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# Development and Validation of an EFL Speaking Self-Efficacy Scale in the Self-Regulated Learning Context

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Drawing on self-regulated learning theory and social cognitive theory, the study reported in this paper describes the development and psychometric evaluation of the Self-Efficacy for EFL Speaking Scale (SEESS), an instrument for assessing students' perceived capability to speak English as a foreign language in the learning-to-speak process. Data were collected from 316 university EFL students in China. Exploratory and confirmatory factor analyses resulted in determination of three factors (i.e., *performance self-efficacy*, *self-regulatory efficacy*, and *linguistic self-efficacy*) with a strong psychometric basis. A second-order confirmatory factor analysis further provided empirical evidence to consider EFL speaking self-efficacy as a unitary construct with three correlated but distinct self-efficacy factors. In addition, the significant correlations between these EFL speaking self-efficacy factors and students' EFL speaking learning strategies further confirmed the concurrent validity of the SEESS. Pedagogical implications of this study for classroom teaching and learning of EFL speaking were discussed.

**Keywords: Chinese EFL students, speaking self-efficacy, scale development, self-regulated learning**

## Introduction

While most L2 learners desire to achieve a high level of speaking proficiency in their new language in the context of a global society, only a few could realize their goal in oral language learning. It is therefore widely assumed that second language speaking is one of the most difficult skills to be acquired by the majority of L2 learners. From a psycholinguistic perspective, Florez (1999) defined speaking as an interactive process of constructing meaning that involves producing and receiving and processing information. Thus, developing speaking competence involves mastering the phonetic system of the target language and developing knowledge of the grammar and vocabulary of the language. From a communicative perspective, the L2 learning-to-speak process entails knowing how to produce language according to the proper social setting and subject matter, organize their thoughts in a meaningful and logical sequence, and use the L2 to interact with other native and nonnative speakers (Saito et al., 2016). In other words, learning to speak a second language means both gaining progressive control over the

 

systems of options (i.e., spoken structures, grammar features, and lexis) in the new language, and learning which options to select to make which meanings in which contexts (Derewianka, 2003). Although recent research has revealed a lot about the nature of L2 language speaking, how best to develop L2 speaking skills particularly in a foreign language context remains the focus of methodological debates. Acquiring speaking skills is still widely considered a daunting task for most foreign language learners. This is particularly true in Chinese EFL context where opportunities for the target language use and practice outside of the classroom are usually limited and where oral language learning occurs only in classroom settings.

Recent research also shows that development of L2 oral skills is a complex process in which subjective factors such as affectivity (affective factors) play a very important role. Particularly worthy to mention is Derwinga and Munro's 7-year study of oral skills in adult immigrant learners of English as a second language among first-language (L1) Mandarin and Slavic language speakers. The Mandarin L1 speakers showed no change over time on any of the dimensions (i.e., comprehensibility, fluency, and accentedness, while the Slavic language L1 speakers improved significantly in comprehensibility and fluency. In Derwing and Munro's view, these outcomes appear to be due to the complex interplay of L1, age, the depth and breadth of learners' conversations in English, and their willingness to communicate. In particular, they highlight the importance of WTC (i.e., willingness to communicate) and its relationship to L1s as a factor in successful acquisition of L2 oral speaking skills.

In the self-regulated L2 learning context, while affective characteristics such as motivation, interest and anxiety have long been accorded importance in understanding students' L2 oral performance (Dornyei & Ryan, 2015; Kormos, 2017), one such domain-specific affective factor, self-efficacy, however, has so far received inadequate attention. Although there has been an increasingly vast amount of theoretical discussion and research examining the multidimensional structure of self-efficacy and its role in students' academic learning processes in mainstream educational psychology, self-efficacy as a dynamic construct in the second language context has been underresearched (Gan et al., 2021; Wang & Gan, 2021; Wang & Bai, 2017). For example, Kormos (2012) suggested that little attention has been given to investigating how individuals' self-efficacy influences learning of EFL speaking (2012). As Pajares (1996, p. 543), a well-known self-efficacy researcher in educational psychology, put it, "knowledge, skill, and prior attainments are often poor predictors of subsequent attainments because the beliefs that individuals hold about their abilities and about the outcome of their efforts powerfully influence the ways they will behave". As such, identifying the characteristics of self-efficacy required in the self-regulated second language speaking learning process will be of pivotal importance in enhancing students' learning interest and sustaining their self-regulated effort investment in the learning-to-speak process. This is particularly important in the Chinese EFL learning context where students' perceptions of their English speaking competence are considerably negative due to daunting challenges in EFL speaking learning in the Chinese context (Gan, 2015). While self-efficacy beliefs have been found to influence what learning goals learners set for themselves and how much effort they put forth in given endeavours, research on self-efficacy beliefs associated with Chinese students' EFL speaking learning has been limited. In our view, this research gap is largely due to the lack of a valid, reliable instrument for assessing features of EFL speaking self-efficacy in Chinese students. This paper therefore presents the development and validation of an EFL speaking self-efficacy scale in the self-regulated learning context.

## Self-Efficacy and Self-Regulated Learning in General Education

Self-efficacy is defined as an individual's beliefs in their capabilities to produce given attainments (Bandura, 1997, 2001). According to Bandura (2006), efficacy beliefs influence the courses of action people choose to pursue, the challenges and goals they set for themselves and their commitment to them, how much effort they put forth in given endeavors, and the outcomes they expect their efforts to produce. As such, self-efficacy is hypothesized in educational researchers to influence learners' choice of activities, effort expenditure, persistence, and achievement (Bandura, 1997; Schunk, 2001). It is therefore recognized in research that individuals' self-efficacy beliefs fulfil a significant role in understanding the

 

academic lives of students at all levels as these efficacy beliefs influence perceptions and judgments as well as their personal engagement in the learning processes, and consequently having a direct impact on their learning outcomes. For example, as Schunk and Zimmerman (2007) reported, students with high self-efficacy for acquiring a skill or performing a task participated more readily, worked harder, persisted longer when they encountered difficulties, and achieved at higher levels, when compared with students who doubted their learning capabilities. As self-efficacy beliefs powerfully influence the level of accomplishment students ultimately realize, they are used to explain why students' academic performances may differ markedly when they have similar abilities (Pajares, 2002).

In Bandura's (1986) social cognitive theory of human functioning, self-regulatory factors are accorded a central role, and previous research studies have provided insights about how these self-regulatory factors operate within students' learning contexts (Usher & Pajares, 2008). In Zimmerman's (2000) three-phase, cyclical model of self-regulation, self-regulatory processes consist of a forethought phase that refers to processes and beliefs occurring before efforts to learn, a performance phase that refers to processes occurring during behavioral implementation, and self-reflection phase that refers to processes occurring after each learning effort. Recent research reveals that students' use of self-regulatory processes enables them to support and sustain their own motivation, and leads to increases in their academic achievement (Pintrich, 2004). Zimmerman, however, also posits that the quality of the self-regulatory skills students employ is usually determined by various beliefs students hold about themselves. Key among these beliefs are self-efficacy beliefs individuals possess about their capability to accomplish a given academic activity or task. This connection between individuals' self- efficacy beliefs and their self-regulatory behavior was first made clear by Bandura (1977, 1986) in his social cognitive theory of human functioning. The overarching tenet of this theory is that individuals are self-organizing, proactive, and self-regulating rather than reactive and shaped by external events (Pajares, 2002). They also create and develop self-efficacy beliefs that become instrumental to the goals they pursue and to the control they are able to exercise over their environments.

## Self-Efficacy in L2 Research

While there is prolific research on self-efficacy in the general education field, it is only within the past decade that self-efficacy has been attracting researchers' attention in the field of L2 acquisition. For example, linking foreign language acquisition motivation research to theoretical foundations and constructs found in contemporary educational psychology research, Mills et al. (2007) examined the influence of self-efficacy and other motivational self-beliefs on the achievement of college intermediate French students. Self-efficacy measures used in Mills et al.'s study include French grade self-efficacy and self-efficacy for self-regulation. Mills et al. found that students' self-efficacy for self-regulation was the most significant predictor of intermediate French language achievement, and that students who perceived themselves as capable of using effective metacognitive strategies to monitor their academic work time effectively were more apt to experience academic success in intermediate French. This finding is consistent with Yang's (1999) observation of a strong correlation between self-efficacy and functional practice strategies in her study of learner language learning beliefs and language learning strategies. Unlike Mills et al., Yang operationalized self-efficacy as a componential element of the construct of learner language learning beliefs. More recently, a number of L2 studies tended to use independent self-efficacy measures to investigate the role of self-efficacy in the L2 learning process. For example, Matthews (2010) investigated what factors in individualized tutoring sessions impact university students' self-efficacy for mastering a foreign language. The tutees completed pretutoring and posttutoring questionnaires indicating their self-efficacy for learning the foreign language at a university tutoring program. Items in the self-efficacy for foreign language learning questionnaire in Matthews' study concern students' perceived ability to use the foreign language to communicate, understand the grammar of the foreign language, master the foreign language skills taught in class, and do well on foreign language tests in class etc. Using both quantitative and qualitative data. Matthews' questionnaire data

 

analysis enables him to conclude that motivationally effective tutoring sessions tended to be shorter, to focus on deeper understanding of the foreign language structure through explanation of rules and deep-level questioning, and to characterize and model the foreign language as learnable and regular.

In another study of graduate pre-service teachers' language learning strategies and language self-efficacy and the relationship between these two constructs in Malaysia, Wong (2005) particularly designed a Language Self-Efficacy Scale which consisted of statements used to measure study participants' confidence in performing some typical English language skill tasks or classroom-based teaching activities such as writing an essay of about 400 words in length on a recent holiday experience, explaining to a visitor the structure of a Diploma in Education Course, and writing a lesson plan for a given topic. Wong's study revealed a significant positive relationship between language learning strategies and language self-efficacy, and high self-efficacy pre-service teachers reported more frequent use of more language learning strategies than did low self-efficacy pre-service teachers.

Most recently, Anam and Stracke (2016) examined young language learners' strategy use and how this strategy use related to self-efficacy beliefs in a foreign language learning context. To measure the participants' self-efficacy beliefs, the researchers developed the Children's Self-efficacy in Learning English Questionnaire (C-SELEQ) which involved 2 subscales, i.e., English self-efficacy and self-regulated learning efficacy. The study identified a significant difference in strategy use as a function of English self-efficacy, suggesting that young language learners who perceived themselves capable of performing English tasks tended to use learning strategies more often than those who did not. Anam and Stracke's results were echoed by Wang et al. (2014) and Wang and Bai (2017) who reported that efficacious students are more likely to employ self-regulated learning strategies and students with strong self-regulation skills tend to be more self-efficacious.

## Self-Efficacy and Self-Regulated EFL Speaking Learning

As discussed above, while a small number of research studies have been conducted to investigate the role of self-efficacy in general L2 development, fewer studies have examined self-efficacy in relation to self-regulated learning of L2 speaking despite the fact that as an integral component of L2 learning, learners' autonomous L2 speaking learning has been researched extensively as a branch of teaching, learning, and testing in its own right. It has also been recognized that learning of speaking in an L2 involves the development of a particular type of communication skill, and that the processing skills involved in L2 speaking differ from those needed in reading and writing (Bygate, 2001). Levelt's (1989) L2 speech production model identifies complex processing components which consist of generating and monitoring messages, giving grammatical and phonological shape to messages, and retrieving chunks of internal speech and executing the message. Given these complex speech production sub-skills, speaking in an imperfectly learned L2 can be particularly anxiety-provoking (Gan, 2013; Kormos, 2017). In relation to self-efficacy beliefs in self-regulated learning of L2 speaking, however, so far only a number of studies have investigated issues related to learning English pronunciation. For example, Smit (2002) found that the factors that significantly impact on learners' success in their pronunciation learning are those internally felt by the individuals such as their own preparedness and willingness to invest effort in adapting their pronunciation to a desirable and ideal level. Sardegna et al. (2018) examined the associations of English language learners' self-efficacy beliefs, attitudes toward learning pronunciation skills, and choice of pronunciation learning strategies, and found that students with higher self-efficacy were more likely to find ways to improve their pronunciation skills and select more strategies to use.

In recent years, while there has been a growing body of research on EFL or ESL students' writing self-efficacy, little research has been done to examine students' self-efficacy in EFL or ESL speaking. Given that fact both teachers and students face long-standing concerns and difficulties in teaching and learning EFL or ESL speaking, there is an imperative need for a more comprehensive understanding of how learner self-efficacy beliefs are connected to self-regulated L2 speaking learning processes particularly in an Asian EFL context. The present study, therefore, serves to fill these gaps by describing the

 

development and validation of a scale that was designed to assess EFL speaking self-efficacy in the self-regulated language learning context.

# Methods

## Participants and Research Context

A total of 316 university EFL students from three mainland Chinese universities were recruited for the present study. Participating students ranged from Year 1 to Year 4 undergraduate students. Among these participants, 43 were male, and 258 were female, 15 did not report their gender status; and the age of the participants ranged from 17 to 23 years old with $M_{age}$ = 20.15 years, $SD_{age}$ = 1.15 years. Students' consent to participate in the study was obtained while the study was conducted.

The degree program which the participants were attending at the time when this study was carried out was a BA in English language and literature. The medium of teaching and learning for all teaching within the BA program is English. The major objectives of this program include: 1) to develop students' awareness of academic English practices required in their disciplinary studies; and 2) to enhance the students' English language competence to address the need to effectively communicate in English in a range of professional communication contexts (Gan et al., 2021). Although efforts have been made by the Ministry of Education to initiate innovative teaching practices in recent years, traditional and transmission-style teaching and generally prevail.

The entry proficiency levels of the students in the BA program are normally measured by the National College Entrance English Examination. At the end of their studies in the BA program, students are required to take the Test for English Majors-Band 8 (TEM-8), which specifies standards in the subskills of listening, reading, speaking, writing, and translation that must be met by all students for graduation.

## Instruments

### The self-efficacy for EFL speaking scale (SEESS)

The aim of the SEESS was to evaluate EFL speakers' self-efficacy beliefs in the use of linguistic knowledge necessary for effective speaking, regulation of their speaking learning process, and classroom speaking performance. The items in the SEESS originated from three major sources: 1) a careful examination of the commonly used instruments developed for measuring self-efficacy beliefs in the field of educational psychology (Pintrich et al., 1991); 2) established self-efficacy instruments used in L2 contexts (e.g., Teng et al., 2018; Wang et al., 2017); 3) interviews with a group of tertiary-level EFL students with an aim to eliciting their speaking self-efficacy in academic English course settings. As a result of these procedures, an initial item pool of 40 SEESS items was generated. A panel of five experts were then invited to review and examine the face and content validity of each of the 40 items. Each of the experts rated the appropriateness of each item independently using a scale (yes/no/unsure) (Gan et al., 2019). An item was retained only if the majority of panel (i.e., 3 experts) agreed that the item was appropriate to be used to measure EFL speaking self-efficacy. This process resulted in a 23-item scale. The items in the scale were initially written in English. Since the participating students in this study were mandarin-speaking Chinese university students, we believed it best to present the Chinese version of the scale to the students in this study. The items in the scale were then translated into Mandarin by colleagues from mainland China. The Mandarin version was independently translated back into English by two bilingual researchers to see whether anything could be misinterpreted. The four translators then met to discuss their translations and reach consensus on the Mandarin version.

### The EFL speaking learning strategies questionnaire (SLSQ)

In this study, the correlations of EFL speaking learning strategies with EFL speaking self-efficacy were examined for evaluating concurrent validity of the SEESS. In order to examine participants' EFL speaking strategies, we developed a questionnaire to investigate the strategies EFL students used in the learning-to-speak process, namely the EFL Speaking Learning Strategies Questionnaire (SLSQ). A 6-point Likert scale was used for the speaking strategies questionnaire items, ranging from 1 (never used) to 6 (always used). Based on Nakatani (2010), four subcategories of EFL speaking learning strategies scales were included in the SLSQ. These were: 1) involvement strategies (5 items); 2) planning strategies (6 items); 3) assistance-seeking strategies (4items); and 4) cognitive strategies (4 items).

## Data Collection and Analysis Procedures

Ethical approval was obtained from the university before the study was carried out. The participants in this study were informed that their participation was voluntary and that they could withdraw from the study at any time. The online survey weblink was sent to the students, and they then completed the two questionnaires online with no time limit.

We used SPSS 24 to randomly split the total sample into two halves with 158 students in each half. The first half of the sample was subjected to exploratory factor analyses (EFA) using the principal component extraction method and promax rotation to examine the underlying structure of the SEESS. To determine the number of factors to be retained, we adopted multiple criteria, including the criterion of Kaiser's eigenvalues > 1 (Kaiser, 1960) and the scree plot (Raubenheimer, 2004). The second half of the sample was then subjected to confirmatory factor analysis (CFA) through the maximum likelihood estimation by using AMOS 23 to cross-validate the factor structure generated from the EFA. In addition, a second-order CFA was conducted to test whether the three factors belonged to a single broader latent factor of EFL speaking self-efficacy. Finally, to evaluate the concurrent validity of the SEESS, we performed Pearson product-moment correlation (*r*) analyses to examine the correlations between the three EFL speaking self-efficacy factors and EFL speaking learning strategies.

Several goodness-of-fit indicators were employed to evaluate the model fit (Hu & Bentler, 1999), including the chi-square statistics ($X^2$) and its degrees of freedom (*df*), along with the associated p-value ($X^2/df$, a value < 3 could be considered as an indication of an acceptable model fit); the Comparative Fit Index (CFI; a value equal to or greater than 0.90 indicates an acceptable model fit); Tucker-Lewis Index (TLI; a value equal to or greater than 0.90 indicates an acceptable model fit); the Root Mean Square Error of Approximation (RMSEA; a value between 0.05-0.08 indicates good fit); and the Standardized Root Mean Square Residual (SRMR; a value less than 0.08 indicates good fit).

# Results

## Exploratory Factor Analyses

Before EFA, we conducted Bartlett's test of sphericity (Bartlett, 1954), and the result suggested that the data was suitable for a factor analysis with $X^2(253) = 2285.52$, $p < .001$. The Kaiser-Meyer-Olkin value was 0.93, exceeding the threshold value of 0.50. Altogether 4 factors were identified, whereas one of the factors only contained 1 item (item 9). As suggested by Bandalos and Finney (2018), factors with fewer than three items need to be excluded. Thus, the one-item factor was deleted from the factor structure. Another 2 items (item 1 and 3) were also excluded due to their low factor loadings (< 0.4; DeVellis, 2003). As demonstrated in Table 1, a 3-factor model with 20 items was obtained, accounting for 64.09% of the total variance. The three factors were then labeled on the basis of common characteristics of the items clustering around each factor: (1) performance self-efficacy (9 items, $\alpha = .92$), (2) self-regulatory

 

efficacy (7 items, α = .87), and (3) linguistic self-efficacy (4 items, α = .86). The descriptive statistics of and the correlations among the three factors were shown in Table 2. These factors significantly and moderately strongly correlated with each other (i.e., a range of 0.63-0.73, *p*s < .001).

TABLE 1
*Results of Exploratory Factor Analyses of the 20-Item SEESS*

| Factor | Item | Loadings | | | | |
|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | Eigen value | α |
| F1. Performance self-efficacy | 2. I can speak English fluently when giving a presentation in front of the class. | **.48** | .29 | .02 | 9.82 | .92 |
| | 8. I can communicate with native-English-speaking students and lectures. | **.46** | -.12 | .45 | | |
| | 17. I can try to keep a high level of self-confidence when I speak English. | **.73** | .34 | -.17 | | |
| | 18.I can understand the most difficult material presented in speaking courses. | **.79** | -.22 | .20 | | |
| | 19.I can understand the most complex material presented by the teacher of speaking courses. | **.95** | -.33 | .05 | | |
| | 20.I can master the speaking skills taught in English class. | **.66** | .07 | .15 | | |
| | 21.I can use the speaking skills taught in class for real-life. | **.63** | .06 | .14 | | |
| | 22.I can do very well on speaking activities in English class. | **.65** | .21 | .09 | | |
| | 23.I can do a good job of participating in class discussion conducted fully in English. | **.61** | .30 | -.02 | | |
| F2. Self-regulatory efficacy | 10. I can realize my goal to improve my English speaking. | -.15 | **.85** | .03 | 1.77 | .87 |
| | 11. I can think of different ways to help me to improve my English speaking. | .09 | **.88** | -.21 | | |
| | 12. I can evaluate whether I achieve my goal in my English speaking. | -.04 | **.75** | .05 | | |
| | 13. I can evaluate whether my speaking performance in class is good or bad. | -.20 | **.63** | .45 | | |
| | 14. I can evaluate my strength and weakness in English speaking. | -.15 | **.53** | .50 | | |
| | 15. I can overcome my anxiety when I speak English. | .45 | **.48** | .17 | | |
| | 16. I can find different ways to increase my motivation to speak English. | .29 | **.49** | .14 | | |
| F3. Linguistic self-efficacy | 4. I can use an appropriate range of structures to describe my university to others in English. | .12 | .09 | **.65** | 1.23 | .86 |
| | 5. I can speak with appropriate pronunciation and intonation when I ask my teachers questions in English. | .17 | -.09 | **.76** | | |
| | 6. I can discuss subjects of my interest in English with my classmates without much obvious searching for expressions. | .00 | .01 | **.87** | | |
| | 7. I can tell my classmates in fluent English about a book I have read. | .15 | -.03 | **.74** | | |

*Note. Factor loadings > 0.4 are highlighted in bold*.

 

TABLE 2
*Descriptive Statistics and Correlations*

| Factors | Mean | SD | 1 | 2 | 3 |
|---|---|---|---|---|---|
| F1 performance self-efficacy | 3.57 | 0.81 | 1 | | |
| F2 self-regulatory efficacy | 3.94 | 0.80 | .70*** | 1 | |
| F3 linguistic self-efficacy | 3.75 | 0.90 | .73*** | .63*** | 1 |

*Note*: ***$p < .001$

## Confirmatory Factor Analyses

For the second half of the sample (n = 158), results of the first round of CFA showed relatively unsatisfactory model fit indices with $X^2 = 324.55$ (df = 167, $p < .001$); CFI = .89; TLI = .88; SRMR = .07; RMSEA = .08. We thus attempted to improve the model fit by addressing the item issues reflected in the modification indices. Two items (i.e., item 8, 15) were removed from the analysis due to their strong correlations with other factors. The modified model showed satisfactory model fit indices with $X^2 = 228.79$ (df = 132, $p < .001$); CFI = .92; TLI = .91; SRMR = .06; RMSEA = .06. All the 18-item parameter estimates were statistically significant ($p < .001$) and most of the standardized estimate loadings on the latent constructs were higher than the recommended value .50 (Hair et al., 2010). Correlations among the three factors were significant and positive ($.61 \leqslant r \leqslant .75$, $p$s < .001; see Figure 1), suggesting the existence of the three distinct yet related dimensions of the EFL speaking self-efficacy.

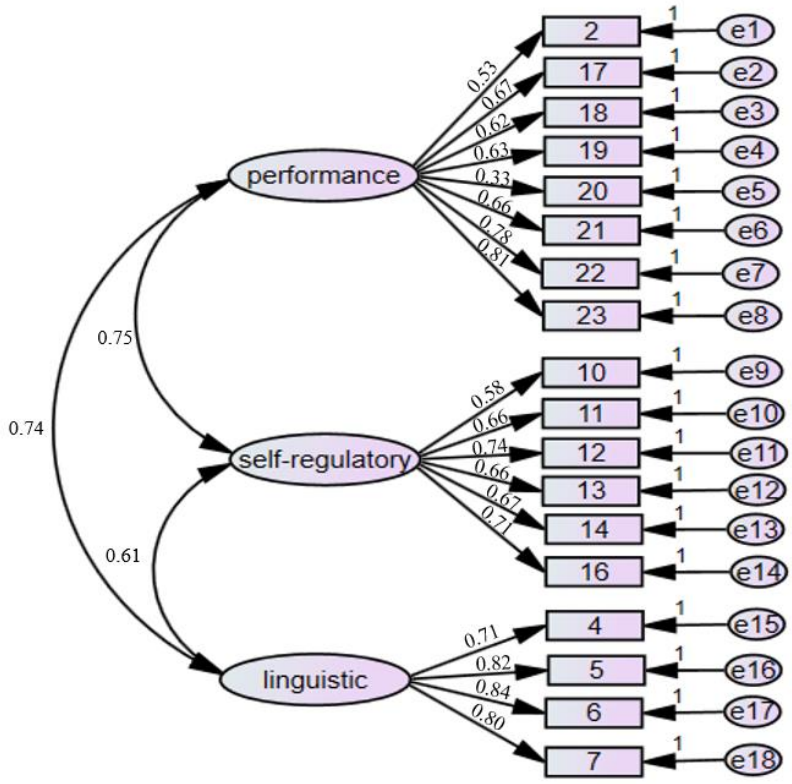


*Figure 1.* A three-factor model of the 18-item SEESS.
*Note. Performance = performance self-efficacy; self-regulatory = self-regulatory efficacy; linguistic = linguistic self-efficacy.*

 

## Second-Order Confirmatory Factor Analyses

By loading the three first-order factors onto a second-order factor of EFL speaking self-efficacy, a second-order CFA was performed. The results showed a satisfactory model fit: $X^2 = 228.79$ (df = 132, $p < .001$); CFI = .92; TLI = .91; SRMR = .06; RMSEA = .06. As demonstrated in Figure 2, the standardized regression weights between the second-order factor and the three first-order factors (performance self-efficacy, self-regulatory efficacy, linguistic efficacy) were .78, .79, and .95 respectively (*ps* < .001), which meets Chin's (1998) recommendation that the loadings of second-order factors should be at least .70 in a second-order construct and overall. These results further support our hypothesis that EFL speaking self-efficacy is a unitary construct including three correlated but distinct domains.

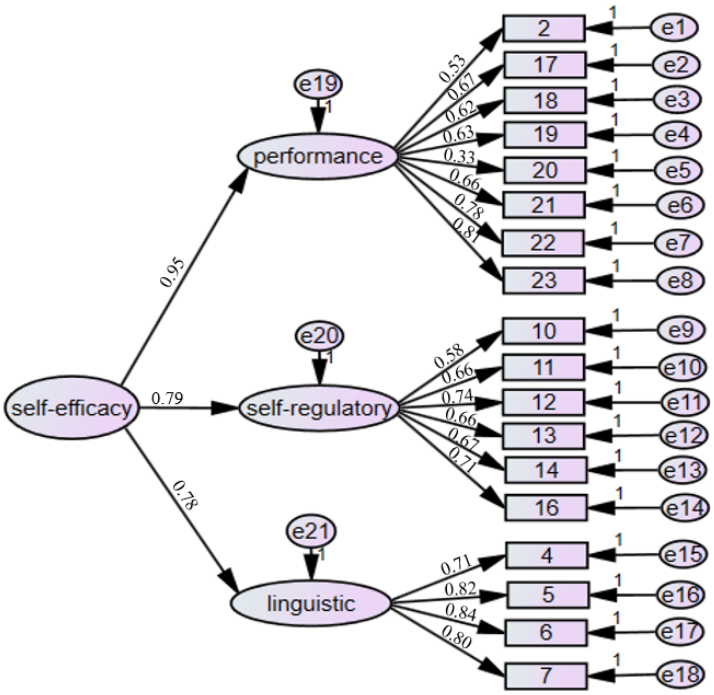


*Figure 2.* A second-order model of the SEESS.
*Note. Self-efficacy=speaking self-efficacy; performance=performance self-efficacy; self-regulatory=self-regulatory efficacy; linguistic=linguistic self-efficacy.*

## Concurrent Validity

In order to examine the concurrent validity of the SEESS, Pearson correlation analysis was conducted to assess the correlations between EFL speaking self-efficacy factors and EFL speaking learning strategies. As can be seen in Table 3, all three SEESS factors were found to be significantly correlated with the four types of EFL speaking learning strategies ($.31 \leqslant r \leqslant .56$, *p*s < .001)

TABLE 3
*Correlations between Factors in SEESS and Strategy Scale*

| | Performance Self-Efficacy | Self-Regulatory Efficacy | Linguistic Self-efficacy |
|---|---|---|---|
| Involvement Strategies | 0.55*** | 0.38*** | 0.47*** |
| Planning Strategies | 0.51*** | 0.51*** | 0.45*** |
| Assistance-Seeking Strategies | 0.39*** | 0.32*** | 0.31*** |
| Cognitive Strategies | 0.43*** | 0.43*** | 0.39*** |

# Discussion

## EFL Speaking Self-Efficacy in the Chinese EFL context

Drawing on self-regulated learning theory and social cognitive theory, the research reported in this article aimed to develop and validate a self-report instrument, the SEESS, to assess Chinese students' perceived capability to speak English as a foreign language in the Chinese higher education context. The results of EFA and CFA analyses provided substantial evidence for the three-factor structure of EFL speaking self-efficacy that subsumes *Performance Self-Efficacy*, *Self-Regulatory Efficacy*, and *Linguistic Self-efficacy*. The results revealed satisfactory psychometric qualities of the instrument in relation to the reliability and validity, and thus were supportive of the SEESS as an acceptable measure for use with tertiary EFL students across universities in China. The final version of the SEESS consists of 18 items targeting three components of the EFL speaking self-efficacy construct: *Performance self-efficacy* (8 items), *Self-regulatory efficacy* (6 items), and *Linguistic Self-Efficacy* (4 items). The three subscales of the SEESS were reliably distinguished but correlated on both conceptual and empirical grounds. So the scores of the 18 items can be collectively summed to represent an EFL student's overall level of English speaking self-efficacy or calculated separately to reveal the level of each of the three EFL speaking self-efficacy constructs, with a higher score indicating a higher level of perceived capability in each area. Below is a brief discussion of the three subscales.

The first subscale (8 item) labeled as *Performance Self-Efficacy* was aimed at assessing students' judgments of their capability to complete the EFL speaking course tasks or understand the EFL speaking course contents in the classroom. This subscale subsumes items such as 'I can master the speaking skills taught in English class', 'I can use the speaking skills taught in class for real-life communication', and 'I can do very well on speaking activities in English class'. The inclusion of these items under *Performance Self-Efficacy* echoes Bandura's (2006) recommendation that evaluation of language arts self-efficacy should be linked to the behavioral factors over which learners can exercise their agency in a particular learning context. Pedagogically, assessing students' performance self-efficacy in speaking activities allows ESL/EFL teachers to understand how challenging and meaningful instructional tasks need to be to empower students with self-assurance and help them develop a robust sense of confidence in speaking class.

The second subscale (6 items) labelled as *Self-Regulatory Efficacy* refers to Chinese EFL students' perceived capability to exercise metacognitive control in the learning-to-speak process (i.e., planning, goal setting, and monitoring) leading to the acquisition of their English speaking competence. Example items used to measure this factor (e.g., 'I can realize my goal to improve my English speaking', 'I can think of different ways to help me to improve my English speaking', and 'I can evaluate whether I achieve my goal in my English speaking') suggest that EFL speaking entails not only cognitive processes but also metacognitive awareness of self-planning, monitoring, and self-evaluation. The higher scores on these items under this scale thus show a higher level of self-regulatory processes involved when students perform specific speaking tasks. The existence of this subscale also illustrates that learning-to-speak-EFL in an input-poor environment such as that in China is an arduous endeavor (Choi & Leung, 2017; Richards & Renandya, 2002; Widdowson, 2015), and that agency of acquiring EFL speaking skills fundamentally resides in the students. The moderately strong correlations between self-regulatory efficacy and linguistic self-efficacy, and between self-regulatory efficacy and performance self-efficacy, further provide evidence that proactive self-regulation tends to have an impact on linguistic outcomes and cognitive performance. It is thus likely that the more frequently students employ volitional, or self-regulatory processes, the more likely they will achieve better linguistic and performance outcomes in classroom speaking activities. Traditionally, EFL teachers tend to focus on students' oral output when they comment on students' speaking performance. In light of the results here, we suggest that attention to self-regulatory efficacy as a dimension of speaking self-efficacy should also be made an explicit feature of EFL teachers' daily speaking instructional task design for the purpose of cultivating students' own agency in the EFL learning-to-speak process.

The third subscale, labeled as *Linguistic Self-Efficacy* refers to students' perceived capability to use appropriate pronunciation, grammar, vocabulary, and structure required to accomplish a given English speaking task with an appropriate level of accuracy and fluency (e.g., 'I can use an appropriate range of structures to describe my university to others in English', 'I can speak with appropriate pronunciation and intonation when I ask my teachers questions in English'; and 'I can discuss subjects of my interest in English with my classmates without much obvious searching for expressions' etc.). The existence of the subscale *Linguistic Self-Efficacy* supports the claim in the L2 acquisition literature that linguistic competence is essential to the development of L2 speaking skills (e.g., Gan & Yang, 2018; Littlewood, 2004). Higher scores on these items thus mean a more solid mastery of linguistic knowledge and a higher level of fluency and accuracy required as the basis for development of speaking skills. Pedagogically, knowledge of linguistic self-efficacy as a dimension of EFL speaking self-efficacy may assist teachers in identifying effective ways in which particular language activities can be used to increase EFL/ESL students' repertoire of specific language features (e.g., *grammatical, lexical or phonological accuracy*) and hence to promote students' speaking skills development and to build students' self-efficacy in the learning-to-speak process.

## Correlations between EFL Speaking Self-Efficacy and EFL Speaking Learning Strategies

Our results showed that the three EFL speaking self-efficacy factors were significantly positively correlated with all four types of EFL speaking learning strategies. These significant correlations confirmed the concurrent validity of the SEESS. Such correlations suggested that the generative attribute of EFL speaking self-efficacy interacted with the level of EFL speaking strategy use. In this study, four subcategories of EFL speaking learning strategies were identified: 1) *Involvement Strategies*; 2) *Planning Strategies*; 3) *Assistance-Seeking Strategies;* and 4) *Cognitive Strategies*. Involvement strategies included speaking-opportunity-seeking strategies such as 'I often seek out opportunities to talk with native English speakers' and 'I try to talk with others in English on my own initiative'. Planning strategies included strategies that are intended to help the student to perform the speaking task such as 'I plan out in advance what I want to say' and 'I consider how to say something in English in my mind before saying it out loud'. Assistance-seeking strategies comprised strategies such as 'I encourage others to correct errors in my speaking' and 'I would request others to help me correct my mistakes when talking in English'. Finally, cognitive strategies are associated with how cognitive processes or information are being carried out or organized in a strategic way that results in satisfactory oral language performance. Taken as a whole, the positive significant correlations between EFL speaking self-efficacy and speaking strategy use suggest that the higher self-efficacy students tend to be more strategically skillful to improve their speaking performance. Particularly worthy of attention is that among the four types of EFL speaking learning strategies, self-efficacy (i.e., *Linguistic Self-Efficacy* and *Performance Self-Efficacy*) emerged to be most strongly related to *Involvement* and *Planning Strategies*. This suggests that students with higher linguistic self-efficacy were more likely to seek opportunities to speak and improve their oral English, and that students with higher performance self-efficacy were more likely to engage in different kinds of 'on-line' planning activities. A significant implication of these results is that teachers may need to adopt different ways to optimize EFL or ESL' students' speaking performance on tasks in the classroom to develop and maintain their speaking self-efficacy. In turn, a stronger sense of self-efficacy will enhance students' speaking performance and competence.

 

## Conclusion and Implications

Owing to the rapidly increasing globalization of English as an international language of communication, many L2 learners of English consider the development of oral proficiency skills as a highly valued commodity and a path to have successful social interaction in English in the context of a global society. Research, however, shows that speaking is one of the most difficult language skills to be acquired, and the majority of EFL learners, Chinese EFL students in particular, suffer from a low level of self-efficacy in the learning-to-speak process. Meanwhile, little empirical research has been done to identify features of speaking self-efficacy in Chinese EFL students. This study contributes to our understanding and knowledge of L2 speaking self-efficacy by developing the SEESS as a useful tool for measuring key aspects of EFL speaking self-efficacy in Chinese university EFL students. Theoretically, this study provides evidence for applying educational psychology theory to the area of L2 acquisition, EFL speaking in particularly. Future research can further use SEESS as a research tool to examine the relationships between EFL speaking self-efficacy and other student characteristics in different learning contexts across varied populations. Practically, students can use SEESS as a self-evaluation tool to appraise their EFL speaking self-efficacy level and can thus further adopt appropriate strategies to foster their own agency in EFL learning-to-speak processes. Furthermore, SEESS can be useful to teachers as a pedagogical tool for diagnosing students' speaking efficacy from linguistic, behavioral, and self-regulation dimensions, and information obtained from this diagnosis can be used for identifying, challenging, and altering less confident students with an aim to developing more self-efficacious EFL speakers.

Although our study is the first to empirically examine the linguistic, behavioral, and self-regulation dimensions of EFL speaking self-efficacy, some limitations need to be acknowledged. First, this study was limited by its reliance on a sample consisting solely of English-major students from one tier-2 and two tier-3 universities in China. In future research, it would be beneficial to include a representative sample of EFL learners across different disciplinary areas. There is also a need to examine if the response patterns are the same and if the intercepts and loadings of factors are the same across populations in other countries where English is taught and learned as a foreign language. Importantly, use of the SEESS with different EFL learners from different cultural contexts can allow direct comparisons of these learners' English speaking self-efficacy beliefs and thus establish cultural validity.

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