

# ***The Effects of Self-Regulated Learning on EFL "Listening Comprehension", Metacognitive Awareness, and Motivation: Evidence from Chinese High School Classrooms***

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**Abstract:** This research examines how "Self-Regulated Learning" (SRL) is associated with EFL "listening comprehension", "metacognitive awareness", and motivation among Chinese high school students. Based on "Self-Regulated Learning" Theory and Social Cognitive Theory, the study used a quantitative, cross-sectional correlational design to examine relationships among the variables. Data were collected from 300 Chinese high school students using a structured questionnaire measuring SRL, "listening comprehension", "metacognitive awareness", and motivation. Data collected were analysed with descriptive statistics, reliability analysis, Pearson correlation and simple linear regression with IBM SPSS statistics. The results showed that internal consistency among all measurement scales was strong with Cronbach's alpha values ranging from .734 to .908, exceeding the .70 threshold. Regression models showed significant positive associations between SRL and EFL "listening comprehension", "metacognitive awareness" and motivation. SRL explained 83.8%, 84.6% and 80.3% of the variance in "listening comprehension", "metacognitive awareness" and motivation, respectively. The Pearson correlation was further used to affirm the existence of strong positive correlations between all the variables. The outcomes indicate that students who plan, monitor and assess their learning processes tend to report stronger "listening comprehension", greater awareness of listening strategies and higher motivation in EFL classrooms. The paper supports incorporating SRL strategies into English-listening instruction to promote learner autonomy and academic engagement. The results add to the literature on SRL in EFL settings and offer practical implications for teachers, curriculum designers and policymakers seeking to support listening development in Chinese high schools.

**Keywords:** Self-Regulated Learning, EFL "Listening Comprehension", "Metacognitive Awareness", Motivation, Chinese High School Students.

# 1. Introduction

## 1.1. Background of the Study

English has become one of the most important international languages for academic communication, global interaction, and educational development. Zeng and Goh (2018) note that English as a Foreign Language (EFL) instruction has become particularly the focus of attention in the Chinese educational environment as English proficiency is viewed as a key to academic and professional achievement among students. Moreover, Wang and Hasim (2026) pointed out that among the four language skills, “listening comprehension” is considered as one of the most perplexing, yet basic skills in EFL learners since it facilitates communication, vocabulary building, pronunciation awareness, and overall language learning. Nevertheless, Xu and Luo (2024) condensed that most of the Chinese high school students still face the challenge of comprehending spoken English because of small exposure to real-life listening, inadequate listening skills, and teacher-focused teaching methods. The recent advances in the study of language learning have pointed to the significance of learner autonomy and self-control in enhancing language performance. Also, Cai and Yu (2024), examined that “Self-Regulated Learning” (SRL) has become an important educational concept since it facilitates the planning, tracking, and assessment of their learning processes. According to Barry Zimmerman, self-regulated learners take full responsibility of managing their cognition, motivation and behaviour to attain academic objectives.

A number of scholars have pointed out to the importance of “Self-Regulated Learning” in promoting language learning. Zhou (2021) states that students with good self-regulation abilities can better remain focused, choose the right learning strategies, and resolve learning challenges. Equally, Self-regulated learners exhibit greater involvement in language activities and higher academic performance in EFL environment. Additionally, Yang, Zhang and Nie (2026), evaluated that within Chinese classrooms, whereby in most cases the traditional methods are dominating the teaching of language, the SRL strategies can offer students more chances to control their learning process and enhance the process of listening to achieve better results. Furthermore, Du and Man (2023), explained that “listening comprehension” is a complicated cognitive process in itself, demanding learners to process spoken information at a high speed and extract semantic, syntactic, phonemic, and contextual meanings concurrently. As Xu, Wang and Dong (2022) claimed, the achievement of the “listening comprehension” process is not only based on the level of linguistic knowledge, but also strategic and metacognitive skills of learners. Chinese EFL students find listening activities difficult due to their overemphasis on word-by-word translation rather than using effectiveness methods of comprehension. As a result, listening teaching in most schools has been exam-focused thus hindering the students to learn effective listening skills and strategic understanding.

The concept of “metacognitive awareness” has assumed a significant role in EFL listening studies since it indicates the capability of the learner to comprehend and control his/her cognitive functions during the process of listening activities. “metacognitive awareness” involves strategizing, tracking, problem solving and analysing strategies

that facilitate efficiency in comprehension by the learner. Zeng and Goh (2018) elaborated that students who have stronger “metacognitive awareness” can more easily recognize the difficulties in listening and apply the right strategies to address it. The Chinese high school situation is that students do not normally get exposed in such explicit teaching about metacognitive listening strategies, which can have a bad impact on student listening confidence and academic achievement. Many researchers have also highlighted the strong connection between the “Self-Regulated Learning” and “metacognitive awareness”. Moreover, Maftoon and Fakhri Alamdari (2020) analysed that SRL facilitates the metacognitive growth since a learner keeps reflection on the learning behaviour and assesses the progress. When SRL strategies like goal-setting, self-monitoring, and self-evaluation are used by students, they are more conscious about the way in which learning takes place and how they can cope with difficulty in listening.

Besides comprehension and metacognitive development EFL listening achievement is also affected by another aspect, learner motivation. Motivation has the influence of deciding whether the students are ready to engage in learning activities, persist in their efforts, and do not give up easily. Tremendously motivated learners tend to exhibit enhanced engagement and language accomplishment as compared to less motivated learners (Chon & Shin, 2019). The students in Chinese high schools are usually pressured by examinations and academic competitions which could lower the level of intrinsic motivation in practicing English listening. Consequently, listening activities are considered by many learners as hard or rather stressful learning activities instead of meaningful learning activities. “Self-Regulated Learning” and motivation have been the focus of increasing academic studies in recent years (Bourdeaud’hui, Aesaert & van Braak, 2021). It is also more likely that self-regulated learners will be more academically motivated since they engage in goal-oriented learning processes. The reforms in Chinese education have been more supportive to student-centred learning methods that foster independence and autonomy in learning. However, teacher explanation, memorization, and examination preparation continue to feature in most of EFL classrooms in China (Ahmadi Safa & Motaghi, 2024). These practices can restrict students to the opportunities to develop “Self-Regulated Learning” skills, “metacognitive awareness”, and intrinsic motivation.

According to Najjarpour (2024), Chinese EFL students tend to over-rely on the teacher instructions and are less autonomous in listening activities. This scenario underscores the necessity of additional studies conducted to determine the impact of SRL on “listening comprehension”, “metacognitive awareness” and motivation in Chinese high school classrooms. Moreover, as explained by Su and Lee (2024), despite the existence of past research that investigated “Self-Regulated Learning” in language education, there have been few studies that have at the same time investigated the relationship of “Self-Regulated Learning” with “listening comprehension”, “metacognitive awareness”, and motivation in the Chinese high school EFL context. The existing literature has mainly concentrated on reading or writing abilities as opposed to “listening comprehension”. Moreover, empirical studies on the prediction of these learning outcomes by SRL in Chinese secondary school students are still lacking. Thus, the research aims to examine the impact of “Self-Regulated Learning” on EFL “listening comprehension”, “metacognitive awareness”, and motivation in Chinese high school students using a quantitative research design.

## 1.2. Problem Statement

Although there has been an increasing emphasis on the role of English listening in Chinese secondary education, a large proportion of high school EFL students show poor “listening comprehension”, low “metacognitive awareness” and low motivation towards listening activities. The Chinese classrooms are mostly characterized by traditional teacher-centred instructional practices that do not allow students to learn to devise their own learning strategies and to learn to learn independently (Fu et al., 2023). According to Meng, Wang and Zhao (2023), ineffective use of listening strategies is one of the greatest obstacles that can influence the EFL listening performance. Equally, lack of self-regulation adversely affects academic involvement and language performance of the learners.

Most recent studies have put more emphasis on “Self-Regulated Learning” as a factor in enhancing language learning outcomes, but few empirical studies have been conducted to determine the effect on “listening comprehension”, “metacognitive awareness”, and motivation across Chinese high school classrooms. Liu and Kasuma (2024) indicated that Chinese EFL learners tend to be largely dependent on the teacher instructions and are less independent when it comes to listening activities. Therefore, there is a huge research gap in terms of how “Self-Regulated Learning” predicts the improvement of EFL-related listening outcomes in Chinese secondary school learners. Thus, this research examined the predictive relationship between “Self-Regulated Learning” and the “listening comprehension”, “metacognitive awareness”, and motivation in EFL Chinese classrooms in high schools.

## 1.3. Research Objectives

- To examine the influence of “Self-Regulated Learning” on EFL “listening comprehension” among Chinese high school students.
- To investigate the relationship between “Self-Regulated Learning” and “metacognitive awareness” in EFL listening classrooms.
- To evaluate the influence of “Self-Regulated Learning” on students’ motivation toward English listening learning in Chinese high school classrooms.

## 1.4. Research Questions

- How does “Self-Regulated Learning” influence EFL “listening comprehension” among Chinese high school students?
- What is the relationship between “Self-Regulated Learning” and “metacognitive awareness” in EFL listening classrooms?
- How does “Self-Regulated Learning” influence students’ motivation toward English listening learning in Chinese high school classrooms?

## 1.5. Significance of the Study

This study is significant because it contributes to the growing body of knowledge regarding “Self-Regulated Learning” in EFL education, particularly within Chinese high school classrooms. This research can be useful to teachers to know how “Self-Regulated Learning” can affect “listening comprehension”, “metacognitive awareness”

and motivation among learners. The research can also have practical implications on English teachers in the view that the need to incorporate the “Self-Regulated Learning” strategies into the learning process of listening should be considered important. Moreover, the results can be used by the policy makers and curriculum developers to propagate student-centred learning styles, which stimulate learner empowerment and enhance English listening outcomes in secondary learning settings.

## **2. Literature Review**

### *2.1. Overview of the Literature Review*

“Self-Regulated Learning” (SRL) is an emerging field of study in education of second and foreign languages due its focus on the active involvement of learners in the learning process. SRL is also more and more connected to enhancements in the areas of “listening comprehension”, “metacognitive awareness”, and learning motivation in EFL settings. Scholars have claimed that when students are able to control their learning behaviours, they are more likely to engage in the learning tasks and perform better in the language. In the recent publications, it has been emphasized that the linguistic knowledge is not the only predictor of EFL “listening comprehension”, but also cognitive and motivational ones. Furthermore, Zhou and Rose (2025) said that students using “Self-Regulated Learning” strategies have a greater ability to cope with listening challenges and stay focused throughout listening activities. Likewise, Bozorgian (2014) indicated that “metacognitive awareness” is an important aspect to be considered to assist EFL learners in monitoring and rewarding their listening processes. Motivation has also been identified as a considerable factor in determining the successes of language learning since learners who are motivated will be more open to classroom activities and will persevere through the hard tasks. Despite the number of studies which have reviewed SRL in language instruction, there is a scarcity of studies that have concurrently explored the interaction of SRL with “listening comprehension”, “metacognitive awareness” and motivation in the context of Chinese high school classrooms. Thus, this section critically evaluates the past literature that is relevant to the variables of the study, theoretical basis, hypothesis construction, conceptual framework and gaps in research.

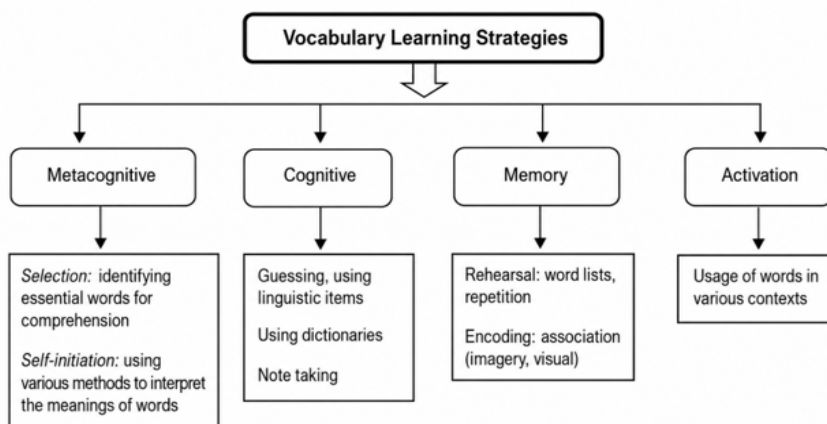
### *2.2. “Self-Regulated Learning” and “listening comprehension”*

“listening comprehension” is regarded as one of the most challenging areas in EFL learners since it involves simultaneous handling of vocabulary, pronunciation, grammatical framework, and contextual interpretation. Moreover, Trang (2020), examined that students in Chinese high school classes tend to have problems with comprehension of natural spoken English because of the lack of exposure to actual dialogues and the lack of effective learning techniques. Figure 1 summarises vocabulary learning strategies by grouping them into metacognitive, cognitive, memory, and activation approaches;

“Self-Regulated Learning” is the skill which allows learners to plan, monitor, guide and assess their processes of learning so as to realize academic objectives. According to Namaziandost et al. (2019), students who use SRL strategies when listening to accomplishments have better concentration and performance in comprehension than

students who only use the guidance of the teacher. The positive correlation between SRL and “listening comprehension” has been confirmed in a number of empirical works in the EFL context. Furthermore, in the research conducted by Ulum (2015), students with a higher level of self-regulation skills demonstrated a better improvement in the “listening comprehension” due to their active control of their understanding and a subsequent change of strategies in case of complications. Similarly, self-regulated learners are likely to participate more in the listening process since they have a better understanding of the learning objectives and performance standards.

Figure 1: Vocabulary Learning Strategies.



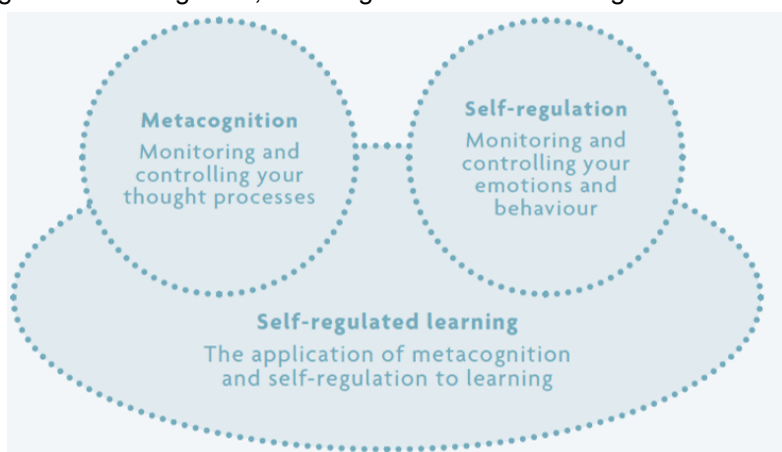
Source: (Goundar, 2019)

Strategic learning behaviours are also linked to the effectiveness of SRL in the teaching of listening. Abdolrezapour and Ghanbari (2021) say that self-regulated learners are better positioned to structure listening tasks systematically and to be able to stay focused throughout the lengthier listening activities. These behaviours are crucial since “listening comprehension” involves sustained thinking and the speed of information processing. However, in most Chinese classrooms, listening teaching is still exam-based which denies students the learning capacity to acquire listening techniques that are independent. The “Self-Regulated Learning” has also been emphasized in the learning of listening due to technology-assisted learning environments. Xu and Luo (2024) elaborated on the fact that digital learning platforms motivate learners to regulate learning speed, re-listening content, and testing understanding on their own. Moreover, SRL listening tasks enhanced participation and confidence of students in EFL classrooms. Nonetheless, other researchers have indicated that the success of SRL can be affected by the level of proficiency of learners, and classroom settings. According to Ozcelik, Van den Branden and Van Steendam (2023), students whose English proficiency is weaker sometimes do not find themselves able to employ self-regulation strategies without the assistance of the teacher. However, most of the recent studies follow the view that self-managed learning has a positive influence on EFL “listening comprehension” in that it enhances the foundation of strategic learning, active involvement, and learner autonomy.

### 2.3. “Self-Regulated Learning” and “metacognitive awareness”

The concept of “metacognitive awareness” has gained prominence in the study of language learning due to its ability to help learners to recognize their cognitive processes, as well as to control them in the context of learning activities. “metacognitive awareness” in EFL listening situations entails planning listening activities, tracking comprehension, detecting challenges and reviewing strategy efficacy.

Figure 2: Metacognition, Self-Regulation and “Self-Regulated Learning”.



Source: (Mannion, 2020)

There has been a growing focus among researchers on the fact that “Self-Regulated Learning” is associated with “metacognitive awareness” since the two involve the learner reflection, monitoring and strategic control. The “metacognitive awareness” aspect specifically plays a significant role in “listening comprehension” since in the process of listening, learners need to process information quickly and handle issues of comprehension concurrently (Lee & Mak, 2018). Haukås (2018) said that learners having higher levels of “metacognitive awareness” have high listening performance, as they can choose right listening strategies based on task demands. Likewise, Haque (2018) identified that “metacognitive awareness” enhances the ability of the learners to detect the failure of comprehension, as well as implement remedial measures when engaged in listening tasks. Recent literature has brought to focus the strong relationship between SRL and metacognitive development. Idris et al. (2022) contended that “Self-Regulated Learning” would make learners more demanding and aware of their learning.

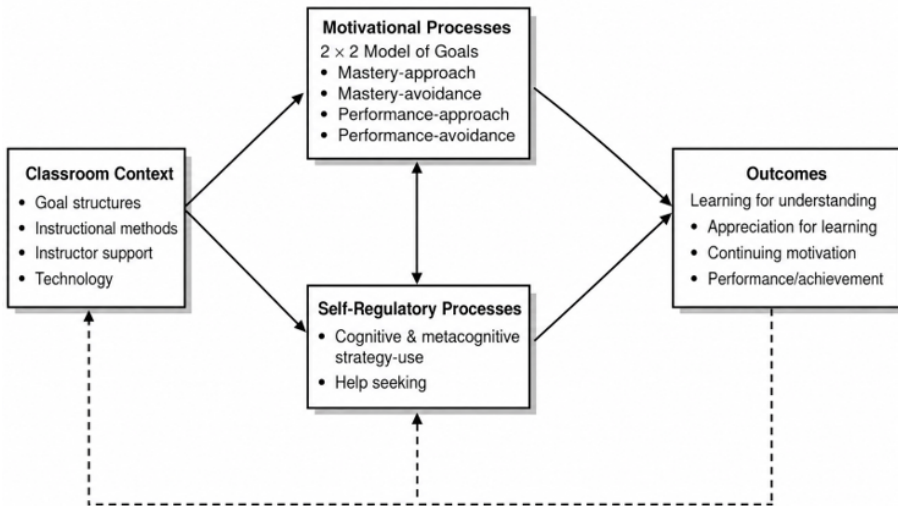
In addition, Idris et al. (2022) reported that cognitive and metacognitive strategy use can strengthen learners’ awareness during foreign-language learning. Similarly, Milliner and Dimoski (2024) clarified that the more the learner was able to monitor his or her listening performance, the better the strategic awareness and comprehension efficiency. Scholarly interest in the integration of metacognitive strategy instruction as a component of SRL practices has also grown. As Yabukoshi (2021) notes, explicit teaching of planning, monitoring, and evaluation strategies can assist learners in enhancing their awareness of listening and making independent learning decisions.

Nevertheless, there are some pitfalls in metacognitive development that have been identified by researchers. Chon and Shin (2019) found that the Chinese high school students have a low level of awareness about listening strategies as the classroom education frequently focuses on the performance on the test at the expense of reflective learning. Learners, therefore, might have difficulties in controlling activities of listening on their own. However, the available literature mostly favors the argument that “Self-Regulated Learning” is an important factor in building “metacognitive awareness” in EFL listening setting.

## 2.4. “Self-Regulated Learning” and Motivation

Motivation is widely recognized as one of the most important factors influencing second language learning success. Motivated students tend to be more likely to participate in listening activity, work harder in challenging tasks and be active in language learning process in the classroom setting in EFL listening classes. Recent research has addressed the topic of “Self-Regulated Learning” becoming more and more likely to motivate learners due to its promotion of goal-setting, self-monitoring, and personal accountability of learning outcomes (Fukuda, 2019).

Figure 3: A General Model for Student Motivation and “Self-Regulated Learning”.



Source: (Zusho et al., 2007)

EFL learning can be motivated in intrinsic and extrinsic dimensions. Intrinsic motivation involves what the learners have in terms of interest and fun in the learning process, extrinsic is affected by outside factors like grades and exams. Intrinsic motivation is usually more evident in self-regulated learners since they are active in their learning processes and derive satisfaction on gaining achievements. SRL and motivation are two topics that have been rampantly debated in the literature relating to educational psychology. Students who are in control of their learning can better keep positive attitudes towards academic activities (Cai & Yu, 2024). Self-regulated

learners will develop goals to learn, track their progress, and assess improvement in listening classrooms, which ultimately enhances motivation and engagement.

There has been a number of empirical studies that have recorded positive correlations between SRL and EFL learning motivation. Soodmand Afshar and Jamshidi (2022) discovered that students who applied self-regulation efforts showed increased involvement and engagement in English listening activities. Similarly, the self-regulated strategies are more likely to be consistent among motivated learners due to their high level of academic commitment and confidence. The classroom setting also affects the correlation between SRL and motivation. Learning environments that are supportive lead to the learners being more responsible in their learning processes and developing more conviction in the motivation. On the contrary, the highly examination-based classrooms can decrease the intrinsic interest of the students in listening activities as learning is concentrated rather on the test results. Additionally, Sharafi (2024), examined that technological advances have also enhanced the motivation of learners by having “Self-Regulated Learning” experiences. Although these positive results were found, researchers have claimed, that low-confidence learners would not have the capacity to keep themselves motivated in case of independent learning activities. However, recent articles have strongly advocated the view that “Self-Regulated Learning” has a positive effect on learner motivation through fostering autonomy, confidence, goal attainment, and engagement in the EFL listening classes.

## *2.5. Theoretical Framework*

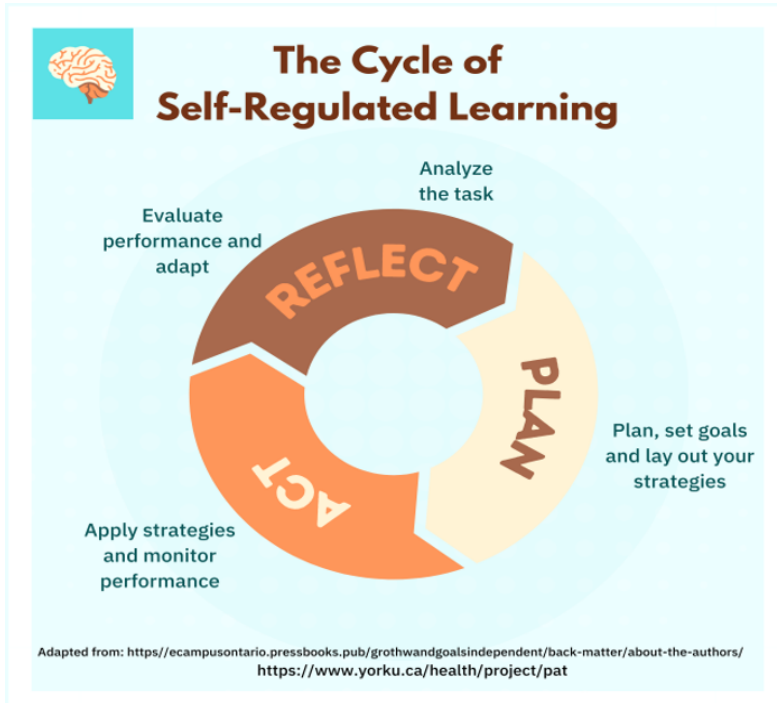
Two broad theories, “Self-Regulated Learning” Theory and Social Cognitive Theory, form the basis of this research. These theories give a powerful conceptual basis in explaining the effects of “Self-Regulated Learning” in “listening comprehension”, “metacognitive awareness” and motivation in Chinese high school EFL learners.

### *2.5.1. “Self-Regulated Learning” Theory*

“Self-Regulated Learning” Theory was developed primarily by Barry Zimmerman and focuses on learners’ ability to control and manage their learning processes through planning, monitoring, and self-evaluation. According to the theory, effective learners are participatory and they manage cognition, behaviour and motivation towards the attainment of learning objectives (Rovers et al., 2019).

Independent learners show better academic achievement as they are better planners of learning activities and they are also capable of tracking their progress. This theory is very applicable to EFL listening teaching since to listen and understand, learners have to effectively employ cognitive and metacognitive strategies. Self-regulated students have a better ability to be able to concentrate, notice points of understanding to grasp and choose the right strategy of listening when engaged in a listening activity (Seli, 2019). SRL assists the learner in being autonomous, through reflective and goal-oriented learning behaviour. “Self-Regulated Learning” Theory, in this research, describes how regulation of learning activities by learners can enhance “listening comprehension”, enhance “metacognitive awareness” and elevate learning motivation (Chu, Hwang & Hwang, 2023). The theory hence forms the main basis in studying the predictive value of SRL in EFL Chinese high school classrooms.

Figure 4: The Cycle of “Self-Regulated Learning”.



Source: (Siekanowicz et al., 2026)

### 2.5.2. Social Cognitive Theory

The Social Cognitive Theory was invented by Albert Bandura and it focuses on the interplay of personal variables, behaviour and environmental variables on the learning process. According to the theory, beliefs, motivation and self-efficacy of learners affect learning outcomes and academic behaviour. According to Schunk and DiBenedetto (2020), learners who have better self-efficacy beliefs get more motivated and persist in difficult educational tasks. The Social Cognitive Theory is applicable to the given research since the level of “listening comprehension” and “metacognitive awareness” depends not just on the cognitive skills but also on the confidence and motivation of learners. When the students in the EFL classroom feel that they have the power to succeed, they will be more careful in their approach to listening activity and this self-regulation strategy will be used on a regular basis. Beauchamp, Crawford and Jackson (2019) described that motivated learners exhibit better academic engagement since they view academic problems as solvable and purposeful. The theory equally serves as a support of the relationship between SRL and motivation in that self-regulated learners also assess progress actively and gain confidence in their learning process through the success in their learning. The Social Cognitive Theory, therefore, assists in elucidating the role of “Self-Regulated Learning” behaviours in enhancing motivation and engagement of students in EFL listening classrooms.

2.6. Hypotheses Development

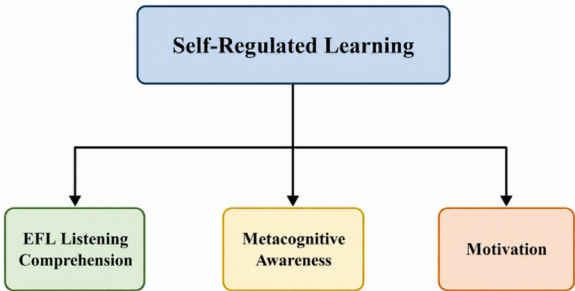
Table 1: Hypotheses.

| Hypothesis Code | Hypothesis Statement                                                                                                                 |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------|
| H1              | “Self-Regulated Learning” has a significant positive influence on EFL “listening comprehension” among Chinese high school students.  |
| H2              | “Self-Regulated Learning” has a significant positive relationship with “metacognitive awareness” among Chinese high school students. |
| H3              | “Self-Regulated Learning” has a significant positive influence on students’ motivation toward English listening learning.            |

2.7. Conceptual Framework

The conceptual framework for this research is presented in the figure below;

Figure 5: Conceptual Framework.



Source: Author

Independent Variable

- “Self-Regulated Learning”

Dependent Variables

- EFL “listening comprehension”
- “metacognitive awareness”
- Motivation

2.8. Literature Gap

Although recent studies have increasingly examined “Self-Regulated Learning” in language education, limited research has simultaneously investigated its influence on EFL “listening comprehension”, “metacognitive awareness”, and motivation within Chinese high school classrooms. Numerous past researches have targeted either reading, writing, or broad-based language achievement as their main outcomes, as opposed to listening-specific outcomes. rather than on secondary school learners. Recent evidence has linked metacognitive awareness with listening skills among Chinese EFL learners, but research focused specifically on high-school students and learner-centred listening practice remains limited (Fu et al., 2023). Moreover, past researchers have seldom used a quantitative regression-based method to

investigate the predictive value of “Self-Regulated Learning” with regard to various listening-related outcomes at the same time. Hence, this paper aims at filling these gaps by investigating the relationship between “Self-Regulated Learning” and “listening comprehension”, “metacognitive awareness”, and motivation in Chinese EFL high school students.

### **3. Research Methodology**

#### *3.1. Overview of the Methodology*

This section explains the methodological procedures adopted to investigate the influence of “Self-Regulated Learning” on EFL “listening comprehension”, “metacognitive awareness”, and motivation among Chinese high school students. The chapter discusses the research philosophy, research approach, research design, population and sampling, data collection instruments, data collection procedures, data analysis techniques, validity and reliability considerations, and ethical considerations. Since the study aims to examine relationships and predictive influences among measurable variables, a quantitative methodology was considered the most appropriate approach.

#### *3.2. Research Philosophy*

The research project is founded on the positivist research philosophy. According to Park, Konge and Artino (2020), positivism is a method that is focused on objective measurement, statistical analysis, and establishing relationships between variables with the help of empirical research. The reason why the positivist approach was chosen is that the study concentrates on such measurable constructs as “Self-Regulated Learning”, “listening comprehension”, “metacognitive awareness” and motivation. This philosophy underlies the use of structured questionnaires and other statistical procedures to analyze relationships among variables in a scientific and systematic way.

#### *3.3. Research Approach*

This study followed a deductive research approach. In addition, Pearse (2019), specified that the deductive methodology starts with the existing theories and empirical literature and then testing hypotheses with the collected data. The methodology was thought to be suitable since the research is based on “Self-Regulated Learning” Theory and Social Cognitive Theory. Moreover, the hypotheses were based on the past literature which aimed to test the significance of “Self-Regulated Learning” in predicting “listening comprehension”, “metacognitive awareness” and motivation in Chinese high school students.

#### *3.4. Research Design*

The study employed a quantitative cross-sectional correlational research design. Quantitative method was chosen due to the possibility to measure and analytically analyze the relationship between variables numerically. The cross-sectional design was suitable since participants had their data collected at one point in time. The

correlational design allowed the study to explore the predictive association between “Self-Regulated Learning” and the three dependent variables.

The study included one independent variable:

- “Self-Regulated Learning” (SRL)

The study also included three dependent variables:

- EFL “listening comprehension”
- “Metacognitive Awareness”
- Motivation

### *3.5. Population and Sampling*

The target population of the study consisted of Chinese high school students studying English as a Foreign Language (EFL). High school students were selected because “listening comprehension” and learner autonomy are highly important during secondary-level English education in China. A purposive sampling technique was adopted to select participants who met the study requirements. The participants were required to:

- Be enrolled in Chinese high schools,
- Study English as a compulsory subject,
- And participate regularly in English listening classroom activities.

The study aimed to collect data from approximately 250 respondents. This sample size was considered sufficient for conducting correlation and regression analyses and for achieving reliable statistical findings.

### *3.6. Data Collection Instrument*

Data were collected using a “structured questionnaire” consisting of two sections. Section A included demographic information such as gender, age, and English learning experience. Section B contained close-ended statements measured using a “five-point Likert scale” ranging from:

“1 = Strongly Disagree”

“2 = Disagree”

“3 = Neutral”

“4 = Agree”

“5 = Strongly Agree”

The questionnaire included four variables:

- “Self-Regulated Learning” (4 items)
- “Listening comprehension” (4 items)
- “Metacognitive awareness” (4 items)
- “Motivation (4 items)”

The questionnaire statements were adapted from previous studies related to “Self-Regulated Learning” and EFL listening education to ensure content validity and relevance to the research objectives.

### 3.7. Data Collection Procedure

Students of Chinese high school were provided with the questionnaires online and in a classroom. Participants were notified of the study purpose and voluntary participation before data collection. Respondents were given clear instructions regarding questionnaire completion. The data collection process was carried out in confidentiality and anonymity.

### 3.8. Data Analysis Techniques

The collected data were analyzed using the IBM SPSS Statistics software. Several statistical techniques were applied to address the research objectives and hypotheses.

Table 2: Statistical Techniques.

| Statistical Technique        | Purpose                                                                                  |
|------------------------------|------------------------------------------------------------------------------------------|
| Descriptive Statistics       | To summarize respondent characteristics and variable distributions                       |
| Reliability Analysis         | To measure internal consistency using Cronbach's Alpha                                   |
| Normality Test               | To examine data distribution                                                             |
| Pearson Correlation Analysis | To examine relationships among variables                                                 |
| Simple Linear Regression     | To test the predictive influence of "Self-Regulated Learning" on each dependent variable |

Three separate simple linear regression analyses were conducted because the study included one independent variable and three dependent variables.

### 3.9. Reliability and Validity

Reliability is a measure of consistency of measurement tools. Internal consistency reliability was assessed using Cronbach Alpha with a value above 0.70 being acceptable. Validity is the measurement instrument being accurate in the intended measurements. Content validity was ensured by adapting questionnaire items from previous literature related to "Self-Regulated Learning", "listening comprehension", "metacognitive awareness", and motivation.

### 3.10. Ethical Considerations

The study upheld ethical principles. It was voluntary and the respondents were informed about the purpose of the study before filling in the questionnaire. The identities of the participants were kept anonymous and all the information gathered was confidential. Moreover, the information was considered to be utilized strictly on academic purposes.

## 4. Findings and Analysis

### 4.1. Overview

This section presents descriptive statistics, reliability testing, regression, and correlation analyses. Findings support high internal consistency of each scale and

show large positive connections between the scales of Self-Regulated Learning and listening comprehension, metacognitive awareness and motivation and indicate Self-Regulated Learning to be a great predictor of EFL listening achievement.

4.2. Descriptive Statistics

The balance of genders indicates that the research had 300 valid respondents. Male students were the majority in the sample with 170 representing 56.7 percent of the respondents. There were 130 female students who comprised 43.3% of the sample. This shows that there was an adequate representation of both males and female students, but it was slightly male dominated. Gender distribution is also helpful since it indicates that the results represent the perspectives of both gender students and this helps to have a more generalized perspective of the concept of Self-Regulated Learning and the experiences of EFL students in listening.

Table 3: Gender Distribution.

| What is Your Gender? |        |           |         |               |                    |
|----------------------|--------|-----------|---------|---------------|--------------------|
|                      |        | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid                | Female | 130       | 43.3    | 43.3          | 43.3               |
|                      | Male   | 170       | 56.7    | 56.7          | 100.0              |
|                      | Total  | 300       | 100.0   | 100.0         |                    |

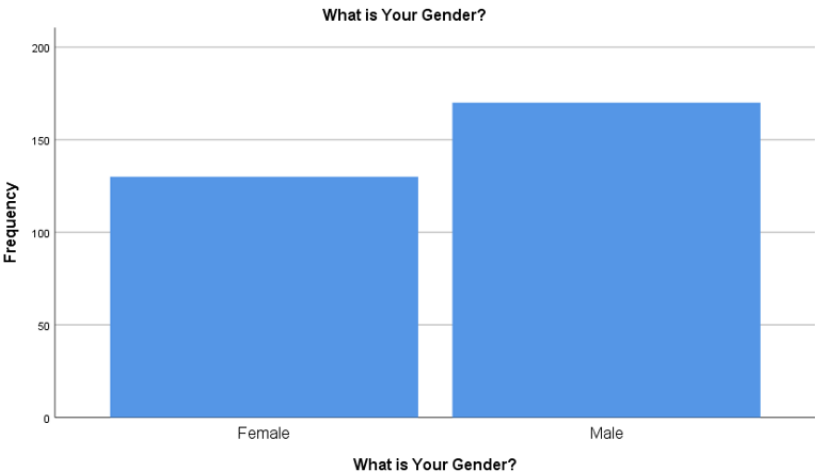
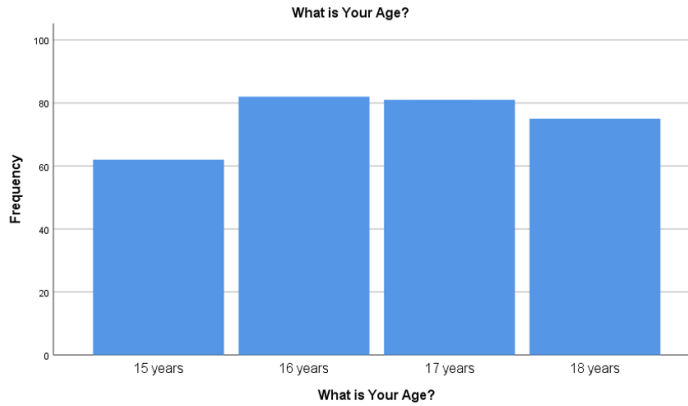


Table 4: Age Distribution.

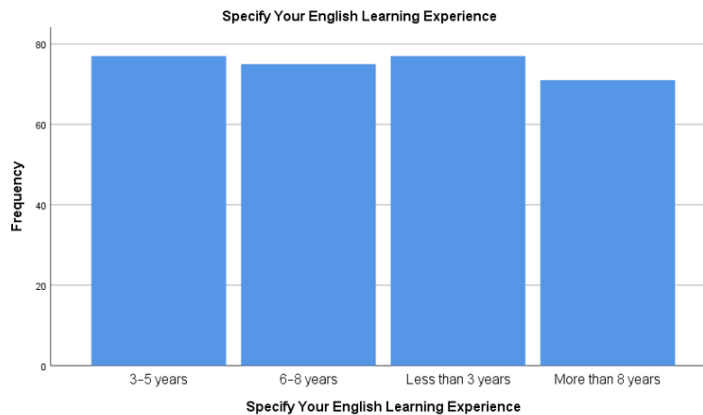
| What is Your Age? |          |           |         |               |                    |
|-------------------|----------|-----------|---------|---------------|--------------------|
|                   |          | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid             | 15 years | 62        | 20.7    | 20.7          | 20.7               |
|                   | 16 years | 82        | 27.3    | 27.3          | 48.0               |
|                   | 17 years | 81        | 27.0    | 27.0          | 75.0               |
|                   | 18 years | 75        | 25.0    | 25.0          | 100.0              |
|                   | Total    | 300       | 100.0   | 100.0         |                    |



The age factor shows that there were four age groups of respondents. The biggest group was composed of 16-year-old students who numbered 82 representing 27.3 percent of the sample. This was then closely matched by the 17-year-old students whose number was 81, representing 27.0. The participants who were 18 years old made 25.0 percent of the population and those at the age of 15 made 20.7 percent. Students in high schools are equally represented in the distribution in all ages. This helps to justify the implications of the results in the broader EFL learning setting in Chinese high schools.

Table 5: English Learning Experience.

| Specify Your English Learning Experience |                   |           |         |               |                    |
|------------------------------------------|-------------------|-----------|---------|---------------|--------------------|
|                                          |                   | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid                                    | 3–5 years         | 77        | 25.7    | 25.7          | 25.7               |
|                                          | 6–8 years         | 75        | 25.0    | 25.0          | 50.7               |
|                                          | Less than 3 years | 77        | 25.7    | 25.7          | 76.3               |
|                                          | More than 8 years | 71        | 23.7    | 23.7          | 100.0              |
|                                          | Total             | 300       | 100.0   | 100.0         |                    |



The results of the English learning experience indicate that respondents were exposed to English learning with a difference in degrees. The sample was 25.7% of students with 3 years of experience or less, and 5 years of experience or less. The students with the experience of 6-8 years constituted 25.0, and the students with the experience of over 8 years constituted 23.7. This shows that the sample was quite equalized in terms of experience groups. This variation is significant since the background of English language learning in students might affect their listening comprehension, metacognitive awareness, motivation and application of Self-Regulated Learning strategies.

#### 4.3. Reliability Analysis

Table 6: Reliability - SRL.

| Scale: “Self-Regulated Learning” |            |
|----------------------------------|------------|
| Reliability Statistics           |            |
| Cronbach’s Alpha                 | N of Items |
| .908                             | 4          |

The “Self-Regulated Learning” scale showed excellent internal consistency, with a Cronbach’s Alpha value of .908 across four items. This indicates that the items used to measure “Self-Regulated Learning” were highly reliable and consistently measured the same construct. Therefore, the scale was suitable for further statistical analysis.

Table 7: Reliability - Listening.

| Scale: EFL “Listening Comprehension” |            |
|--------------------------------------|------------|
| Reliability Statistics               |            |
| Cronbach’s Alpha                     | N of Items |
| .902                                 | 4          |

The EFL “listening comprehension” scale produced a Cronbach’s Alpha value of .902 across four items, indicating excellent reliability. This suggests that the items were internally consistent and effectively measured students’ “listening comprehension”. The result confirms that the scale was reliable enough for correlation and regression analysis.

Table 8: Reliability - Metacognitive Awareness.

| Scale: “Metacognitive Awareness” |            |
|----------------------------------|------------|
| Reliability Statistics           |            |
| Cronbach’s Alpha                 | N of Items |
| .907                             | 4          |

The “metacognitive awareness” scale achieved a Cronbach’s Alpha value of .907 across four items. This demonstrates excellent internal consistency among the items. The result indicates that the statements used to measure “metacognitive awareness” were reliable and appropriate for assessing students’ awareness of listening strategies and learning processes.

Table 9: Reliability - Motivation.

| Scale: Motivation      |            |
|------------------------|------------|
| Reliability Statistics |            |
| Cronbach's Alpha       | N of Items |
| .734                   | 4          |

The motivation scale reported a Cronbach's Alpha value of .734 across four items, indicating acceptable internal consistency. Although lower than the other scales, the value is above the commonly accepted threshold of .70. This means the motivation items were reliable enough for further analysis and suitable for measuring students' motivation toward EFL listening.

#### 4.4 Regression Test 1

Table 10: Model Summary - Listening.

| Model Summary <sup>b</sup> |                   |          |                   |                            |                   |          |     |
|----------------------------|-------------------|----------|-------------------|----------------------------|-------------------|----------|-----|
| Model                      | R                 | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics |          |     |
|                            |                   |          |                   |                            | R Square Change   | F Change | df1 |
| 1                          | .916 <sup>a</sup> | .838     | .838              | .31889                     | .838              | 1543.481 | 1   |

Table 11: Model Significance - Listening.

| Model Summary <sup>b</sup>                           |                   |               |       |
|------------------------------------------------------|-------------------|---------------|-------|
| Model                                                | Change Statistics |               |       |
|                                                      | df2               | Sig. F Change |       |
| 1                                                    | 298               | <.001         | 1.861 |
| a. Predictors: (Constant), "Self-Regulated Learning" |                   |               |       |

According to the model summary, the relation between the Self-Regulated Learning and EFL listening comprehension is very strong with the R value of .916. The value of R squared is 0.838, which means that the variable, Self-Regulated Learning, was able to explain a variance of 83.8 percent of the variable, EFL listening comprehension. This suggests that "Self-Regulated Learning" is a very strong predictor of students' "listening comprehension". Adjusted R Square was also .838, which also indicated that after adjusting the model was stable.

Table 12: ANOVA Results - Listening.

| ANOVA <sup>a</sup>                                   |            |                |     |             |          |                    |
|------------------------------------------------------|------------|----------------|-----|-------------|----------|--------------------|
| Model                                                |            | Sum of Squares | df  | Mean Square | F        | Sig.               |
| 1                                                    | Regression | 156.957        | 1   | 156.957     | 1543.481 | <.001 <sup>b</sup> |
|                                                      | Residual   | 30.304         | 298 | .102        |          |                    |
|                                                      | Total      | 187.261        | 299 |             |          |                    |
| a. Dependent Variable: EFL "listening comprehension" |            |                |     |             |          |                    |
| b. Predictors: (Constant), "Self-Regulated Learning" |            |                |     |             |          |                    |

The ANOVA results show that the regression model was statistically significant,  $F(1, 298) = 1543.481, p < .001$ . This implies that the relationship between EFL and listening comprehension of Chinese high school students was strongly predicted

by Self-Regulated Learning. The model was rejected as meaningless since the significance value was less than .05. Thus, the results indicate that such enhancements in Self-Regulated Learning are closely intertwined with enhanced EFL performances concerning listening comprehension.

Table 13: Coefficients - Listening.

| Coefficients <sup>a</sup> |                           |                             |            |                           |        |
|---------------------------|---------------------------|-----------------------------|------------|---------------------------|--------|
| Model                     |                           | Unstandardized Coefficients |            | Standardized Coefficients | t      |
|                           |                           | B                           | Std. Error | Beta                      |        |
| 1                         | (Constant)                | .550                        | .097       |                           | 5.658  |
|                           | "Self-Regulated Learning" | .871                        | .022       | .916                      | 39.287 |

a. Dependent Variable: EFL "listening comprehension"

The coefficient results show that "Self-Regulated Learning" had a significant positive effect on EFL "listening comprehension",  $B = .871$ ,  $\beta = .916$ ,  $t = 39.287$ ,  $p < .001$ . This means that for every one-unit increase in "Self-Regulated Learning", EFL "listening comprehension" increased by .871 units. The positive beta value indicates a strong positive predictive relationship. Therefore, students with higher "Self-Regulated Learning" skills were more likely to report stronger "listening comprehension".

Table 14: Residual Statistics - Listening.

| Residuals Statistics <sup>a</sup> |         |         |        |                |     |
|-----------------------------------|---------|---------|--------|----------------|-----|
|                                   | Minimum | Maximum | Mean   | Std. Deviation | N   |
| Predicted Value                   | 1.4208  | 4.9051  | 4.2975 | .72453         | 300 |
| Residual                          | -.90507 | .74823  | .00000 | .31836         | 300 |
| Std. Predicted Value              | -3.970  | .839    | .000   | 1.000          | 300 |
| Std. Residual                     | -2.838  | 2.346   | .000   | .998           | 300 |

a. Dependent Variable: EFL "listening comprehension"

The residual statistics indicate that the predicted values were between 1.4208 and 4.9051 whose mean is 4.2975. The mean of the residues was .00000, which implied that the prediction errors were distributed about the value of zero. The standardized residuals were in the range of -2.838 to 2.346 which is acceptable and falls within the range of  $\pm 3$ . This implies that there were no severe outliers on the regression model which is why the prediction results would be reliable.

#### 4.5. Regression Test 2

Table 15: Model Summary - Metacognitive Awareness.

| Model Summary <sup>b</sup> |                   |          |                   |                            |                   |          |     |
|----------------------------|-------------------|----------|-------------------|----------------------------|-------------------|----------|-----|
| Model                      | R                 | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics |          |     |
|                            |                   |          |                   |                            | R Square Change   | F Change | df1 |
| 1                          | .920 <sup>a</sup> | .846     | .846              | .32076                     | .846              | 1639.630 | 1   |

As indicated in the model summary there is a very strong relationship between the Self-Regulated Learning and the metacognitive awareness and the R is 0.920. The R

Square of 0.846 means that Self-regulated learning explained 84.6% of the variance in metacognitive awareness. This means that “Self-Regulated Learning” was a very strong predictor of students’ “metacognitive awareness”. A value of the adjusted R Square was also equal to .846 which confirmed that the model was stable and reliable.

Table 16: Model Significance - Metacognitive Awareness.

| Model Summary <sup>b</sup>                           |                   |               |       |
|------------------------------------------------------|-------------------|---------------|-------|
| Model                                                | Change Statistics |               |       |
|                                                      | df2               | Sig. F Change |       |
| 1                                                    | 298               | <.001         | 1.835 |
| a. Predictors: (Constant), “Self-Regulated Learning” |                   |               |       |
| b. Dependent Variable: “metacognitive awareness”     |                   |               |       |

Table 17: ANOVA Results - Metacognitive Awareness.

| ANOVA <sup>a</sup>                                   |            |                |     |             |          |                    |
|------------------------------------------------------|------------|----------------|-----|-------------|----------|--------------------|
|                                                      | Model      | Sum of Squares | df  | Mean Square | F        | Sig.               |
| 1                                                    | Regression | 168.693        | 1   | 168.693     | 1639.630 | <.001 <sup>b</sup> |
|                                                      | Residual   | 30.660         | 298 | .103        |          |                    |
|                                                      | Total      | 199.352        | 299 |             |          |                    |
| a. Dependent Variable: “metacognitive awareness”     |            |                |     |             |          |                    |
| b. Predictors: (Constant), “Self-Regulated Learning” |            |                |     |             |          |                    |

The ANOVA results indicate that the regression model was statistically significant,  $F(1, 298) = 1639.630$ ,  $p < .001$ . This shows that “Self-Regulated Learning” significantly predicted “metacognitive awareness” among Chinese high school students. Since the significance value was below .05, the model was statistically acceptable. Therefore, the result suggests that students with stronger “Self-Regulated Learning” skills were more likely to demonstrate higher “metacognitive awareness” in EFL listening activities.

Table 18: Coefficients - Metacognitive Awareness.

| Coefficients <sup>a</sup>                        |                           |                             |            |                           |        |       |
|--------------------------------------------------|---------------------------|-----------------------------|------------|---------------------------|--------|-------|
| Model                                            |                           | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig.  |
|                                                  |                           | B                           | Std. Error | Beta                      |        |       |
| 1                                                | (Constant)                | .409                        | .098       |                           | 4.183  | <.001 |
|                                                  | “Self-Regulated Learning” | .903                        | .022       | .920                      | 40.492 | <.001 |
| a. Dependent Variable: “metacognitive awareness” |                           |                             |            |                           |        |       |

The coefficient results show that “Self-Regulated Learning” had a significant positive influence on “metacognitive awareness”,  $B = .903$ ,  $\beta = .920$ ,  $t = 40.492$ ,  $p < .001$ . This means that for every one-unit increase in “Self-Regulated Learning”, “metacognitive awareness” increased by .903 units. The positive standardized beta value indicates a very strong predictive effect. Therefore, higher “Self-Regulated Learning” was strongly associated with stronger “metacognitive awareness” among the students.

The residual statistics show that the predicted values ranged from 1.3119 to 4.9240, with a mean of 4.2942. The residual mean was .00000, indicating that prediction errors were evenly balanced around zero. The standardized residual values ranged from -2.881 to 2.348, which are within the acceptable range of  $\pm 3$ . This suggests

that no serious outliers affected the model, supporting the reliability and stability of the regression results.

Table 19: Residual Statistics - Metacognitive Awareness.

| Residuals Statistics <sup>a</sup> |         |         |        |                |     |
|-----------------------------------|---------|---------|--------|----------------|-----|
|                                   | Minimum | Maximum | Mean   | Std. Deviation | N   |
| Predicted Value                   | 1.3119  | 4.9240  | 4.2942 | .75113         | 300 |
| Residual                          | -.92404 | .75324  | .00000 | .32022         | 300 |
| Std. Predicted Value              | -3.970  | .839    | .000   | 1.000          | 300 |
| Std. Residual                     | -2.881  | 2.348   | .000   | .998           | 300 |

a. Dependent Variable: “metacognitive awareness”

#### 4.6. Regression Test 3

Table 20: Model Summary - Motivation.

| Model Summary <sup>b</sup> |                   |          |                   |                            |                   |          |     |
|----------------------------|-------------------|----------|-------------------|----------------------------|-------------------|----------|-----|
| Model                      | R                 | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics |          |     |
|                            |                   |          |                   |                            | R Square Change   | F Change | df1 |
| 1                          | .896 <sup>a</sup> | .803     | .802              | .27565                     | .803              | 1215.565 | 1   |

Table 21: Model Significance - Motivation.

| Model Summary <sup>b</sup> |                   |               |       |
|----------------------------|-------------------|---------------|-------|
| Model                      | Change Statistics |               |       |
|                            | df2               | Sig. F Change |       |
| 1                          | 298               | <.001         | 2.139 |

a. Predictors: (Constant), “Self-Regulated Learning”  
b. Dependent Variable: Motivation

The model summary shows a very strong relationship between “Self-Regulated Learning” and motivation, with an R value of .896. The R Square value of .803 indicates that “Self-Regulated Learning” explained 80.3% of the variance in motivation. This means that “Self-Regulated Learning” was a strong predictor of students’ motivation toward EFL listening. The adjusted R Square value of .802 confirms that the model remained stable after adjustment.

Table 22: ANOVA Results - Motivation.

| ANOVA <sup>a</sup> |            |                |     |             |          |                    |
|--------------------|------------|----------------|-----|-------------|----------|--------------------|
| Model              |            | Sum of Squares | df  | Mean Square | F        | Sig.               |
| 1                  | Regression | 92.360         | 1   | 92.360      | 1215.565 | <.001 <sup>b</sup> |
|                    | Residual   | 22.642         | 298 | .076        |          |                    |
|                    | Total      | 115.002        | 299 |             |          |                    |

a. Dependent Variable: Motivation  
b. Predictors: (Constant), “Self-Regulated Learning”

The ANOVA results show that the regression model was statistically significant,  $F(1, 298) = 1215.565$ ,  $p < .001$ . This indicates that “Self-Regulated Learning” significantly predicted motivation among Chinese high school students. Since the significance

value was below .05, the regression model was accepted as statistically meaningful. Therefore, the result suggests that higher “Self-Regulated Learning” is strongly associated with stronger motivation toward English listening activities.

Table 23: Coefficients - Motivation.

| Coefficients <sup>a</sup> |                             |            |                           |        |       |
|---------------------------|-----------------------------|------------|---------------------------|--------|-------|
| Model                     | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig.  |
|                           | B                           | Std. Error | Beta                      |        |       |
| 1 (Constant)              | 1.444                       | .084       |                           | 17.198 | <.001 |
| "Self-Regulated Learning" | .668                        | .019       | .896                      | 34.865 | <.001 |

a. Dependent Variable: Motivation

The coefficient results indicate that “Self-Regulated Learning” had a significant positive influence on motivation,  $B = .668$ ,  $\beta = .896$ ,  $t = 34.865$ ,  $p < .001$ . This means that for every one-unit increase in “Self-Regulated Learning”, motivation increased by .668 units. The positive beta value confirms a strong positive predictive relationship. Therefore, students with higher “Self-Regulated Learning” skills were more likely to show stronger motivation in EFL listening.

Table 24: Residual Statistics - Motivation.

| Residuals Statistics <sup>a</sup> |         |         |        |                |     |
|-----------------------------------|---------|---------|--------|----------------|-----|
|                                   | Minimum | Maximum | Mean   | Std. Deviation | N   |
| Predicted Value                   | 2.1125  | 4.7852  | 4.3192 | .55578         | 300 |
| Residual                          | -.61818 | .71591  | .00000 | .27519         | 300 |
| Std. Predicted Value              | -3.970  | .839    | .000   | 1.000          | 300 |
| Std. Residual                     | -2.243  | 2.597   | .000   | .998           | 300 |

a. Dependent Variable: Motivation

The residual statistics show that the predicted motivation values ranged from 2.1125 to 4.7852, with a mean of 4.3192. The residual mean was .00000, showing that prediction errors were balanced around zero. The standardized residuals ranged from -2.243 to 2.597, which are within the acceptable  $\pm 3$  range. This suggests that there were no serious outliers, supporting the stability and reliability of the regression model.

#### 4.7. Correlation Analysis

The outcomes of the Pearson correlation indicate that there exist significant and positive relationships between all study variables at the 0.01 level. There was a positive relationship of a very strong nature between EFL “listening comprehension and Self-Regulated Learning,  $r = .916$ ,  $p < .001$  with the result that the stronger the student in their Self-Regulated Learning skills were, the stronger was their reported EFL listening comprehension. There was also strong association between Self-Regulated Learning and metacognitive awareness whereby,  $r = .920$ ,  $p < .001$  indicated that students who employed the strategies of Self-Regulated Learning were more aware of their listening processes. Likewise, motivation was positively correlated with Self-Regulated Learning with a strong relationship of  $r = .896$ ,  $p < .001$ . There was also a strong correlation between the dependent variables whereby the listens comprehension

was correlated with metacognitive awareness,  $r = .902$ , and motivation,  $r = .869$ , with metacognitive awareness correlated with motivation,  $r = .864$ . In general, the findings provide strong positive relationships between all the variables.

Table 25: Pearson Correlations.

| Correlations                                                 |                     |                           |                               |                           |
|--------------------------------------------------------------|---------------------|---------------------------|-------------------------------|---------------------------|
|                                                              |                     | “Self-Regulated Learning” | Efl “Listening Comprehension” | “Metacognitive Awareness” |
| “Self-Regulated Learning”                                    | Pearson Correlation | 1                         | .916**                        | .920**                    |
|                                                              | Sig. (2-tailed)     |                           | <.001                         | <.001                     |
|                                                              | N                   | 300                       | 300                           | 300                       |
| EFL “listening comprehension”                                | Pearson Correlation | .916**                    | 1                             | .902**                    |
|                                                              | Sig. (2-tailed)     | <.001                     |                               | <.001                     |
|                                                              | N                   | 300                       | 300                           | 300                       |
| “Metacognitive awareness”                                    | Pearson Correlation | .920**                    | .902**                        | 1                         |
|                                                              | Sig. (2-tailed)     | <.001                     | <.001                         |                           |
|                                                              | N                   | 300                       | 300                           | 300                       |
| Motivation                                                   | Pearson Correlation | .896**                    | .869**                        | .864**                    |
|                                                              | Sig. (2-tailed)     | <.001                     | <.001                         | <.001                     |
|                                                              | N                   | 300                       | 300                           | 300                       |
| Correlations                                                 |                     |                           |                               |                           |
|                                                              |                     |                           | Motivation                    |                           |
| “Self-Regulated Learning”                                    | Pearson Correlation |                           | .896**                        |                           |
|                                                              | Sig. (2-tailed)     |                           | <.001                         |                           |
|                                                              | N                   |                           | 300                           |                           |
| EFL “listening comprehension”                                | Pearson Correlation |                           | .869**                        |                           |
|                                                              | Sig. (2-tailed)     |                           | <.001                         |                           |
|                                                              | N                   |                           | 300                           |                           |
| “Metacognitive awareness”                                    | Pearson Correlation |                           | .864**                        |                           |
|                                                              | Sig. (2-tailed)     |                           | <.001                         |                           |
|                                                              | N                   |                           | 300                           |                           |
| Motivation                                                   | Pearson Correlation |                           | 1                             |                           |
|                                                              | Sig. (2-tailed)     |                           | 300                           |                           |
|                                                              | N                   |                           |                               |                           |
| **. Correlation is significant at the 0.01 level (2-tailed). |                     |                           |                               |                           |

## 5. Discussion

The research results indicated that self-regulated learning had a strong positive association with EFL listening comprehension of the Chinese high school students. Regression analysis revealed a strong positive predictive relationship between Self-Regulated Learning and listening comprehension, with a standardised coefficient of  $\beta = .916$ ,  $p < .001$ ; correlation analysis also showed a strong positive relationship,  $r = .916$ . These results suggest that students in the high-level of skills of Self-Regulated Learning had higher chances to show better results in the sphere of the high level of listening comprehension. These findings are in line with other past studies as discussed in Chapter 2. According to Xu and Luo (2024), the strategies of Self-Regulated Learning enhance the possibility of learners to deal with listening tasks by themselves and improve the learning of listening. In a similar vein, Abdolrezapour and Ghanbari (2021) stated that learners with self-monitoring and strategic listening behaviours are likely to attain better comprehension results in EFL situations.

Additionally, Zhou and Rose (2025) elaborated that self-regulated learners can be better in terms of maintaining focus and changing listening strategies according to task requirements. Results obtained today thus uphold the claim that Self-Regulated Learning improves EFL listening comprehension by providing tactical involvement, learner control, and active thought processing.

The paper has also established that the Self-Regulated Learning was a significant predictor of the metacognitive awareness in Chinese high school students. The regression analysis indicated a very strong positive association between Self-Regulated Learning and metacognitive awareness with  $\beta = .920$  and  $p < .001$ ; however, the correlation analysis found there to be a strong positive relationship between the two variables,  $r = .920$ . These results indicate that students who managed to control their learning behaviours successfully tended to show better awareness of listening strategies as well as comprehension monitoring and reflective learning processes. The results are heavily backed by past studies as outlined in the literature chapter. According to Maftoon and Fakhri Alamdari (2020), Self-Regulated Learning can serve as a key factor in the metacognitive development since learners constantly monitor their learning strategies and make changes. Similarly, Haukås (2018) indicated that the practice of metacognitive awareness enhances when learners actively observe challenges in understanding and use corrective listening skills. Idris et al. (2022) also elaborated that continuous planning, monitoring, and assessment activities make self-regulated learners more self-reflective and aware of their learning processes. Therefore, the current findings confirm that “Self-Regulated Learning” plays an important role in strengthening “metacognitive awareness” in EFL listening classrooms.

The results also indicated that Self-Regulated Learning was significantly associated with students’ motivation for learning English listening. The regression analysis revealed that the standardised coefficient was strong at  $\beta = .896$ ,  $p < .001$  and correlation analysis revealed that the relationship between “self-regulated learning” and motivation was strong with  $r = .896$ . These results show that students who implemented the strategies of the Self-Regulated Learning were better motivated to engage in the activities that focused on the English listening and being focused during the listening tasks. Findings are very consistent with the earlier literature that was mentioned in Chapter 2. According to Sharafi (2024), Self-Regulated Learning is beneficial because it enhances confidence, independence, and persistence of learners that positively affect motivation in EFL learning settings. Likewise, Soodmand Afshar and Jamshidi (2022) specified that students capable of controlling their learning mechanisms in an effective way exhibit both better academic engagement and motivation. Chon and Shin (2019) further elaborated that motivated learners tend to be more actively involved in listening activities, and maintain learning efforts despite understanding problems. The current research thus argues in favor of the position that Self-Regulated Learning has a positive reinforcement of student-motivation through the promotion of learner-control, confidence, and goal-directed behaviors within the EFL listening classrooms.

## 6. Conclusion and Recommendations

### 6.1. Conclusion

This study was aimed at exploring the effects of “Self-Regulated Learning” on EFL

"listening comprehension", "metacognitive awareness", and motivation among Chinese high school students. The research methodology was cross-sectional correlational research design which is quantitative in nature. A structured questionnaire was used to collect data on 300 Chinese high school students and the data collected was analyzed using a descriptive statistics, reliability analysis, Pearson correlation analysis, and simple linear regression analysis using the IBM SPSS Statistics. The study findings proved that "Self-Regulated Learning" positively contributed to EFL "listening comprehension" significantly. Students whose "Self-Regulated Learning" abilities were more pronounced were in a better position to comprehend spoken English materials and were in a better position to handle listening activities. The findings suggest that "Self-Regulated Learning" strategies like planning, monitoring and self-evaluation have positive effects in the performance of "listening comprehension". This validates the essence of learner autonomy and strategic learning behaviour in EFL listening classrooms. The research also discovered that "Self-Regulated Learning" had a great impact on "metacognitive awareness" of Chinese high school students.

Students with better self-regulation showed a higher level of awareness of their strategies of listening, their understanding challenges and how they learnt. Such results indicate that "Self-Regulated Learning" develops the capacity in the students to assess and regulate their performance in listening. The results further highlight the importance of metacognitive strategy awareness in improving EFL listening achievement. The research also indicated that "Self-Regulated Learning" had a positive effect on the students English listening learning motivation. The student who had a better level of "Self-Regulated Learning" showed an increased confidence, interest, and readiness to engage in listening activities. The results imply that "Self-Regulated Learning" aids motivation as it motivates a learner to become responsible towards academic development and learning objectives. By and large, the study affirms that "Self-Regulated Learning" is of great significance in enhancing EFL related outcomes of listening among Chinese high school students. The results add to the current literature on the topic of "Self-Regulated Learning" in the process of EFL education and offer practical implications for teachers, curriculum developers and educational policymakers. This paper highlights the relevance of combining the "Self-Regulated Learning" strategies in teaching English listening to enhance the "listening comprehension", "metacognitive awareness", and learner motivation in Chinese high school classrooms.

## *6.2. Recommendations*

- 1. Incorporation of "Self-Regulated Learning" Strategies:* English instructors are advised to incorporate "Self-Regulated Learning" strategies or planning, self-monitoring, goal-setting, and self-evaluation in classroom listening activities. This can assist the students to be more autonomous and strategic learners in the listening activity.
- 2. Higher Metacognitive Strategy Instruction:* Teachers are to instruct specifically on metacognitive listening strategies. Students are to be instructed on the ways of recognising the listening problems, tracking the understanding and the appropriate listening strategies to be used in classwork.
- 3. Student-Centred Learning:* Schools must promote student-centred teaching methods as opposed to teacher-centred and examination-based methods. Learner

autonomy, engagement and confidence in listening may be enhanced in student-centred learning environments.

4. *Digital Listening Platforms*: Educational organizations are expected to promote the utilization of online listening platforms and digital learning. Such technologies can enable students to engage in listening practice on their own, repeat sound items and effectively track their own progress as learners.
5. *Teacher Training and Professional Development*: English teachers should be trained on “Self-Regulated Learning” and teaching of listening strategies. Professional development opportunities can assist teachers in coming up with more effective listening activities that encourage learner motivation and autonomy.

### 6.3. Limitations of the Study

The study has several limitations. To begin with, the study was confined to the study population of Chinese high school students, which could limit the overall applicability of the results to other educational settings or age groups. Second, the research was cross-sectional, i.e. data were measured at one time. Third, the research depended on self-reporting questionnaire surveys, which could have introduced the biases of response or social desire response. Lastly, the experiment utilized a single independent variable “Self-Regulated Learning” without considering other mechanisms affecting “listening comprehension” and motivation.

### 6.4. Future Research Directions

Future research needs to explore other variables which might affect EFL listening performance, including self-efficacy, classroom atmosphere, the use of technologies, and anxiety of learning. The researchers can also use longitudinal or experimental research design to explore the long-term implications or the “Self-Regulated Learning” on the development of listening. Moreover, the inclusion of participants representing various levels of education, regions, and nations in the future should be done to enhance the generalizability of the findings. Qualitative or mixed-method research can also be a way of getting more information on the lives of learners, their perceptions, and use of listening strategies during EFL classes.

## References

- Abdolrezapour, P. & Ghanbari, N. (2021). Enhancing learning potential score in EFL listening comprehension and self-regulation through self-regulated dynamic assessment procedures. *Language Testing in Asia*, 11(1), pp. 10. doi: <https://doi.org/10.1186/s40468-021-00126-5>
- Ahmadi Safa, M. & Motaghi, F. (2024). Cognitive vs. metacognitive scaffolding strategies and EFL learners' listening comprehension development. *Language Teaching Research*, 28(3), pp. 987–1010. doi: <https://doi.org/10.1177/13621688211021821>
- Beauchamp, M. R., Crawford, K. L. & Jackson, B. (2019). Social cognitive theory and physical activity: Mechanisms of behavior change, critique, and legacy. *Psychology of Sport and Exercise*, 42, pp. 110–117. doi: <https://doi.org/10.1016/j.psychsport.2018.11.009>

- Bourdeaud'hui, H., Aesaert, K. & van Braak, J. (2021). Exploring the relationship between metacognitive awareness, motivation, and L1 students' critical listening skills. *The Journal of Educational Research*, 114(1), pp. 40–51. doi: <https://doi.org/10.1080/00220671.2021.1872474>
- Bozorgian, H. (2014). The Role of Metacognition in the Development of EFL Learners' Listening Skill. *International Journal of Listening*, 28(3), pp. 149–161. doi: <https://doi.org/10.1080/10904018.2013.861303>
- Cai, H. & Yu, Q. (2024). The effect of self-perceived learning needs on self-regulated learning and learning outcomes in an EFL listening course. *System*, 127, pp. 103503. doi: <https://doi.org/10.1016/j.system.2024.103503>
- Chon, Y. V. & Shin, T. (2019). Profile of second language learners' metacognitive awareness and academic motivation for successful listening: A latent class analysis. *Learning and Individual Differences*, 70, pp. 62–75. doi: <https://doi.org/10.1016/j.lindif.2019.01.007>
- Chu, S.-T., Hwang, G.-J. & Hwang, G.-H. (2023). A Goal-Oriented Reflection Strategy-Based Virtual Reality Approach to Promoting Students' Learning Achievement, Motivation and Reflective Thinking. *Sustainability*, 15(4), pp. 3192. doi: <https://doi.org/10.3390/su15043192>
- Du, G. & Man, D. (2023). Mediating Effect of Metacognition on the Relationship Between Listening Self-efficacy and L2 Listening Comprehension. *The Asia-Pacific Education Researcher*, 32(5), pp. 655–664. doi: <https://doi.org/10.1007/s40299-022-00684-z>
- Fu, Y., Wang, M., Min, S., Zhou, S. & Pan, X. (2023). Exploring the relationship between metacognitive awareness and Chinese EFL learners' listening skills. *Frontiers in Psychology*, 14, pp. 1148610. doi: <https://doi.org/10.3389/fpsyg.2023.1148610>
- Fukuda, A. (2019). What Less-Proficient EFL Learners Tell Us about Their Language Learning: Qualitative Analysis of Self-Regulated Learning. *Journal of Pan-Pacific Association of Applied Linguistics*, 23(1), pp. 103–126. doi: <https://doi.org/10.25256/PAAL.23.1.6>
- Goundar, P. R. (2019). Vocabulary Learning Strategies (VLSs) Employed by Learners of English as a Foreign Language (EFL). *English Language Teaching*, 12(5), pp. 177–189. doi: <https://doi.org/10.5539/elt.v12n5p177>
- Haque, M. M. (2018). Metacognition: A Catalyst in Fostering Learner Autonomy for ESL/ EFL Learners. *Korea TESOL Journal*, 14(1), pp. 181–202. Retrieved from [https://www.koreatesol.org/sites/default/files/pdf\\_publications/KTJ14-1web\\_0.pdf](https://www.koreatesol.org/sites/default/files/pdf_publications/KTJ14-1web_0.pdf)
- Haukås, Å. (2018). Metacognition in Language Learning and Teaching: An Overview. In Å. Haukås, C. Bjørke, & M. Dypedahl (Eds.), *Metacognition in Language Learning and Teaching* (pp. 11–30). Routledge. doi: <https://doi.org/10.4324/9781351049146-2>
- Idris, N., Isa, H. M., Zakaria, N. N. N., Taib, N. A. M., Ismail, S. & Rahmat, N. H. (2022). An Investigation of the Use of Cognitive and Metacognitive Strategies in Foreign Language Learning. *International Journal of Academic Research in Business and Social Sciences*, 12(2), pp. 70–89. doi: <https://doi.org/10.6007/IJARBS/v12-i2/12152>

- Lee, I. & Mak, P. (2018). Metacognition and Metacognitive Instruction in Second Language Writing Classrooms. *TESOL Quarterly*, 52(4), pp. 1085–1097. doi: <https://doi.org/10.1002/tesq.436>
- Liu, L. & Kasuma, S. A. A. (2024). Fostering Autonomy: A Perception Study on Self-Directed English Listening Activities among Chinese EFL Undergraduate Learners. *International Journal of Language, Literacy and Translation*, 7(1), pp. 65–82. doi: <https://doi.org/10.36777/ijolt2024.7.1.099>
- Maftoon, P. & Fakhri Alamdari, E. (2020). Exploring the Effect of Metacognitive Strategy Instruction on Metacognitive Awareness and Listening Performance Through a Process-Based Approach. *International Journal of Listening*, 34(1), pp. 1–20. doi: <https://doi.org/10.1080/10904018.2016.1250632>
- Mannion, J. (2020, May 1). *Metacognition, self-regulation and self-regulated learning: what's the difference?* The Chartered College of Teaching. Retrieved from [https://my.chartered.college/impact\\_article/metacognition-self-regulation-and-self-regulated-learning-whats-the-difference](https://my.chartered.college/impact_article/metacognition-self-regulation-and-self-regulated-learning-whats-the-difference)
- Meng, Y., Wang, Y. & Zhao, N. (2023). Cognitive diagnostic assessment of EFL learners' listening barriers through incorrect responses. *Frontiers in Psychology*, 14, pp. 1126106. doi: <https://doi.org/10.3389/fpsyg.2023.1126106>
- Milliner, B. & Dimoski, B. (2024). The effects of a metacognitive intervention on lower-proficiency EFL learners' listening comprehension and listening self-efficacy. *Language Teaching Research*, 28(2), pp. 679–713. doi: <https://doi.org/10.1177/13621688211004646>
- Najjarpour, M. (2024). Constructing a self-management competence model for EFL teachers: A perception-strategy evaluation. *Acta Psychologica*, 251, pp. 104592. doi: <https://doi.org/10.1016/j.actpsy.2024.104592>
- Namaziandost, E., Neisi, L., Mahdavi, F. & Nasri, M. (2019). The relationship between listening comprehension problems and strategy usage among advance EFL learners. *Cogent Psychology*, 6(1), pp. 1691338. doi: <https://doi.org/10.1080/23311908.2019.1691338>
- Ozcelik, H. N., Van den Branden, K. & Van Steendam, E. (2023). Listening Comprehension Problems of FL Learners in a Peer Interactive, Self-Regulated Listening Task. *International Journal of Listening*, 37(2), pp. 142–155. doi: <https://doi.org/10.1080/10904018.2019.1659141>
- Park, Y. S., Konge, L. & Artino, A. R., Jr. (2020). The Positivism Paradigm of Research. *Academic Medicine*, 95(5), pp. 690–694. doi: <https://doi.org/10.1097/ACM.0000000000003093>
- Pearse, N. (2019). An Illustration of Deductive Analysis in Qualitative Research. In A. Stacey (Ed.), *Proceedings of the 18th European Conference on Research Methodology for Business and Management Studies* (pp. 264–270). Academic Conferences and Publishing International Limited. doi: <https://doi.org/10.34190/RM.19.006>
- Rovers, S. F. E., Clarebout, G., Savelberg, H. H. C. M., de Bruin, A. B. H. & van Merriënboer, J. J. G. (2019). Granularity matters: comparing different ways of measuring self-regulated learning. *Metacognition and Learning*, 14(1), pp. 1–19. doi: <https://doi.org/10.1007/s11409-019-09188-6>

- Schunk, D. H. & DiBenedetto, M. K. (2020). Motivation and social cognitive theory. *Contemporary Educational Psychology*, 60, pp. 101832. doi: <https://doi.org/10.1016/j.cedpsych.2019.101832>
- Seli, H. (2019). *Motivation and Learning Strategies for College Success: A Focus on Self-Regulated Learning*. Routledge.
- Sharafi, M. (2024). An Exploration into the Interrelation between EFL Learners' Self-Regulated Learning, Self-Determined Motivation, and Academic Persistence. *FOSTER: Journal of English Language Teaching*, 5(1), pp. 28–39. doi: <https://doi.org/10.24256/foster-jelt.v5i1.157>
- Siekanowicz, M., Delaviz, Y., Jafry, A., Barolet, J., Da Silva, J. O., Blair-Hamilton, A., et al. (2026). Working Through the Cycle of Self-Regulated Learning. In *Pedagogy that Aids Transition for Higher-Ed Students*. Retrieved from <https://ecampusontario.pressbooks.pub/paths/chapter/working-through-the-cycle-of-self-regulated-learning>
- Soodmand Afshar, H. & Jamshidi, B. (2022). EFL learners' language learning strategy use, instrumental motivation, self-efficacy, self-regulation, autonomy, and L2 achievement: A SEM analysis. *Applied Research on English Language*, 11(4), pp. 133–160. doi: <https://doi.org/10.22108/are.2022.133123.1880>
- Su, X. & Lee, I. (2024). Emotion Regulation of EFL Teachers in Blended Classroom Assessment. *The Asia-Pacific Education Researcher*, 33(3), pp. 649–658. doi: <https://doi.org/10.1007/s40299-023-00761-x>
- Trang, N. M. (2020). Understanding listening comprehension processing and challenges encountered: Research perspectives. *International Journal of English Language and Literature Studies*, 9(2), pp. 63–75. doi: <https://doi.org/10.18488/journal.23.2020.92.63.75>
- Ulum, Ö. G. (2015). Listening: The Ignored Skill in EFL Context. *International Journal of Humanities Social Sciences and Education (IJHSSE)*, 2(5), pp. 257–270. Retrieved from <https://arcjournals.org/article/10167>
- Wang, X. & Hasim, Z. (2026). Impact of Metacognitive Self-Regulated Listening Approach on EFL Learners' Listening Proficiency and Strategy Use. *International Journal of Instruction*, 19(3), pp. 37–58. doi: <https://doi.org/10.29333/iji.2026.1933a>
- Xu, J. & Luo, K. (2024). Immersing learners in English listening classroom: does self-regulated learning instruction make a difference? *Applied Linguistics Review*, 15(1), pp. 219–240. doi: <https://doi.org/10.1515/applirev-2021-0171>
- Xu, J., Wang, M. & Dong, M. (2022). Relationship Between Test-taking Motivation and Listening Metacognitive Awareness in EFL Listening Context. *European Journal of Psychology Open*, 81(1), pp. 13–23. doi: <https://doi.org/10.1024/2673-8627/a000020>
- Yabukoshi, T. (2021). Self-regulation and self-efficacy for the improvement of listening proficiency outside the classroom. *The Language Learning Journal*, 49(1), pp. 27–40. doi: <https://doi.org/10.1080/09571736.2018.1472626>
- Yang, X., Zhang, Y. & Nie, Q. (2026). Unpacking the mechanisms of self-regulated learning: How motivation translates into reading benefits for EFL adolescents. *Frontiers in Psychology*, 17, pp. 1747968. doi: <https://doi.org/10.3389/fpsyg.2026.1747968>

- Zeng, Y. & Goh, C. C. M. (2018). A self-regulated learning approach to extensive listening and its impact on listening achievement and metacognitive awareness. *Studies in Second Language Learning and Teaching*, 8(2), pp. 193–218. doi: <https://doi.org/10.14746/ssllt.2018.8.2.2>
- Zhou, S. (2021). *Students' self-regulated listening during a transition period in an English-medium university in China* (Doctoral dissertation, University of Oxford). Retrieved from <https://ora.ox.ac.uk/objects/uuid:02e35ff5-1429-4057-98b9-44f1ec676c70>
- Zhou, S. & Rose, H. (2025). A longitudinal study on lecture listening difficulties and self-regulated learning strategies across different proficiency levels in EMI higher education. *Applied Linguistics Review*, 16(1), pp. 509–535. doi: <https://doi.org/10.1515/applirev-2023-0113>
- Zusho, A., Karabenick, S. A., Bonney, C. R. & Sims, B. C. (2007). Contextual Determinants of Motivation and Help Seeking in the College Classroom. In R. P. Perry & J. C. Smart (Eds.), *The Scholarship of Teaching and Learning in Higher Education: An Evidence-Based Perspective* (pp. 611–659). Springer Netherlands. doi: [https://doi.org/10.1007/1-4020-5742-3\\_14](https://doi.org/10.1007/1-4020-5742-3_14)