Language Learning Strategies used by Chinese Students Studying in Online English Language Courses

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Abstract

This study examined the language learning strategies (LLS) used by Chinese students in online English language courses and investigated their relationship with academic achievement. The participants in this study consisted of 118 Chinese students who enrolled in the Fundamental English courses of the international program at the Faculty of Humanities, Chiang Rai Rajabhat University, Thailand. The research involved a mixed-methods approach, using both qualitative and quantitative data collection methods. The data was collected through online surveys and interviews with Chinese students studying in online English language courses. The results indicate that Chinese learners use a variety of language learning strategies (LLS), with Internet strategies being the most frequently used by high, medium, and low achievers, but not correlating with academic achievement. Time management strategies are the second most used, particularly among high achievers, while social strategies are used by all students. High achievers tend to use cognitive strategies more than medium and low achievers. The study found a significant correlation between LLS use and English academic achievement, with Memory, Cognitive, Metacognitive, and Self-Monitoring Strategies being strongly correlated, and Compensation, Social, Time Management, and Concentration Regulation Strategies correlated at a strong level. However, no significant relationship was found between Internet Strategies and academic achievement. These findings emphasize the importance of developing effective language

learning strategies (LLS) training to support Chinese learners in online English language courses to improve their academic performance.

Introduction

The COVID-19 pandemic has led to universities worldwide having to shift to online learning. This shift not only presents numerous advantages for students but also poses new and unique challenges for students worldwide. Research indicates that several challenges negatively impact students' language development in an online learning environment. One major challenge faced by students in an online learning environment is a lack of interaction and collaboration with their peers and teachers. The limited face-to-face interaction in online learning environments can hinder the development of language skills as students miss out on opportunities for real-time feedback and language-rich interactions with others (Chen & Liang, 2020). Moreover, students in online learning environments may lack the motivation to engage in class activities and discussions, which are critical components of language development (Choi & Hannafin, 2005).

Chinese students also face a number of difficulties that can negatively impact their language achievement, such as a lack of interaction with teachers and peers, a lack of motivation, and technical difficulties when learning a language online (Zhang, 2021). These challenges can impact students' language achievement and hinder their overall success in online learning. To mitigate these difficulties, the use of effective learning strategies has been shown to be an important solution. Many studies have revealed that online learning requires a different set of skills and strategies compared to traditional face-to-face learning. According to a study by Kim and Lee (2021), students need to be proactive, self-directed, and self-disciplined. For example, students should create a routine for their online studies and set specific goals for each session. Additionally, students can benefit from using active learning strategies such as note-taking, summarizing, and reflection, which can help them retain information and engage with the material in a deeper way. Moreover, Zhang and Chen (2022) suggest that social interaction is an important factor in the success

of online learning. Another strategy that students can use to enhance their language learning experience in an online environment is to create a structured schedule for their learning (Liu, Li, & Chen, 2021). This can involve setting aside specific times for learning, completing assignments, and engaging in interactive activities with classmates and teachers. Accordingly, the implementation of effective learning strategies in an online learning environment is crucial for students to overcome the unique challenges posed by online learning and improve their language skills.

Despite numerous studies on language learning strategies and challenges faced by language learners, there is still a limited understanding of the relationship between student success in English language courses and the use of language learning strategies within an online learning environment. To address this gap in the literature, this study aims to examine the language learning strategies employed by Chinese students with varying levels of English academic achievement in online English language courses at Chiang Rai Rajabhat University and explore the relationship between the utilization of language learning strategies and the English academic achievement levels of Chinese students pursuing online English language courses at Chiang Rai Rajabhat University.

Language Learning Strategies

The use of effective online learning strategies is essential for overcoming the difficulties faced by students in online learning environments. These strategies play a crucial role in determining the success of online learning, as they help students regulate and manage their learning process. Research has shown that students who employ appropriate online learning strategies achieve better academic outcomes, learn more quickly, efficiently, and effectively, and experience greater satisfaction in online learning. Utilizing effective online learning strategies is not only beneficial to the students but also helps optimize the potential of online learning as an educational tool.

1. Oxford's Language Learning Strategy Taxonomy

According to Oxford's Language Learning Strategy Taxonomy (1990), language learning strategies are classified as either direct or indirect. Direct strategies pertain to the cognitive processes involved in language learning, including memory, cognitive, and compensation strategies. On the other hand, indirect strategies involve those not directly engaged in the learning process but are vital to acquiring the language, such as metacognitive, affective, and social strategies.

1.1 Memory Strategies

Memory or mnemonic strategies refer to the various techniques employed to encode, store, and retrieve new information, such as creating mental linkages, utilizing images and sound, frequent reviewing, and implementing actions (Nagy et al., 2019). Oxford (1990) posited that these strategies are particularly beneficial for language learners when acquiring new vocabulary in the target language, as they facilitate the meaningful storage of verbal material and retrieval of such information during communication in the target language. This enables the transition from factual to skilled language use and ultimately, the establishment of long-term memory.

1.2 Cognitive Strategies

Cognitive strategies constitute practical and essential techniques for acquiring new languages, as posited by Oxford (1990). They encompass practices such as receiving and sending messages, analysis, reasoning, and structuring of input and output. Consistent practice is one of the significant strategies that most successful language learners employ to achieve proficiency in a new language. In addition to practice, the exchange of messages is an essential aspect of comprehending and producing messages in the target language. Language learners typically employ various techniques, such as note-taking, summarization, and information highlighting, to enhance their analysis and reasoning skills and effectively comprehend the new language, thereby benefiting their speaking and writing skills (Hu & Gramling, 2009).

1.3 Compensation Strategies

According to Oxford (1990), compensation strategies have proven to be effective for learning grammar and vocabulary. Language learners typically utilize various techniques, such as guessing, to understand or overcome their communication limitations when learning a new language. Guessing strategies entail using clues to decipher the meaning of unfamiliar words. Additionally, compensation strategies comprise the techniques of producing new language even with incomplete knowledge, such as using gestures, synonyms, or adjusting the message, which can enhance learners' communication effectiveness (Zhang, 2010).

1.4 Metacognitive Strategies

Oxford (1990) characterized metacognitive strategies as "beyond, besides, or with the cognitive," denoting actions beyond solely cognitive approaches. Language learners who utilize these strategies typically monitor their cognitive processes by preparing and planning their learning while regulating and evaluating their learning processes. Language learners who effectively employ these strategies exhibit self-control in their studies and possess high motivation and determination to persist in their learning pursuits. Effective time management is also a crucial aspect of language learning; learners need to allocate appropriate time to study and conduct self-evaluation to adjust their learning approach appropriately to reach their learning goals (Gao & Zhang, 2020).

1.5 Affective Strategies

Affective strategies, defined by Oxford (1990), encompass techniques associated with emotions, attitudes, motivation, and learning values. The ability to regulate these factors can lower stress and encourage and motivate language learners to achieve their learning objectives. Successful language learners frequently possess the skills to regulate their emotions, as positive emotions and attitudes can enhance the effectiveness and enjoyment of the language learning experience (Dörnyei & Ushioda, 2022).

1.6 Social Strategies

As language serves as a means of communication among individuals in society, social strategies also play a crucial role in language learning processes. Oxford (1990) posited that successful language learners frequently utilize techniques such as questioning, collaboration, and empathy to enhance their learning outcomes. Social strategies can be categorized as cooperative learning strategies, enabling language learners to engage with others, build confidence, and utilize the target language more efficiently (Yang & Brown, 2017).

2. Language Learning Strategies in the Digital Era

The integration of technology in learning processes has been a concern, despite its enormous potential to significantly transform the nature and scope of education throughout individuals' lives. Over the past two decades, there has been a considerable shift in the ways people learn, especially in terms of knowledge sources, information transfer, and interaction methods. The increasing accessibility of education through technology at home and in the classroom has enabled students to become familiar with and adopt new technologies within their own contexts, utilizing multiple apps for information retrieval, management, and communication with others.

Today's students are surrounded by Information and Communication Technologies (ICTs) and Internet environments, leading them to become "native speakers" of technology, proficient in the digital language of mobiles, computers, e-learning, gadgets, and other technology tools (Selwyn, 2009). This proficiency has altered the way earlier generations of students learned, enabling them to quickly and easily acquire knowledge through the use of ICTs, the Internet, and complex technology items. Consequently, students in the digital era require specific learning strategies to succeed in the online learning mode. Zariski and Styles (2000) suggest that to successfully learn a language in an online learning environment, students must exert control over their learning through the use of appropriate strategies.

2.1 Internet skills encompass the fundamental abilities that students require to successfully complete online learning tasks, including searching for information, communicating effectively, and engaging with digital content.

2.2 Self–regulation methods involve a learner's awareness and control of their cognition, enabling them to set goals and manage their own learning performance. This deliberate effort is supported by determination or extrinsic incentives, allowing students to persist in the pursuit of learning objectives and resist temptation or distractions.

2.3 Time management strategies enable students to schedule, plan, and manage their study time effectively, utilizing their active time management abilities to adhere to their online learning schedule and complete assigned activities promptly.

2.4 Self–monitoring strategies involve students' intentional observation and documentation of their behavior, cognition, and motivation for learning, facilitating the establishment of appropriate goals and tracking progress towards achieving them.

2.5 Concentration regulation strategies are techniques that students use to exert effort and maintain focus, avoiding distraction from online multimedia or other sources.

2.6 Help–seeking strategies refer to a student's ability to seek assistance from others or utilize resources to overcome academic challenges.

2.7 Resourcing strategies encompass students' ability to effectively use available resources to simplify their learning, including assistive functions, online dictionaries and grammar checks, and spell checks

Conceptual Framework

The study will utilize the framework of Oxford's Language Learning Strategy Taxonomy (1990) and Zariski and Styles' (2000) Language Learning Strategies in the Digital Era to investigate the language learning strategies used by students in an online learning environment. However, when comparing Oxford's Language Learning Strategies with the Language Learning strategies in the digital era, it is evident that several strategies align or can be grouped together. This understanding has led this study to focus

on four specific learning strategies within the digital era: internet skills, time management skills, self-monitoring skills, and concentration regulation strategies.
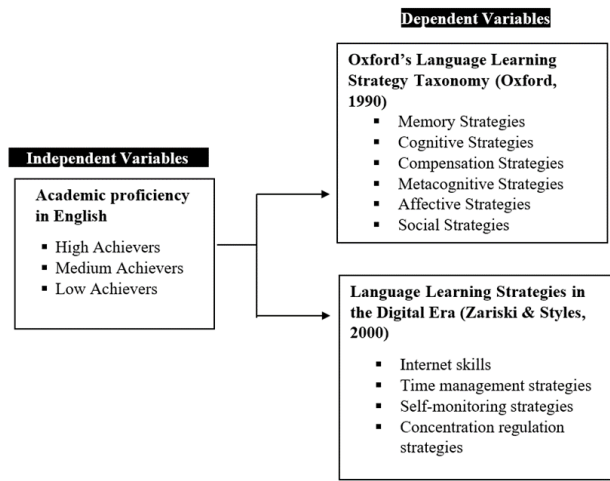
The first identified similarity is between metacognitive strategies in Oxford's framework and self-regulation methods in the digital era. Both strategies share common ground in terms of the learner's awareness and control of their own learning process. Oxford's metacognitive strategies involve summarizing, making connections, and maintaining attention, while self-regulation methods in the digital era encompass goal-setting, managing learning performance, and resisting distractions.

The social strategies in Oxford's framework and help-seeking strategies in the digital era emphasize the importance of seeking assistance from others. Oxford's social strategies promote collaborative learning and question-asking, while help-seeking strategies in the digital era involve a student's ability to seek help or effectively utilize available resources to overcome challenges.

Lastly, it is worth noting that internet skills and resourcing skills are closely related and can be grouped together as they involve utilizing online resources and tools for language learning. Internet skills and resourcing skills are closely related as they both involve utilizing online resources and tools for language learning. Internet skills in the context of language learning refer to the ability to navigate online platforms, search for relevant information, and effectively engage with digital content, while resourcing skills specifically focus on the ability to identify and effectively use available resources to facilitate language learning. Both skills rely on the effective use of digital tools and online resources to enhance language learning outcomes.

In conclusion, this study will incorporate a combination of Oxford's Language learning strategies, including Memory strategies, Cognitive strategies, Compensation strategies, Metacognitive strategies, Affective strategies, and Social strategies, along with the Language Learning strategies in the digital era proposed by Zariski and Styles, which encompass Internet skills, Time management strategies, Self-monitoring strategies, and Concentration regulation strategies. By integrating these frameworks, the study aims to provide a comprehensive understanding of language learning strategies that address both

the fundamental aspects of language acquisition and the unique challenges and opportunities presented by online learning environments. This combined approach recognizes the importance of leveraging traditional language learning strategies while adapting and incorporating strategies that are specific to the digital era. Through this comprehensive approach, the study aims to contribute to the advancement of effective language learning practices in online settings, benefiting language learners in their pursuit of language proficiency and success in the digital age.

Dependent Variables

Oxford's Language Learning Strategy Taxonomy (Oxford, 1990)
- Memory Strategies
- Cognitive Strategies
- Compensation Strategies
- Metacognitive Strategies
- Affective Strategies
- Social Strategies

Independent Variables

Academic proficiency in English
- High Achievers
- Medium Achievers
- Low Achievers

Language Learning Strategies in the Digital Era (Zariski & Styles, 2000)
- Internet skills
- Time management strategies
- Self-monitoring strategies
- Concentration regulation strategies

Population and Samples

The participants in this study consisted of 118 Chinese students who enrolled in the Fundamental English courses of the international program at the Faculty of Humanities, Chiang Rai Rajabhat University, Thailand. The selection of participants was based on the purposive and convenience sampling method, taking into account their English academic achievement levels, as well as their availability and willingness to participate. Out of the 118 participants, there were 84 high achievers, 21 medium achievers, and only 13 low achievers, determined by their grades in English courses.

The grading system from Fundamental English courses 1 and 2 was used to determine the English academic achievement levels. Students who received grades of A, B+, or B in their English courses were classified as high achievers. Students who received grades of C+ or C were classified as medium achievers. Finally, students who received grades of D+ or D were classified as low achievers.

Research Instruments

To reach the objectives of the study, the research instruments used in this study were a questionnaire and an interview.

1. Questionnaire

The questionnaire used in this study consisted of three main sections, aiming to gather comprehensive information about the participants' background, the language learning strategies they employed, and any additional strategies not covered in the questionnaire.

The first section of the questionnaire focused on gathering background information from the respondents. Participants were asked to provide details such as their year of study, the course in which they were enrolled, and their English grade. This section aimed to establish a profile of the participants and understand their academic standing in relation to English language learning.

The second section of the questionnaire delved into the language learning strategies utilized by the participants. Participants were asked to rate the frequency with which they employed each strategy using a five-point scale. This scale provided a numerical representation of the participants' frequency of utilizing different language learning strategies. The scale was accompanied by a clear description of each rating, ensuring that participants understood the meaning behind each numerical value.

The validity and reliability of the questionnaire were tested through a rigorous process to ensure its effectiveness in gathering accurate and consistent data. Initially, the questionnaire was sent to two experts in the field of language learning and assessment for validation. These experts carefully examined the content, structure, and clarity of the

questionnaire. They provided valuable feedback and suggestions for improvement, which were incorporated into the final version of the questionnaire. This expert validation process helped enhance the questionnaire's validity by ensuring that it measured what it intended to measure.

2. Interview

The second instrument used in this study was the interview, which was employed to generate qualitative data and obtain deep and in-depth information from the participants. While the initial survey provided valuable quantitative data, the interview aimed to delve further into the participants' experiences, perceptions, and reflections on their language learning strategies in the online English language learning context. The interview questions asked participants to provide specific examples of how they implemented these strategies in their online English language learning. By requesting concrete examples, the researcher aimed to gain insights into the practical application and effectiveness of the strategies in participants' language learning journeys.

To ensure the validity of the interview questions, they were reviewed by experts in the field. The experts assessed the content and clarity of the questions, providing feedback and suggestions for improvement. This expert review process helped refine and validate the interview questions, ensuring that they were relevant, reliable, and capable of eliciting the desired in-depth information from the participants.

Data Collection

Questionnaires were administered using an online platform, specifically Google Forms. Participants received a link to the questionnaire, which they accessed and completed electronically. The interviews were conducted online, utilizing communication platforms such as video conferencing tools. Participants who had completed the questionnaires were invited to participate in the interviews. Throughout the data collection process, due attention was given to ethical considerations. Participants were provided with informed consent forms that outlined the purpose of the study, their rights, and the voluntary nature of their participation. Confidentiality measures were implemented to

protect the participants' privacy, and all data were securely stored and analyzed anonymously. Participants were assured that their responses would be kept confidential and used solely for research purposes.

Data Analysis

The data collected from both the questionnaire and the interviews will be analyzed using a mixed-methods approach to gain comprehensive insights into the language learning strategies employed by the participants and their relationship with English academic achievement in the online learning environment.

For the questionnaire data, quantitative analysis was conducted. Descriptive statistics were calculated to summarize the participants' responses to the questions. The numerical ratings of the Likert scale responses were analyzed to determine the frequency and level of engagement in different language learning strategies. In addition, correlation analysis was applied to explore the relationships between language learning strategies and English academic achievement levels. The qualitative data obtained from the interviews undergoes thematic analysis. The interviews were transcribed, and thematic categories were created. Responses from all participants were then collectively examined for critical observation. Multiple readings of the data were conducted to identify specific opinions and relationships and to interpret the data.

The integrated analysis of the quantitative and qualitative data will involve comparing, contrasting, and merging the findings from both sources. The aim is to provide a comprehensive understanding of the language learning strategies employed by the participants, the relationships between these strategies and English academic achievement, and the contextual nuances and rich insights revealed through the qualitative data.

Result

Language Learning Strategies Employed by Chinese Students in Online English Language Courses

Table 1 Language Learning Strategies Employed by High Achievers, Medium Achievers, and Low Achievers

Strategies	High Achievers			Medium Achievers			Low Achievers		
	$\bar{x}$	SD	Level of Use	$\bar{x}$	SD	Level of Use	$\bar{x}$	SD	Level of Use
Memory	3.98	.32	High	2.79	.45	Medium	2.14	.26	Low
Cognitive	**4.21**	**.41**	**Very High**	**1.98**	**.22**	**Low**	**1.57**	**.25**	**Very Low**
Compensation	4.19	.38	High	3.20	.41	Medium	2.57	.41	Low
Metacognitive	3.76	.39	High	2.09	.41	Low	1.71	.30	Very Low
Affective	4.00	.44	High	2.97	.31	Medium	2.63	.28	Medium
Social	**4.29**	**.43**	**Very High**	**4.04**	**.36**	**High**	**3.86**	**.35**	**High**
Internet	**4.37**	**.50**	**Very High**	**4.21**	**.71**	**Very High**	**4.44**	**.45**	**Very High**
Time Management	**4.36**	**.41**	**Very High**	**3.13**	**.30**	**Medium**	**2.92**	**.47**	**Medium**
Self–Monitoring	3.99	.34	High	2.55	.33	Low	1.85	.46	Low
Concentration Regulation	4.12	.38	High	2.77	.41	Medium	2.44	.62	Low

Table 1 presents the analysis of the language learning strategies employed by high, medium, and low achievers in online English classes. High achievers demonstrated a preference for the Internet Strategy ($\bar{x}$ = 4.35), Time Management Strategy ($\bar{x}$ = 4.36), Social Strategy ($\bar{x}$ = 4.29), and Cognitive Strategy ($\bar{x}$ = 4.21). These strategies were consistently utilized by high achievers to support their language learning endeavors.

In comparison, medium and low achievers exhibited similar patterns in their language learning strategies. Both groups heavily relied on the Internet Strategy, with mean scores of $\bar{x}$ = 4.21 and $\bar{x}$ = 4.44, respectively. The Social Strategy was the second most frequently used strategy for both medium and low achievers, with mean scores of $\bar{x}$ = 4.04 and $\bar{x}$ = 3.86, respectively.

Interestingly, the analysis indicates that high achievers displayed a greater inclination towards employing Cognitive and Time Management Strategies in their online English classes. In contrast, medium and low achievers demonstrated less frequent usage of these strategies. Medium achievers utilized the Time Management Strategy at a moderate level ($\bar{x}$ = 3.13), while the Cognitive Strategy was employed at a lower level ($\bar{x}$ = 1.98). Low achievers exhibited even lower utilization of the Cognitive Strategy ($\bar{x}$ = 1.57) and the Time Management Strategy ($\bar{x}$ = 2.92).

Interview Results

The findings from the interviews further supported and confirmed the results obtained from the questionnaire, revealing similar patterns in the language learning strategies employed by the participants. The interview participants consistently highlighted the significance of the Internet Strategy, emphasizing its role in accessing online resources, interactive language learning platforms, and authentic language materials. Additionally, the Social Strategy emerged as a prominent theme in the interviews, with participants discussing the value of online discussions, group collaborations, and peer feedback in enhancing their language learning experience. These findings align with the questionnaire data, providing robust evidence of the consistent use and perceived effectiveness of these strategies in the online language learning context. The convergence of findings from both the questionnaire and the interviews strengthens the validity and reliability of the study's results, enhancing our confidence in the identified language learning strategies and their relationship to English academic achievement.

1. Internet Strategies Employed by High, Medium, and Low Achievers

The interview findings support the results obtained from the questionnaire, demonstrating a similar pattern in the use of digital tools and online resources among high, medium, and low achievers. Participants across all three groups reported utilizing the digital tools and online resources provided by the university to enhance their language learning. They expressed a strong reliance on these resources, with a focus on accessing various technology and learning tools to support their learning journey. Moreover, the interview findings revealed that high and low achievers actively sought out additional resources to supplement their understanding of the lessons. They demonstrated a proactive approach in searching for relevant materials and utilizing them effectively. Similarly, medium achievers also acknowledged the importance of resource searching, although they reported slightly lower engagement compared to the other two groups.

Overall, the interview findings corroborate the survey results, providing further evidence of the consistent use of digital tools, online resources, and resource searching strategies among high, medium, and low achievers. These findings emphasize the significance of leveraging digital platforms and tools to support language learning and highlight the potential benefits of actively seeking out supplementary resources to enhance comprehension and mastery of the language.

2. Social Strategies Employed by High, Medium, and Low Achievers

The interviews conducted with high, medium, and low achievers in online English courses revealed a consistent pattern of utilizing social strategies to enhance their language learning. Participants from all achievement levels emphasized the importance of engaging in online discussions, forums, and learning communities to deepen their understanding of the lessons. They highlighted the value of social interaction in seeking assistance, sharing challenges, and exchanging ideas with their peers.

This finding aligns with the questionnaire data, indicating a strong convergence in the use of social strategies among the participants. The consistent emphasis on social strategies across all achievement levels underscores their significance in promoting effective language learning in the online environment.

3. Time Management Strategies Employed by High, Medium, and Low Achievers

The interviews conducted with high, medium, and low achievers further confirmed the finding that time management strategies were commonly employed by students in their online English courses. Participants across all achievement levels acknowledged the importance of effective time management in their language learning journey. High achievers consistently emphasized the need to allocate dedicated study time for their online courses, ensuring that they could fully engage with the materials and complete tasks in a timely manner. Similarly, medium and low achievers recognized the significance of time management, albeit with varying levels of implementation.

4. Cognitive Strategies Employed by High, Medium, and Low Achievers

The interview findings further support the results obtained from the questionnaire regarding the use of Cognitive Strategies among high, medium, and low achievers. High achievers consistently demonstrated a strong focus and active participation during live sessions, prioritizing understanding the content rather than immediately taking notes. They also emphasized the importance of summarizing lessons, organizing information through charts or outlines, and engaging in reflective thinking after class to enhance their learning experience.

In contrast, medium and low achievers showed limited utilization of these Cognitive Strategies. While they acknowledged the importance of paying attention in class, their active participation, note-taking, and post-class reflection were relatively infrequent. These findings indicate a disparity in the application of Cognitive Strategies between high achievers and their counterparts, suggesting that the effective use of these strategies contributes to better academic performance in online English courses.

The consistent findings from both the questionnaire and interview support the notion that high achievers display a more comprehensive and intentional adoption of Cognitive Strategies compared to medium and low achievers.

Relationships between the Language Learning Strategies Used by Chinese Students and Their English Academic Achievement

Table 2 Relationships between Language Learning Strategies and English Academic Achievement

Strategies	English Academic Achievement		
	Pearson Correlation	p-value	Correlation Level
Memory	0.716**	.000	Very Strong Correlation
Cognitive	0.903**	.000	Very Strong Correlation
Compensation	0.619**	.000	Substantial Correlation
Metacognitive	0.711**	.000	Very Strong Correlation
Affective	0.353**	.000	Moderate Correlation
Social	0.623**	.000	Substantial Correlation
Internet	0.001	.992	No Correlation
Time Management	0.619**	.000	Substantial Correlation
Self–Monitoring	0.812**	.000	Very Strong Correlation
Concentration Regulation	0.671**	.000	Substantial Correlation

** Correlation is significant at the 0.01 level (2–tailed)

* Correlation is significant at the 0.05 level (2–tailed)

The analysis of the data, as presented in Table 2, demonstrates significant correlations between language learning strategies and the English academic achievement of Chinese students. Interestingly, the findings indicate that while Internet Strategies, which were widely used by the students, did not show a correlation with English academic achievement, other strategies exhibited significant correlations.

Specifically, the analysis reveals that Memory, Cognitive, Metacognitive, and Self-Monitoring Strategies demonstrated a very strong correlation with English academic achievement. High achievers consistently utilized these strategies at a high level, while medium and low achievers utilized them at a low level.

Compensation, Social, Time Management, and Concentration Regulation Strategies showed a substantial correlation, indicating their relevance to English academic achievement. High achievers consistently employed these strategies at a high level, while medium and low achievers utilized them at a low level, except for social strategies, which were used at a high level by all students.

On the other hand, Affective Strategies exhibited a moderate correlation with English academic achievement. High achievers consistently employed these strategies at a high level, while medium and low achievers utilized them at a medium level.

Conclusion

The findings of this study provide valuable insights into the language learning strategies employed by Chinese students in online English language courses and their relationship to English academic achievement.

The results from the questionnaire revealed that Chinese students, regardless of their academic achievement levels, commonly utilized strategies such as Internet Strategy, Social Strategy, and Time Management Strategy. However, high achievers demonstrated a higher frequency of employing Cognitive and Metacognitive Strategies compared to medium and low achievers. These findings suggest that certain strategies may contribute to better English academic performance in the online learning environment.

The interviews further confirmed the significance of the identified strategies. Participants shared their experiences and highlighted the effectiveness of strategies such as seeking assistance from knowledgeable individuals, utilizing social networks for collaboration, and actively participating in online discussions. The interviews also shed light on additional strategies employed by the students, demonstrating the diverse approaches they utilized to enhance their language learning experiences.

In summary, the study findings indicate that language learning strategies play a crucial role in the online English language learning context. The identified strategies, including cognitive, metacognitive, social, and time management strategies, were found to be correlated with English academic achievement. These findings highlight the importance of using various language learning strategies in online learning in order to achieve the desired academic outcomes.

Implications of the Findings

The results of this study show that medium and low achievers did not employ all English language learning strategies and did so to a limited extent. As online learning has become a prevalent mode of education, opening up new opportunities for language learners to develop their language skills, it is essential to teach them how to develop language learning strategies to help these students succeed in an online language environment.

According to the study, there is a significant correlation between academic achievement in English and memory, cognitive, metacognitive, and self-monitoring strategies. Consequently, language teachers should offer lessons or exercises related to these methods to help students develop their English language skills and succeed in an online language learning environment.

Recent research has provided insights into the most effective ways to teach these strategies in an online setting. One of the key memory strategies that can be used in an online language environment is the use of mnemonics. Mnemonics are memory aids that help students remember new information by connecting it to something that is already familiar to them. For example, an acronym can be used to remember a list of items, or a rhyme can be used to remember a piece of information. Research has shown that the use of mnemonics can lead to better memory retention and recall in language learners (Lee, 2020).

Cognitive strategies, such as elaboration, summarization, and organization, can also be used to help students process and understand new information. Elaboration involves connecting new information to existing knowledge, summarization involves reducing new

information to its main points, and organization involves grouping similar information together. Research has shown that these strategies can lead to better comprehension and retention of new information in language learners (Lu & Anderson, 2021).

Metacognitive strategies, such as planning, monitoring, and evaluating, can help students think more critically about their own learning and take more control of their learning process. Planning involves setting learning goals, monitoring involves tracking progress, and evaluating involves assessing the effectiveness of the strategies used. Research has shown that the use of metacognitive strategies can lead to better language proficiency in online language learners (Gu, 2019).

Self-monitoring strategies, such as self-assessment and self-evaluation, can also be used to help students take more responsibility for their own learning. Self-assessment involves assessing one's own language abilities, and self-evaluation involves evaluating the effectiveness of the strategies used. Research has shown that the use of self-monitoring strategies can lead to greater self-awareness, which can result in greater success in an online language environment (Gu, 2019).

Teaching students how to develop memory, cognitive, metacognitive, and self-monitoring strategies is essential for success in an online language environment. By providing instruction and opportunities to practice these strategies, educators can help students better understand, process, and retain new information, which can lead to greater proficiency in the target language.

Recommendations for further study

This study specifically investigated the English language learning strategies employed by Chinese students at Chiang Rai Rajabhat University with varying levels of English academic achievement. However, further research should be conducted to include participants from different majors and universities to obtain a more comprehensive understanding. Additionally, it would be valuable to explore the relationship between English language learning strategies and factors such as age, gender, learning style, motivation, and other aspects.

Furthermore, in order to capture the evolving nature of language learning in the new generation, it is recommended to incorporate language learning strategies from other researchers in the questionnaire. This will provide a broader range of strategies and allow for a more comprehensive exploration of language learning strategies from various perspectives.

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