coefficient = 0.940)", consists of four items that capture the importance of recognizing and appreciating cultural nuances and diversity when engaging in international business communication. Factor 3, designated as "Letter Formatting (Cronbach's Alpha Coefficient = 0.926)", encompasses four items that emphasize the significance of adhering to appropriate formatting conventions and standards when composing written correspondence in English for foreign trade purposes. Factor 4, referred to as "Language Proficiency (Cronbach's Alpha Coefficient = 0.908)", encompasses three items that highlight the essentiality of possessing a high level of proficiency in the English language to effectively communicate in the realm of foreign trade.

Table 2. Exploratory factor analysis results.

Dimension	Item	Factor				Uniqueness	Communalities	Cronbach's Alpha Coefficient
		1	2	3	4			
Cultural Awareness	CA1		0.780			0.221	0.779	0.940
	CA2		0.931			0.130	0.870	
	CA3		0.796			0.180	0.820	
	CA4		0.724			0.247	0.753	
Language Proficiency	LP1				0.893	0.143	0.857	0.908
	LP3				0.681	0.212	0.788	
	LP4				0.721	0.238	0.762	

Table 2. *Cont.*

Dimension	Item	Factor				Uniqueness	Communalities	Cronbach's Alpha Coefficient
		1	2	3	4			
Business Knowledge	BK1	0.790				0.168	0.832	0.960
	BK2	0.867				0.163	0.837	
	BK3	0.871				0.091	0.909	
	BK4	0.881				0.137	0.863	0.926
Letter Formatting	LF1			0.669		0.211	0.789	
	LF2			0.706		0.304	0.696	
	LF3			0.896		0.163	0.837	
	LF4			0.859		0.239	0.761	

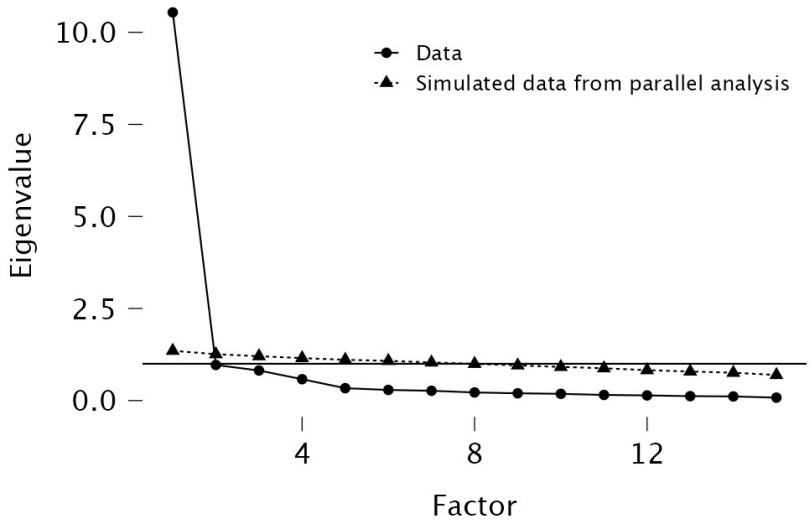

Figure 1. Scree plot.

4.7. Confirmatory Factor Analysis

The second set of data was utilized for confirmatory factor analysis to validate the latent factor structure model derived from the exploratory factor analysis and assess its consistency with the observed data. The analysis employed various fit indices to evaluate the goodness of fit of the model. The findings indicate that the model demonstrates favorable fit as indicated by the $\chi 2/df = 4.058 < 6$, Root Mean Square Error of Approximation (RMSEA) = 0.067 < 0.08, Goodness-of-Fit Index (GFI) = 0.939 > 0.90, Standardized Root Mean Square Residual (SRMR) = 0.020 < 0.05, Normed Fit Index (NFI) = 0.973 > 0.900, Tucker-Lewis Index (TLI) = 0.974 > 0.900, and Comparative Fit Index (CFI) = 0.980 > 0.900, all of which fall within an acceptable range. These results support the hypothesized factor structure as shown in **Figure 2** and indicate that the model is well-aligned with the observed data.

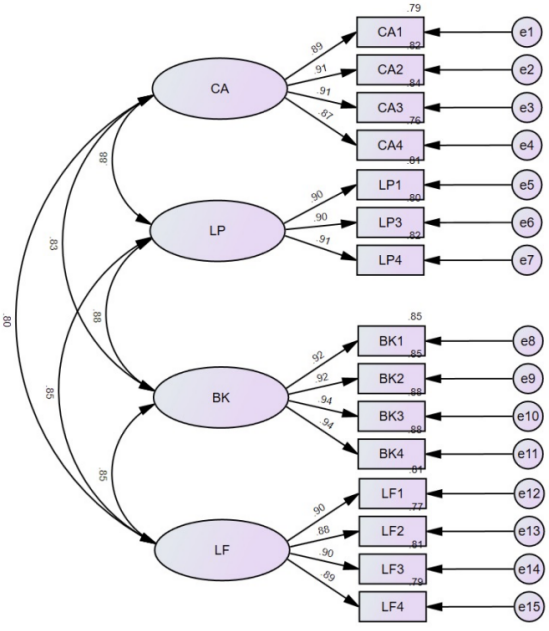

Figure 2. Four-Factor structure of SSEFTCW.

4.8. Convergent Validity

Convergent validity measures the extent to which items designed to assess the same construct actually do so by grouping them under the same factor. This concept emphasizes the strong correlation among items intended to measure the same underlying variable. Essentially, it requires a high level of correlation among all items within a dimension, ensuring that they are consistent in capturing the same construct.

To evaluate the convergent validity of the scale, we first examined the standardized factor loading coefficients. These coefficients, after standardization, indicate good convergent validity if they exceed 0.7 for each item. As shown in **Tables 2** and **3**, all items have standardized factor loading coefficients above the recommended threshold of 0.7, suggesting that the scale has good convergent validity.

Additionally, the Average Variance Extracted (AVE) was calculated for each latent factor. The AVE values, ranging from 0.796 to 0.863, fall within an acceptable range. Furthermore, the Composite Reliability (CR) for each latent factor was also computed. The CR values for all dimensions exceed the recommended threshold of 0.7, as proposed by Hair et al.[40]. Therefore, it can be concluded that the scale demonstrates good convergent validity.

Table 3. Factor loading.

Dimension	Item	UnStd Estimate	Std Estimate	S.E.	C.R.	*p*-Value	CR	AVE
CA	CA1	1.000	0.887				0.942	0.802
	CA2	1.051	0.907	0.029	36.155	***		
	CA3	1.077	0.915	0.029	36.923	***		
	CA4	0.986	0.873	0.03	33.198	***		
LP	LP1	1.000	0.901				0.928	0.811
	LP3	1.016	0.895	0.028	36.078	***		
	LP4	1.042	0.906	0.028	37.126	***		
BK	BK1	1.000	0.921				0.962	0.863
	BK2	1.012	0.920	0.024	42.677	***		
	BK3	1.035	0.936	0.023	45.14	***		
	BK4	1.049	0.939	0.023	45.586	***		
LF	LF1	1.000	0.900				0.940	0.796
	LF2	0.977	0.880	0.028	34.657	***		
	LF3	0.971	0.901	0.026	36.667	***		
	LF4	0.957	0.887	0.027	35.351	***		

Note: ***$p < 0.001$.

4.9. Discriminant Validity

Discriminant validity ensures that measurement items designed to assess different constructs do not overlap, thus emphasizing the distinction between items that should belong to different factors. In this study, discriminant validity was assessed using two methods. First, the Fornell-Larcker criterion[41] was applied, which establishes discriminant validity when the square root of the Average Variance Extracted (AVE) for each factor is greater than the correlation between that factor and any other factor. Second, the Heterotrait-Monotrait ratio (HTMT) was used, which is the ratio of the average correlations between indicators of different constructs to the square root of the product of average correlations between indicators of the same construct. An HTMT value below 0.85[42] indicates discriminant validity between the factors.

As shown in **Table 4**, the square root values of the Average Variance Extracted (AVE), highlighted in bold, were greater than the correlations between subconstructs. Additionally, the AVE values exceeded the correlations between different constructs. These results indicate that the four factors being studied are distinct and demonstrate discriminant validity.

Furthermore, the analysis results show HTMT values between the dimensions significantly below the 0.90 threshold, ranging from 0.804 to 0.882. These findings indicate that the four dimensions are distinct from one another and can be reliably measured as separate constructs.

Table 4. Fornell-Larcker results.

Dimension	CA	LP	BK	LF
CA	0.896			
LP	0.880***	0.901		
BK	0.829***	0.878***	0.929	
LF	0.803***	0.849***	0.846***	0.892

Note: ***$p < 0.001$.

4.10. Criterion-Related Validity

Criterion-related validity assesses how well a measurement or test can predict or correlate with a specific criterion or outcome. It involves comparing the assessment scores or measurements with an external criterion, which is considered a valid and reliable measure of the construct being evaluated.

To validate the criterion-related validity of the Self-efficacy Scale for English Foreign Trade Correspondence Writing, this study administered two additional scales related to English writing self-efficacy along with the scale. These scales were distributed simultaneously to obtain concurrent validity. The two additional scales are Adapted Questionnaire of English Self-efficacy (AQES) and Genre-based Second Language (L2) Writing Self-efficacy Scale (BSLWSS).

The Pearson correlation coefficients for the dimensions of Self-efficacy Scale for English Foreign Trade Correspondence Writing with the Adapted Questionnaire of English Self-efficacy (AQES) (ranging from 0.719 to 0.783), and the Genre-based Second Language (L2) Writing Self-efficacy Scale (ranging from 0.720 to 0.774) are all significant at $p = 0.01$. These findings indicate that the SSEFTCW demonstrates good criterion-related validity.

5. Discussion

This study aimed to develop and validate the Self-efficacy Scale for English Foreign Trade Correspondence Writing, considering the context of international communication and English as a global lingua franca. Taking into account the specific characteristics of foreign trade correspondence, including content, format, culture, and language aspects, the dimensions of the Self-efficacy Scale for English Foreign Trade Correspondence Writing were initially established. In addition, two instructors who teach the "English Foreign Trade Correspondence" course were interviewed, focusing on primary content, format requirements, cultural disparities, language norms, and expectations in English foreign trade correspondence writing (refer Appendix A). Based on expert suggestions, one item, LP2 was removed. What's more, LP5 was removed from further analysis during the exploratory factor analysis as it exhibited a cross-loading below 0.4. The results of the exploratory factor analysis revealed that the Self-efficacy Scale for English Foreign Trade Correspondence Writing consists of four dimensions: Business Knowledge (4 items), Cultural Awareness (4 items), Letter Formatting (4 items), and Language Proficiency (3 items).

Factor 1, termed "Business Knowledge", comprises four items that pertain to a comprehensive understanding of business practices and principles within the context of foreign trade. Factor 2, labeled as "Cultural Awareness", consists of four items that capture the importance of recognizing and appreciating cultural nuances and diversity when engaging in international business communication. Factor 3, designated as "Letter Formatting", encompasses four items that emphasize the significance of adhering to appropriate formatting conventions and standards when composing written correspondence in English for foreign trade purposes. Factor 4, referred to as "Language Proficiency", encompasses three items that highlight the essentiality of possessing a high level of proficiency in the English language to effectively communicate in the realm of foreign trade.

CFA was then conducted to validate the proposed factor structure derived from EFA. The CFA results indicate a good fit between the proposed factor structure and the second set of data. The goodness-of-fit indices, such as the CFI, TLI, and RMSEA, all demonstrate satisfactory values, suggesting a strong alignment between the observed data and the hypothesized model. Additionally, the scale demonstrates evidence of convergent validity, discriminant validity, and criterion-related validity.

6. Implications

The scale provides a validated tool for measuring self-efficacy specifically in foreign trade correspondence writ-

ing, extending existing self-efficacy theories to a specialized professional and language-learning context. It offers a framework for exploring how domain-specific self-efficacy influences writing performance, motivation, and learning strategies. In practice, the scale can inform curriculum development, teaching strategies, and assessment methods to enhance students' confidence and competence in professional business communication. Educators can use the scale to identify students' strengths and weaknesses in foreign trade correspondence writing, enabling targeted instructional design and intervention. Organizations can also apply the findings to training programs, improving employees' writing performance and overall communication effectiveness in international trade contexts.

7. Limitations and Future Research

It is crucial to recognize certain limitations in the development and validation of the scales. Primarily, the sample was obtained from a single institution, which constitutes a notable limitation and may introduce sampling bias, thereby restricting the generalizability of the findings. Future research should address this limitation by including participants from multiple institutions, regions, and cultural backgrounds, which would enhance the external validity and robustness of the results.

Additionally, the cross-sectional design of the study restricted the ability to gather data from the same individuals at different time points, impeding the evaluation of the scale's test-retest reliability. Future research should consider employing a longitudinal design, allowing for repeated measurements within the same group to effectively assess the test-retest reliability of the measurement tool.

Meanwhile, although the scale includes a Cultural Awareness dimension, the current items primarily focus on surface-level cultural adaptations, such as date formats and taboo expressions. It does not yet capture deeper cultural competencies, such as politeness strategies, or genre conventions across different cultural contexts. This limits the scale's ability to fully assess learners' self-efficacy in handling complex intercultural situations in foreign trade correspondence. Future research should consider expanding this dimension in revised versions of the scale to provide a more comprehensive evaluation of cross-cultural writing competence and offer more specific guidance for teaching and training interventions.

Furthermore, operational challenges prevented the implementation of a practical test to evaluate participants' English foreign trade correspondence writing skills. As a result, actual performance data, which could support the scale's predictive validity, was not collected. Future research should aim to administer questionnaires and tests specifically to students majoring in business English and international trade. This approach would enable the collection of relevant performance data to validate the scale's predictive validity.

8. Conclusion

In summary, the Self-efficacy Scale for English Foreign Trade Correspondence Writing demonstrates good psychometric properties, including high reliability and validity. Therefore, the scale can be widely utilized to assess individuals' self-efficacy levels in English foreign trade correspondence writing.

Author Contributions

Conceptualization, Y.Y. and S.X.; validation, Y.L.; data curation, H.Z. and J.Z.; writing—original draft preparation, H.Z. and B.J.; writing—review and editing, Y.L., S.X., and Y.W.; supervision, Y.Y. and S.X.; project administration, Y.Y. All authors have read and agreed to the published version of the manuscript.

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Institutional Review Board Statement

The study was approved by the Academic Affairs Office of the Qinggong College, North China University of Science and Technology (No.: QGXYLL20230016). The questionnaire was distributed via the Wenjuanxing platform and included an embedded digital informed consent form outlining the study's purpose, procedures, methods, and contact information. Participation was entirely voluntary and only those who agreed to participate could access the questionnaire.

Informed Consent Statement

Not Applicable.

Data Availability Statement

The datasets generated and/or analyzed during the current study are available from the corresponding author on reasonable request.

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Conflicts of Interest

The authors declare that there is no conflict of interest.

Appendix A. Self-Efficacy Scale for English Foreign Trade Correspondence Writing

Appendix A.1. Cultural Awareness (CA)

CA1: I am able to use appropriate date expressions in foreign trade correspondence writing according to the recipient country's information.

CA2: I am able to avoid taboo words in the recipient country's culture in foreign trade correspondence writing.

CA3: I am able to use corresponding measurement units (such as metric tons and pounds) in foreign trade correspondence writing according to the recipient country's information.

CA4: I am able to appropriately express respect and understanding for cultural differences in foreign trade correspondence writing according to the recipient country's information.

Appendix A.2. Language Proficiency (LP)

LP1: I am able to use language effectively (such as correct tenses and voices) in foreign trade correspondence writing to avoid grammatical errors.

LP3: I am able to express my specific writing intentions and purposes through certain sentence patterns in foreign trade correspondence writing, such as using imperative sentences to give commands and using interrogative sentences to make suggestions.

LP4: I am able to use rich vocabulary in the process of foreign trade correspondence writing to avoid dull content (such as using synonyms and adding appropriate modifiers).

Appendix A.3. Business Knowledge (BK)

BK1: I am able to skillfully master the use of various business English trade terms and abbreviations (such as FOB and CIF) in foreign trade correspondence writing.

BK2: I am able to skillfully master the details of business processes (such as inquiries, counter-offers, and re-offers) in foreign trade correspondence writing.

BK3: I am able to skillfully master the details of international payment methods and settlement methods, including letters of credit, collection, and wire transfers, and provide relevant payment arrangements and requirements in foreign trade correspondence writing.

BK4: I am able to skillfully master international logistics and transportation methods, such as sea freight, air freight, and express delivery, in order to provide accurate logistics arrangements and delivery deadlines in foreign trade correspondence writing.

Appendix A.4. Letter Format (LF)

LF1: I am able to follow the standard business letter format in foreign trade correspondence writing, such as using agreed-upon fonts and sizes or formal layouts.

LF2: I am able to maintain the completeness of necessary information in foreign trade correspondence writing, such as appropriate titles, proper forms of address, closing remarks, and signatures.

LF3: I am able to highlight key information in foreign trade correspondence writing through the use of bold, underline, and italics.

LF4 : I am able to use punctuation correctly in foreign trade correspondence writing.

References

[1] Vijayasri, G.V., 2013. The Importance of International Trade in the World. International Journal of Market-

ing, Financial Services & Management Research. 2(9), 111–119. Available from: https://www.enrichedpublications.com/ep_admin/jounral/pdf/1709702009.pdf#page=22

[2] Polachek, S.W., 1997. Why Democracies Cooperate More and Fight Less: The Relationship Between International Trade and Cooperation. Review of International Economics. 5(3), 295–309. DOI: https://doi.org/10.1111/1467-9396.00058

[3] Klimova, I.I., Klimova, G.V., Dubinka, S.A., 2019. Students' Communicative Competence in the Context of Intercultural Business Communication. European Scientific Language Journal. 12(1), 207–218. DOI: https://doi.org/10.18355/XL.2019.12.01.16

[4] Takino, M., 2017. Power in International Business Communication and Linguistic Competence: Analyzing the Experiences of Nonnative Business People Who Use English as a Business Lingua Franca (BELF). International Journal of Business Communication. 57(4), 517–544. DOI: https://doi.org/10.1177/2329488417714222

[5] Bao, F., 2021. The Globalization of the English Language and Its Impact on International Trade [Bachelor's Thesis]. University of Valladolid: Valladolid, Spain. pp. 1–72.

[6] Yip, M.C.W., 2021. The Linkage Among Academic Performance, Learning Strategies and Self-Efficacy of Japanese University Students: A Mixed-Method Approach. Studies in Higher Education. 46(8), 1565–1577. DOI: https://doi.org/10.1080/03075079.2019.1695111

[7] Basith, A., Syahputra, A., Ichwanto, M.A., 2020. Academic Self-Efficacy as Predictor of Academic Achievement. JPI (Jurnal Pendidikan Indonesia). 9(1), 163–170. DOI: https://doi.org/10.23887/jpi-undiksha.v9i1.24403

[8] Hewagallage, D.S., Stewart, J.C., 2020. The relation of personality, gender, and self-efficacy to achievement in college science classes. Available from: https://par.nsf.gov/servlets/purl/10170857 (cited 24 March 2023).

[9] Bandura, A., 1986. Social Foundations of Thought and Action: A Social Cognitive Theory. Prentice-Hall: Englewood Cliffs, NJ, USA. pp. 1–169.

[10] Bandura, A., 1997. Self-Efficacy: The Exercise of Control. W.H. Freeman/Times Books/Henry Holt & Co.: New York, NY, USA. pp. 1–350.

[11] Bandura, A., 2006. Guide for Constructing Self-Efficacy Scales. In: Pajares, F., Urdan, T. (eds.). Self-Efficacy Beliefs of Adolescents. Information Age Publishing: Greenwich, CT, USA. pp. 307–337.

[12] Pajares, F., Graham, L., 1999. Self-Efficacy, Motivation Constructs, and Mathematics Performance of Entering Middle School Students. Contemporary Educational Psychology. 24(2), 124–139. DOI: https://doi.org/10.1006/ceps.1998.0991

[13] Vieira, D.A., 2014. Transition from Higher Education to Work: The Power of Self-Efficacy and Professional Objectives. Vida Economica Editorial: Porto, Portugal. pp. 1–250. (in Portuguese)

[14] Meza, P., González, M., 2020. Construction and Validation of the Self-Efficacy Scale for Disciplinary Academic Writing. Cogent Education. 7(1), 1830464. DOI: https://doi.org/10.1080/2331186X.2020.1830464

[15] Mitchell, K.M., McMillan, D.E., Lobchuk, M.M., et al., 2021. Development and Validation of the Situated Academic Writing Self-Efficacy Scale (SAWSES). Assessing Writing. 48, 100524. DOI: https://doi.org/10.1016/j.asw.2021.100524

[16] Sun, T., Wang, C., Kim, S.Y., 2022. Psychometric Properties of an English Writing Self-Efficacy Scale: Aspects of Construct Validity. Reading and Writing. 35(3), 743–766. DOI: https://doi.org/10.1007/s11145-021-10206-w

[17] Cuiping, H., Ya, Z., 2019. On Writing Strategies of Business Letters in Cross-Border E-Commerce. East African Scholars Journal of Economics, Business and Management. 2(8), 461–472. Available from: https://www.easpublisher.com/media/features_articles/EASJEBM_28_464-472_c.pdf

[18] Sankrusme, S., 2017. International Business Correspondence. Anchor Academic Publishing: Hamburg, Germany. pp. 1–200.

[19] Shen, D., Wang, Y., 2020. Vocabulary Acquisition in Foreign Trade Correspondence and Recessive Cultural Connotation. Lifelong Education. 9(4), 280–282. DOI: https://doi.org/10.18282/le.v9i4.985

[20] Riadi, A., Angelina, Y., 2020. An Analysis of Literalness Aspect of Google Translate in Translating Business Correspondence. ELSA Journal. 1(1), 1–14. DOI: https://doi.org/10.63848/elsa.v01n1.1

[21] Jiang, S., Li, B., Li, Z., 2017. Analysis on Key Points of Foreign Trade English Correspondence Translation. In Proceedings of the 2017 International Conference on Economics, Finance and Statistics (ICEFS 2017), Hong Kong, China, 14–15 January 2017; pp. 461–466. DOI: https://doi.org/10.2991/icefs-17.2017.61

[22] Karpenko, M., 2021. The Problems of Translating a Business Correspondence. In All Ukrainian Scientific Conference, Social and Humanitarian Aspects of the Development of Modern Society, Sumy Oblast, Ukraine, 15–16 April 2021; pp. 61–66.

[23] Ayvazyan, N., 2022. Linguistic Features of Business Correspondence. Foreign Languages for Special Purposes. 20, 129–154.

[24] Aimoldina, A., Zharkynbekova, S., 2013. Rhetorical and Pragmalinguistic Features of Business Correspondence. Journal of Applied Linguistics and Professional Practice. 10(1), 1–22.

[25] Czehan, G., 2022. Pragmatic Features of Business Correspondence [Bachelor Thesis]. Saint Petersburg State

University: St Petersburg, Russia. pp. 1–80. Available from: https://api.dspace.spbu.ru/server/api/core/bitstreams/66cf0cb7-df08-432b-8d79-314759069f45/content (in Russian)

[26] Mandasari, B., 2020. The Impact of Online Learning Toward Students' Academic Performance on Business Correspondence Course. EDUTEC: Journal of Education and Technology. 4(1), 98–110. DOI: https://doi.org/10.29062/edu.v4i1.74

[27] Kawinvasin, S., Lertchalermtipakoon, P., Pochote, S., et al., 2021. Using Genre Awareness to Enhance Business Email Correspondence Among EFL Students: Making Complaints. Liberal Arts Review. 16(1), 45–58. Available from: https://so04.tci-thaijo.org/index.php/larhcu/article/view/248656

[28] Kapralikova, I., 2022. Abbreviations in Modern Business Correspondence and Their Pedagogical Implications. CASALC Review. 12(2), 5–22. DOI: https://doi.org/10.5817/CASALC2022-2-1

[29] Cong, C., 2020. Reform of "3+3 Promotion" Teaching Model Based on CDIO—Taking the Course of "Business English Correspondence" as an Example. Education Reform and Development. 2(2), 117–122. DOI: https://doi.org/10.26689/erd.v2i2.2127

[30] Li, Z., 2020. Study on Application of the Coherence Principle to Business English Correspondence and Its Teaching Implications. In Proceedings of the 2020 Conference on Education, Language and Inter-Cultural Communication (ELIC 2020), Zhengzhou, China, 21–22 September 2020; pp. 223–225. DOI: https://doi.org/10.2991/assehr.k.201127.044

[31] Lin, Y., 2021. Teaching Reform and Design of International Business Correspondence Based on BOPPPS Teaching Model. International Journal of Education and Management. 6, 55–59. Available from: http://www.acadpubl.com/Papers/Vol%206,%20No%203%20(IJEM%202021).pdf#page=61

[32] Tenieshvili, A., 2023. Analysis of Discourse Organization and Metadiscourse Devices in Georgian Business Correspondence: Specifics of Georgian Business Letters and Emails. Language Education and Technology. 3(1), 73–88. Available from: https://langedutech.com/letjournal/index.php/let/article/view/45

[33] Aimoldina, A., 2020. Models for Discourse Analysis of Business Correspondence: Kazakhstani Context. In Proceedings of the X International Conference "Word, Utterance, Text: Cognitive, Pragmatic and Cultural Aspects" (WUT 2020), Chelyabinsk, Russia, 27–29 April 2020; pp. 1–12. Available from: https://www.europeanproceedings.com/article/10.15405/epsbs.2020.08.4

[34] Kipiani, S., 2022. Modal Verbs Indicating Politeness in Business Correspondence. Language and Culture. 27, 1–6. DOI: https://doi.org/10.52340/lac.2022.943

[35] En-Chong, L., 2022. Effects of Rubric-Based and Detailed Peer Feedback on University-Level English as a Foreign Language Students' Writing Self-Efficacy and Subsequent Revisions. English Teaching and Learning. 46, 59–76. DOI: https://doi.org/10.1007/s42321-021-00088-0

[36] Wang, C., Bai, B., 2017. Validating the Instruments to Measure ESL/EFL Learners' Self-Efficacy Beliefs and Self-Regulated Learning Strategies. TESOL Quarterly. 51(4), 931–947. DOI: https://doi.org/10.1002/tesq.355

[37] Zhang, J.H., Zhang, L.J., Zhu, Y., 2023. Development and Validation of a Genre-Based Second Language (L2) Writing Self-Efficacy Scale. Frontiers in Psychology. 14, 1–13. DOI: https://doi.org/10.3389/fpsyg.2023.1181196

[38] Rattray, J., Jones, M.C., 2007. Essential Elements of Questionnaire Design and Development. Journal of Clinical Nursing. 16(2), 234–243. DOI: https://doi.org/10.1111/j.1365-2702.2006.01573.x

[39] Zamanzadeh, V., Ghahramanian, A., Rassouli, M., et al., 2015. Design and Implementation Content Validity Study: Development of an Instrument for Measuring Patient-Centered Communication. Journal of Caring Sciences. 4(2), 165–178. DOI: https://doi.org/10.15171/jcs.2015.017

[40] Hair, J.J.F., Black, W.C., Babin, B., et al., 2010. Multivariate Data Analysis. Prentice-Hall, Inc.: Upper Saddle River, NJ, USA.

[41] Fornell, C., Larcker, D.F., 1981. Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. Journal of Marketing Research. 18(1), 39–50. DOI: https://doi.org/10.2307/3151312

[42] Henseler, J., Ringle, C.M., Sarstedt, M., 2015. A New Criterion for Assessing Discriminant Validity in Variance-Based Structural Equation Modeling. Journal of the Academy of Marketing Science. 43(1), 115–135. DOI: https://doi.org/10.1007/s11747-014-0403-8