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A Comprehensive Investigation of Mediating Effect of Cognitive Functions on Self-Regulated Learning on English Language Learning Among Chinese EFL Students: Moderated by Social Support

Abstract: - **Objectives:** This study aimed to investigate the influence of self-regulated learning (SRL), cognitive functions (CF), and social support (SS) on English language proficiency (ELP) among Chinese English as Foreign Language(EFL) learners. The research sought to identify the relationships between these variables and how they impact language learning outcomes.

Study Design: The research utilized a structured questionnaire to assess SRL, cognitive functions, and SS on ELP. Data were collected through a mobile-friendly, questionnaire administered via Google Forms.

Methods: An aggregate of 850 Chinese EFL learners contributed to the study. The questionnaire included 20 items assessing four main factors. Data analysis involved calculating Cronbach's Alpha for reliability, performing factor analysis, and conducting an independent sample t-test to evaluate SS and self-directed learning skills.

Results: The findings revealed significant relationships among the variables studied. SRL positively impacted both CF and ELP, with CF serving as a mediator between SRL and ELP. SS moderated the relationship between SRL and CF. The data indicated that learners' self-regulation strategies and perceptions of support are crucial for enhancing language proficiency.

Conclusions: This study contributes to understanding how SRL, cognitive functions, and SS interact to influence ELP among Chinese EFL learners. These findings offer practical insights for educators to develop targeted interventions and instructional strategies that foster SRL and enhance language proficiency.

Keywords: SRL, Chinese college EFL learners, SS, cognitive functions, ELP.

I. INTRODUCTION

English is an essential universal language for professional and educational advancement. Motivational beliefs, such as Fundamental principles and self-efficacy are important components that motivate pupils to learn. Chinese university students acquiring foreign language proficiency in English benefit greatly through self-regulated language learning (SRLL) [1, 2]. These learners often face specific challenges that highlight the importance of SRLL in enhancing their ability to learn autonomously. In a competitive environment, for scholastic and professional reasons, people must become highly proficient in English [3, 4]. Proficiency in English is highly esteemed, offering ample prospects for both professional growth and academic achievement. Effective learning regulation is achieved by self-regulated learners by the application of diverse SRL tactics, including cognitive strategies, environment and resource management, and metacognitive self-regulation.

SRL refers to an individual's capacity to regulate themselves throughout the learning process [5, 6]. It comprises planning, goal-setting, self-awareness, self-surveillance, and self-control methods. SRL is the basic theoretical framework utilized to understand the cognitive, motivational, and affective aspects of learning, and it has substantially impacted educational psychology. CF and SRL are intricately connected, each enhancing the effectiveness of the other [7, 8]. Metacognitive awareness, a key cognitive function, enables learners to plan, monitor, and evaluate their learning activities by being aware of their cognitive processes [9, 10]. Cognitive

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strategies, such as summarization, elaboration, and mnemonic devices, help in encoding, storing, and retrieving information more efficiently, thereby facilitating deeper learning and better retention.

CF mediates the relationship between SRLL and English language learning by improving executive functions, promoting metacognitive awareness, facilitating the use of cognitive strategies, enhancing feedback processing, and interacting with SS [11-13]. SS plays a crucial moderating role in the association between CF and SRLL in English language learning [14, 15]. By enhancing social support, the benefits of CF on SRLL for EFL learners may be significantly amplified. This interaction ultimately leads to improved language learning outcomes, demonstrating the importance of a supportive learning context in the educational journey of EFL students.

SS enhances CF by boosting motivation, facilitating resource sharing, providing emotional support, creating a positive learning environment, and influencing self-regulation strategies [16-18]. This interaction leads to improved results in language learning, showcasing the critical role of a supportive learning environment in the success of EFL students. This investigation intends to advance the field of language education by scrutinizing the factors associated with SRLL acquisition among Chinese college EFL learners and by offering empirical data to support successful teaching strategies and interventions [19, 20]. Researchers, educators, and legislators intending to ensure Chinese college EFL learners' successful language acquisition and competence will find significant value in the study's findings, which will further broaden our comprehension of SRLL procedures. Through this research, we aim to shed light on the crucial roles that SS and cognitive processes play in SRLL and emphasize the significance it is to providing a supportive learning environment to improve language learning outcomes.

1.1 Significance of the Study

This study aims to inform evidence-based practices, policies, and interventions that support independent and equitable language learning environments. By examining the mediating effect of CF on SRL among Chinese EFL students, and considering the moderating role of social support, it seeks to certify an exhaustive comprehension of these dynamics. The research emphasizes the importance of SS in creating a learning atmosphere that fosters independence, resourcefulness, and lifelong learning. The findings will contribute to developing effective pedagogical programs and support systems tailored to EFL learners' needs. Additionally, the study proposes models of SS systems that enhance English language learning, offering valuable insights for educators, policymakers, and practitioners to improve SS and create favorable conditions for autonomous learning among EFL pupils.

II. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

2.1 SRL in EFL Learners

Higher education institutions have repeatedly recognized the efficiency of SRL in improving foreign language learning (FLL) outcomes. In [21], Siregar et al. suggested that metacognitive strategies play a crucial role in ornamental SRL among EFL adult pupils by promoting awareness, regulating behaviours, and optimizing language learning outcomes. In [22], Noordin & Yang described that SRLL is vital for Chinese college EFL learners' language development, as it identifies key variables shaping SRLL and aids educators in enhancing language acquisition outcomes. Furthermore, in [23], Noordin & Jeyaraj mentioned that SRL interventions have proven effective in improving various aspects of external language learning among EFL learners in tertiary education, involving motivation, self-efficacy, tactics, and linguistic ability. Additionally, in [24], Essa noted that SRL techniques have been effective among EFL learners, leading to improved academic achievement. Students controlled their learning behaviour through beliefs, resulting in positive outcomes.

Hypothesis 1 (H1):SRL positively affects ELP among Chinese EFL students.

2.2 CF in SRL

Student responsibility for learning is referred to as SRL. Establishing goals is an aspect of it, as is controlling motivation, affect, emotions, and thought processes (for example, by controlling the educational atmosphere). Metacognition, which serves to monitor and regulate cognitive processing, is a vital element of SRL. Experiences, knowledge, and control associated with metacognition are the three aspects of metacognition. Each of these elements has a unique role in the administration of learning. In [25], Efklides & Metallidou applied metacognitive skills to students' subjective learning experiences and emotions, fostering increased self-awareness and leading to more effective learning processes. In [26], Amaruddin et al. aimed to investigate how students perceive their motivation through the utilization of self-regulation techniques. These findings highlight the value of motivation and SRL in promoting successful learning practices, with important implications for educators and learners alike.

In [27], Aljumaili & Al-Obeidisought to determine the degree of cognitive SRL among middle conservatory pupils alongside the importance of the variations in this domain. The study's findings demonstrated the research sample's strong cognitive self-regulation.

Hypothesis 2 (H2):CF mediates the connection between English language competency and SRL.

2.3 SS in EFL Learners

The well-being and academic engagement of EFL learners are significantly impacted by social support. In [28], Luo et al. explored the complex interplay among English language learners (ELLs) between academic vigor, academic excitement, and peer encouragement. As highlighted in the study, For EFL university language learners, self-efficacy beliefs, academic zeal, and vitality all seem greatly enhanced by social support. In [29], Alnajjar et al. state that SS positively impacts EFL students' self-directed learning skills, with family support being the most significant. Female students tend to benefit more from SS in EFL learning. In [30], Gao et al. recommended that perceived instructor emotional support plays a mediating role in enhancing the Social-emotional proficiency and psychological well-being of EFL students, as indicated by the study using structural equation modeling. In [31], Wu & Kang mentioned in their paper that teacher support positively influences academic proficiency in secondary EFL learners, mediated by academic self-concept. This relationship highlights the importance of SS in enhancing EFL learners' academic success.

Hypothesis 3 (H3): SS moderates the connection between SRL and cognitive processes.

III. METHOD

3.1 Research Participants

Chinese EFL pupils enrolled in EFL classes at two Guang Dong-based English language institutes were the participants in this research. The convenience sample approach was used to select 478 male and 372 female intermediate EFL learners, ages 18 to 27, as research participants. Each questionnaire had a consent form that guaranteed participants' replies would remain private and provided them with information about their voluntary involvement. To guarantee the legitimacy of the questionnaires, all participants received assurances that the information they provided would involve preserved privacy.

3.2 Research instrument

A range of items were included in a questionnaire designed specifically for this study to evaluate motivational orientation, the primary source of motivational beliefs, and the use of SRL strategies. Four scales are included in the questionnaire: CF (6), ELP (5 things), SS (5 items), and SRL (4 items). The questionnaire consisted of 20 items and was intended to evaluate each dimension's associated characteristics utilizing a 5-point Likert scale that ranged from "strongly disagree" to "strongly agree," depending on the question category [32].

3.3 Data Collection and Procedure

Using a web-based application called Google Forms; to collect data, a standardized questionnaire was employed. Since many individuals access surveys on their smartphones or tablets, we offered participants a mobile-friendly format to complete the questionnaire in a way that would make it more comfortable for them to do so, which increased the response rate. The questionnaire was accessible in both Mandarin and English to avoid any ambiguities or inconveniences. Both language institutes' students acquired it.

In this work, ELP is our Dependent Variable, (SRL) is an Independent Variable and CF and SS is a Mediating and Moderating Variable. Learners' performance, including how much effort they put into their work and their focus on SRL, was assessed using four items. Some examples include "I clearly define the objectives I want to achieve in my English studies" as well as "I monitor my performance during English language tasks". Then, five items were used to get a sense of their English Language Proficiency. Examples include the statement, "I feel confident in my overall English language skills" and "I believe my English language skills are improving". We use a set of six items that inquire about the opinions and activities of learners to assess how they contribute to CF for EFL. Examples of statements are, "I can maintain focus on my English learning tasks without getting easily distracted" as well as "I can solve problems encountered during my English studies". Furthermore, using five measures that were taken from the strategy literature on examines that evaluate and assess SS performance on SRL; we looked at how participants saw their behaviour as learners. The example substances are "I feel supported by my family when I face difficulties in learning English" and "My teachers provide valuable feedback to improve my English skills".

3.4 Data analysis

An independent sample t-test is one of the main steps followed for measuring SS and self-directed learning skills. The questionnaire exhibited acceptable reliability and validity rates, according to factor analysis and Cronbach's Alpha values using SPSS software version 20.0 [33]. Every respondent received instructions on how to score the elements in the inquiries, ensuring the precision and reliability of responses.

Within 20 days, all of the responses were received. We verified and omitted any apparent errors in the respondents' responses by checking them twice. Subsequently, It was determined by a multiple regression analysis the extent to which SRL, cognitive processes, and the moderating influence of SS contribute to the variance in ELP amongst Chinese EFL learners.

IV. RESULTS

4.1 Exploratory factor analyses

The consistency of the simulations, including SRL, Cognitive functions, EFL, and social support, has been rigorously assessed (table 1). This establishes' internal consistency as indicated by Cronbach's Alpha values, spanning from 0.94912 to 0.96873. Higher Cronbach's Alpha values are a sign of sturdier steadfastness, and all of the study's hypotheses show satisfactory quantities of internal consistency. In the context of EFL instruction, these results establish confidence in the validity of the measures used to evaluate these important components of SRLL acquisition.

Higher composite reliability values signify improved internal consistency. This instance indicates good reliability since all hypotheses have composite reliability ratings between 0.894 and 0.935. To what degree the observed variables measure the same essential constructs is determined utilizing the AVE method of convergent validity assessment. Greater AVE values signify improved convergent validity. The constructs in this instance exhibit moderate to good convergent validity, with AVE values ranging from 0.70006 to 0.85444.

Table 1: Result of Convergent Validity

Construct	Item	Factor loading	CRa	AVE	Cα
SRL	I clearly define the objectives I want to achieve in my English studies	0.91	0.901	0.72446	0.96635
	I monitor my performance during English language tasks	0.84			
	I regularly track my progress towards my English language learning goals.	0.87			
	I allocate sufficient time to practice each aspect of English	0.94			
ELP	I feel confident in my overall English language skills	0.79	0.894	0.70006	0.94912
	I believe my English language skills are improving	0.85			
	In written English, I am willing to articulate myself clearly.	0.86			
	I can understand English speakers even when they speak quickly	0.81			
	I can identify specific details in English reading materials	0.88			
CF	I can maintain focus on my English learning tasks without getting easily distracted	0.94	0.918	0.83785	0.96873
	I can solve problems encountered during my English studies	0.92			

Construct	Item	Factor loading	CRa	AVE	Cα
	I can easily remember new English vocabulary words	0.89			
	I can remember grammar rules and apply them correctly in my English writing.	0.91			
	I can plan and organize my English learning activities effectively	0.95			
	I can quickly identify errors in my English writing and correct them	0.88			
SS	I feel supported by my family when I face difficulties in learning English	0.91	0.935	0.85444	0.96072
	My teachers provide valuable feedback to improve my English skills	0.87			
	My family provides resources (e.g., books, internet) for my English learning	0.81			
	I have a network of people who encourage and assist me in learning English	0.83			
	My teachers provide the necessary support to help me succeed in English.	0.89			

The observed variables are accurate and legitimate measurements of the corresponding latent constructs, according to the overall findings of the SEM analysis extent model. The study's evaluation methods emerge to be dependable based on the constructs' satisfactory to satisfactory degrees of internal coherence. Furthermore, a significant proportion of variation in the associated constructs is captured by the observed variables, proving convergent validity.

4.2 Descriptive statistics and correlations

Table 2 illustrates that the square root value of the AVE for each subscale was superior to the equivalent coefficients of correlation (r), indicating strong discriminant legitimacy across each subscale. Participants reported modest scores consistently across all scales. There is an intimate connection among each variation.

Table 2: Results of discriminant validity analyses

	CR	AVE	SRL	ELP	CF	SS
SRL	0.72446	0.96635	0.848			
ELP	0.70006	0.94912	0.843	0.836		
CF	0.83785	0.96873	0.871	0.873	0.915	
SS	0.85444	0.96072	0.851	0.845	0.878	0.903
Note(s): AVE = Average Variance Extracted, CR = composite reliability.						

SRL was positively related to ELP (r = 0.843) and CF (r = 0.871). SS was positively associated with both ELP (r = 0.845) and CF (r = 0.878). Thus, the 1-3 hypotheses were established. Table 2 furthermore illustrates the coefficient, skewness, kurtosis, and ELP for SS, CF, and ELP. Since the course absolute value is < 1, the data are roughly distributed according to a normal distribution. Consequently, an alternative is to employ the maximum likelihood estimation.

4.3 Hypothesis testing

The majority of the paths were statistically significant, according to Table 2's standardized path coefficients for the proposed model. Specifically, (SRL) positively predicted ELP with a path coefficient of $\beta = 0.754$ (SE = 0.023, CR = 9.21, $p < 0.001$). Furthermore, CF arbitrated the association between SRL and ELP ($\beta = 0.127$, SE = 0.082, CR = 5.16, $p < 0.001$). Additionally, both SRL and SS positively influenced CF ($\beta = 0.093$, SE = 0.054, CR = 4.013, $p < 0.001$). These findings highlight the critical role of SRL and SS in enhancing CF and ELP among students.

Table 3: Standardized path coefficients

Hypothesis	Paths	Stdest	SE	CR	p-value	Result
1	SRL → ELP	0.754	0.023	9.21	0.00	Supported
2	SRL → CF → ELP	0.127	0.082	5.16	0.00	Supported
3	SRL * SS → CF	0.093	0.054	4.013	0.00	Supported
Note(s): CR = critical ratio; SE = standard error; Stdest = standardized estimate.						

The significant paths from SRL to ELP and from CF to ELP confirm the mediating role of CF. Moreover, the significant path from both SRL and SS to CF underscores the importance of these factors in cognitive development. Overall, the study confirms that SRL, CF, and SS are significant predictors of ELP, providing valuable perspectives for educators and decision-makers hoping to enhance language acquisition results.

Table 4: Structural model results

Relationship	β	SE	t-test	p-value
SRL → ELP	0.512	0.025	20.48	0.00
SRL → CF	0.678	0.03	22.6	0.00
CF → ELP	0.463	0.022	21.045	0.00
SRL * SS → CF	0.398	0.027	14.741	0.00

Significant path coefficients were observed in the structural model. Specifically, (SRL) positively predicted ELP with a path coefficient of $\beta = 0.512$ ($p < 0.001$). Additionally, SRL positively influenced CF with a path coefficient of $\beta = 0.678$ ($p < 0.001$). CF also positively predicted ELP with a path coefficient of $\beta = 0.463$ ($p < 0.001$). Furthermore, the interaction of SRL and SS positively influenced CF, with a path coefficient of $\beta = 0.398$ ($p < 0.001$). These findings designate that SRL significantly impacts both CF and ELP and that CF plays a mediating role between SRL and ELP. The interaction between SRL and SS further enhances CF, underscoring the importance of these constructs in improving ELP. This supports the hypothesized model and highlights the arbitrating role of CF in the association between SRL and ELP.

4.4 Testing the moderating effect of social support

The moderating effects of SS in the associations among SRL and ELP are presented in Table 5. SRL, social support, CF, and ELP were included in the model. The findings supported the hypothesis by demonstrating that SRL effectively predicted ELP ($\beta = 0.512$, $p < 0.001$, see Table 5) and that the interaction between SRL and SS had an essential effect on CF ($\beta = 0.398$, $p < 0.001$, see Table 5).

Table 5: Results of Pearson Correlation Coefficients

Dimension	SRL	CF	SS	Interaction (SRL * SS)	ELP
"Evaluation of learning success"	.512**	.463**	.398**	.398**	.512**
"Ability to apply learning strategies"	.678**	.463**	.398**	.398**	.512**
"Ability to use learning opportunities"	.678**	.463**	.398**	.398**	.512**
"Motivation and self-confidence"	.678**	.463**	.398**	.398**	.512**
"Attitude towards learning"	.678**	.463**	.398**	.398**	.512**
"Assessment of learning process"	.678**	.463**	.398**	.398**	.512**

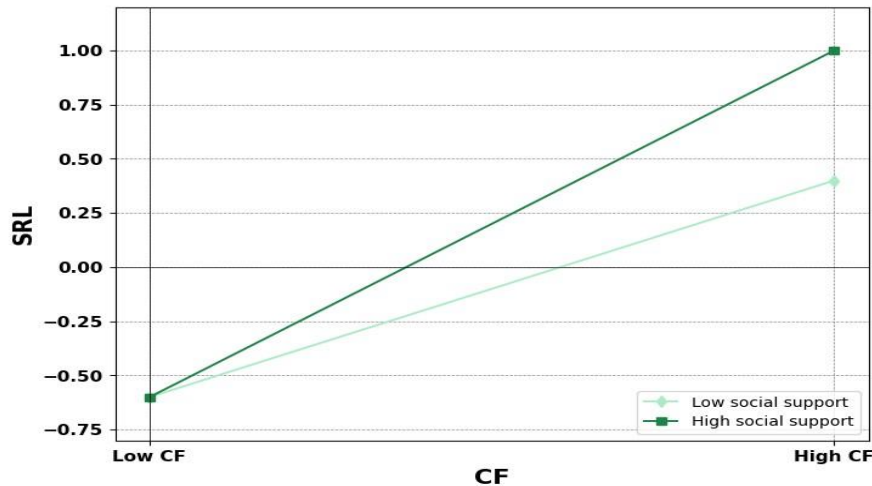| "Ability to manage information"	.678**	.463**	.398**	.398**	.512**
"Ability to plan learning"	.678**	.463**	.398**	.398**	.512**
"Learning responsibility"	.678**	.463**	.398**	.398**	.512**
"Total Self-direct learning skills"	.678**	.463**	.398**	.398**	.512**

Figure 1: Interaction Effect of SS on the Relationship between SRL and CF

Furthermore, An individual standard deviation above or below the average, or high and impoverished social support, was measured utilizing straightforward slope tests. The findings demonstrated that when SS was strong, the impact of SRL on CF was greater than when it was low. Subsequently, we evaluated the conditional indirect effects or moderated mediation further, utilizing SS as a moderating variable in the mediating path of "SRL → CF → ELP." The intermediate path of "SRL → CF → ELP" (index = 0.03, 95% bootstrap CI = [0.01, 0.06]) has been determined to be strongly moderated by social support, according to the data. As SS was resilient ($\beta = 0.22$, 95% bootstrap CI = [0.11, 0.34]) contrasted to low ($\beta = 0.16$, 95% bootstrap CI = [0.07, 0.27]), the results demonstrated that the unintended impact of SRL on ELP through CF was more significant. As SS grew, accompanied by the impact of SRL on ELP through CF, according to this finding.

V. DISCUSSION

The study observed that (SRL) ominously positively predicted ELP among Chinese EFL students, with CF playing a crucial mediating role. This relationship was further enhanced by SS, demonstrating the importance of these constructs in improving ELP. Correlation analyses demonstrated that SRL significantly positively predicted ELP ($\beta = 0.512$, $p < 0.001$), confirming the research hypothesis. This aligns with the theories of, indicating that students' ability to manage their learning processes positively impacts their language proficiency. The positive correlation between CF and ELP ($\beta = 0.463$, $p < 0.001$) also supports this finding, emphasizing the role of CF in academic performance. Previous studies have shown that improved CF leads to better academic outcomes, further supporting the research hypotheses.

SRL and English Language Proficiency: The analysis exposed a robust positive relationship between SRL and ELP ($\beta = 0.512$, $p < 0.001$). This suggests that students who exhibit higher levels of SRL are destined to obtain superior results when learning the English language. This finding aligns with the literature that emphasizes the prominence of SRL strategies in academic success, particularly in language acquisition. SRL involves setting goals, self-monitoring, and self-evaluating, which likely contribute to improved performance in language tasks.

SRL and Cognitive Functions: The study also found a momentous positive impact of SRL on CF ($\beta = 0.678$, $p < 0.001$). This designates that SRL tends to have enhanced cognitive functions, which include attention, memory, and problem-solving skills. Enhanced cognitive functions, in turn, support more effective language learning, as learners are better able to process and apply new information.

CF and English Language Proficiency: The positive path from CF to ELP ($\beta = 0.463$, $p < 0.001$) highlights the role of cognitive abilities in achieving higher levels of language proficiency. CF such as memory and attention are

crucial for language acquisition and use, reinforcing the idea that improving cognitive skills can lead to better language learning outcomes.

Interaction of SRL and SS **on Cognitive Functions:** The interaction effect between SRL and SS on CF (β = 0.398, p < 0.001) suggests that social support enhances the positive effects of SRL on cognitive functions. This finding underscores the importance of a supportive environment in maximizing the benefits of SRL. SS can provide additional resources and encouragement, which can further improve cognitive functioning and, consequently, language proficiency.

Mediating Role of Cognitive Functions: The results support the hypothesis that CF mediates the relationship between SRL and ELP. This mediation effect highlights that SRL not only directly impacts language proficiency but also indirectly affects it through improvements in cognitive functions. This finding is unswerving with existing exploration that suggests cognitive processes play a critical role in the association between self-regulation and academic performance.

Overall, the study's findings emphasize the reputation of integrating SRL approaches and enhancing CF to improve language proficiency. Additionally, fostering a supportive environment can amplify the benefits of SRL. These insights can inform educational practices and interventions aimed at boosting language learning outcomes by addressing both cognitive and environmental factors.

5.1 Practical Implications

Regarding encountering Chinese college EFL learners, educators and language learning practitioners can benefit enormously from the study's practical consequences. A thorough understanding of the factors related to SRL can greatly improve instructional strategies and treatments meant to improve language acquisition.

Initially, the significant impact of SRL on ELP underscores the importance of fostering self-regulation in learners. By defining specific learning objectives, educators may implement techniques into practice to improve SRL, providing structured self-regulation frameworks, and promoting self-monitoring techniques. By cultivating students' self-regulation abilities, Educators can support students in applying efficient learning techniques while demonstrating more responsibility for their language learning process. Furthermore, the positive effect of CF on ELP highlights the need to focus on developing cognitive skills that support language acquisition. Educators can incorporate activities that enhance cognitive processes, such as memory drills, problem-solving activities, and critical thinking exercises, into their instructional methods. Creating a learning environment that stimulates cognitive development can lead to better language proficiency.

Moreover, the interaction between SRL and SS reveals the importance of a supportive learning environment. Educators should strive to build a supportive classroom atmosphere by encouraging collaboration, providing constructive feedback, and involving family or peer support networks. By leveraging social support, educators can amplify the positive effects of SRL on CF and language proficiency. The study also emphasizes the protagonist of criticism as a critical component in the learning process. Providing timely, specific, and actionable criticism helps learners reflect on their progress and make necessary adjustments. Incorporating diverse criticism sources, such as peer reviews and computerized criticism tools, can enhance SRL and improve language enactment.

By addressing and considering these significant ramifications, educators and language professionals can assist Chinese college EFL pupils with attaining more language competency more effectively. Implementing strategies to enhance SRL and cognitive functions, and leveraging SS will establish an optimal feasible learning environment that encourages effective language acquisition and learner autonomy.

5.2 Theoretical Implications

The study's results provide a substantial theoretical contribution of SRLL. By examining the relationships between SRL, Cognitive Functions, Social Support, and English Language Proficiency, this research provides valuable insights into the field's present theories and hypotheses.

Initially, the study validates and expands existing theoretical frameworks of SRLL. The significant relationships between SRL and ELP, as well as the mediating role of CF, support and enhance current models of SRL. This empirical evidence enriches the theoretical foundations of SRLL by demonstrating how CF mediates the impact of SRL on language proficiency. Furthermore, the interaction between SRL and SS in influencing CF highlights the need to integrate SS into theoretical models of SRLL. This finding suggests that future research should consider the role of social contexts in SRLand its impact on cognitive processes and language outcomes. The study also identifies gaps and areas that require further research. For example, the influence of technology-assisted learning on SRLL

remains an underexplored area. With the emergent role of Online instruments and systems for language learning, investigating their impact on self-regulation could provide new insights. Additionally, examining individual differences in self-regulation and their effects on language proficiency can deepen the understanding of SRLL across diverse learner populations.

Finally, Hypotheses SRLL have advanced as a result of this exploration. This research advances the theoretical comprehension of SRLL among Chinese college EFL learners by confirming and expanding current frameworks and identifying concerns for future research. It sets the stage for further investigations to refine theoretical models, explore new dimensions of SRL, and ultimately improve educational practices and outcomes in language learning.

VI. 6. CONCLUSION

In this research, Chinese college students pursuing English as a foreign language (EFL) were the population of interest to examine SRLL.

The field of SRLL benefits from multiple significant contributions contributed by this research. Firstly, it advances theoretical understanding by authenticating and intensifying existing models of SRL. The findings provide empirical support for the theoretical frameworks of SRLL, particularly by demonstrating the mediating role of CF in the association between SRL and language proficiency. Secondly, the research offers valuable empirical evidence on the factors influencing SRLL among learners of EFL in Chinese institutions. By identifying key variables such as SRL, CF, and SS, the study provides insights into how these factors drive successful language learning. This contributes to a more sophisticated comprehension regarding self-regulation and cognitive processes that impact language proficiency. Moreover, the study supports defensible language education practices by offering empirical evidence for designing efficient treatments and approaches to instruction. Educators and practitioners can use these findings to develop targeted approaches that enhance SRL, cognitive functions, and social support, ultimately improving the results of language learning for Chinese college EFL learners. For a deeper appreciation of the experiences and perspectives of learners, future research might employ miscellaneous methods, which integrate observational and interview-based qualitative techniques combined with quantitative analysis.

CONFLICT OF INTEREST

The authors declare that we have no conflict of interest. On behalf of all authors, the corresponding author states that there is no conflict of interest.

Funding:

No fund received for this project.

Ethical Approval:

No ethics approval is required.

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