Research on Reading Strategies, Engagement, and Anxiety among EFL University Students in China

Yue Zhou\textsuperscript{1,2}

\textsuperscript{1}Anhui University of Finance and Economics, Bengbu, Anhui, 233000, China
\textsuperscript{2}Lyceum of the Philippines University, Batangas, Philippines
785534958@qq.com

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\textbf{Abstract:} The research explored the relationship between Chinese EFL learners' reading strategies, reading engagement, and reading anxiety. The study employed a quantitative and descriptive approach to investigate these variables among undergraduate students in Anhui province. 457 questionnaires were collected from students of different grades and majors, both English and non-English majors. Most participants were female first-year students who were not majoring in English. It was found that reading strategies, reading participation, and reading anxiety show a positive correlation in pairs. Additionally, most students are proficient in using reading strategies. However, students tend to have lower emotional participation in the classroom. Chinese students demonstrate moderate levels of reading anxiety. Overall, this research has practical implications for both learners and teachers. Learners can benefit from the findings by understanding the importance of selecting and applying appropriate reading strategies to improve their reading skills. For teachers, the study provides insights into enhancing class engagement and reducing students' reading anxiety, ultimately increasing the effectiveness of English reading instruction.

1. Introduction

Through reading, university students can access various knowledge and ideas, develop critical thinking skills, enhance their vocabulary, and improve their communication abilities.

When students have strong reading skills, they comprehend complex texts more easily and efficiently. This enables them to engage with academic materials, understand course content, and perform better in their studies. Additionally, proficient readers are better equipped to conduct research, analyze information, and evaluate sources, which are essential skills for success in higher education.

Moreover, reading plays a crucial role in language development. Reading extensively exposes students to different writing styles, sentence structures, and vocabulary, which helps expand their language abilities. Research has shown that regular reading enhances grammar and syntax acquisition, improves writing skills, and increases overall language proficiency (Brown & Lee, 2020) [1].
Furthermore, reading also has a positive impact on cognitive abilities. It stimulates the brain, enhances concentration and focus, and improves memory retention. Regular reading can sharpen analytical thinking, problem-solving skills, and creativity. It also promotes empathy and understanding by exposing students to diverse perspectives and experiences (Ahmadi & Pourhosein, 2012) [2].

To become strategic readers, learners need to be aware of their thinking processes while reading and be able to regulate their thoughts. This is where metacognitive strategies come into play. Strategic readers use metacognitive strategies such as setting goals, summarizing information, making connections, and asking questions to enhance their reading comprehension (Day & Anderson, 2000) [3].

Reading engagement refers to learners' interest, involvement, and active participation in reading activities. Students who are engaged in reading are more likely to comprehend and retain information, develop critical thinking skills, and experience enjoyment and motivation in the reading process (Guthrie & Wigfield, 2000) [4].

Student engagement in English teaching involves behavioral, cognitive, and emotional aspects (Kong, 2003) [5]. It encompasses not only students' explicit behaviors, such as completing tasks, but also their implicit behaviors, which include their thoughts, emotions, and active participation in the learning process (Austin et al., 2021) [6].

Student engagement in English teaching emphasizes the importance of students' subjectivity and active participation in the learning process. Constructivist principles guide the approach to teaching English, where students actively construct knowledge through interaction with new information and their existing knowledge. Teachers support student engagement and foster a dynamic and meaningful learning experience (Garrison, 2009) [7].

Reading anxiety, on the other hand, refers to the tension, apprehension, and discomfort that some individuals experience when faced with reading tasks. It can negatively affect reading performance, comprehension, and overall reading experience (Grabe & Stoller, 2005) [8]. Reducing reading anxiety is crucial for creating a positive reading environment and fostering students' confidence and enjoyment.

Anxiety can negatively affect language learning. It can hinder a learner's ability to concentrate and inhibit their willingness to participate in activities that involve speaking or writing. This can result in limited language production and reduced opportunities for practice, which can impede the development of language skills (Horwitz, 2001) [9].

Moreover, anxiety can undermine a learner's self-esteem and confidence, leading to a negative cycle of decreased motivation and avoidance behavior. It can also affect memory and cognitive processes, making it more difficult for learners to retain and retrieve language information (Re, 2019).

Understanding the relationship between reading strategies, reading engagement, and reading anxiety among EFL learners is essential for designing effective reading instruction and support. Educators can enhance students' reading abilities and foster a positive reading culture by promoting appropriate reading strategies, creating engaging reading activities, and addressing anxiety-inducing factors.

A concern is that the current situation of English reading teaching in China emphasizes rote memorization and translation rather than critical thinking and analysis. The heavy focus on vocabulary and syntactic elements can hinder students' ability to comprehend the content and meaning of the texts they are reading (Liu, 2010) [10]. In passive learning, students approach reading rigidly and mechanically, simply absorbing knowledge without actively exploring or engaging in critical thinking. This passive approach and negative emotional states can result in inefficient classroom engagement among Chinese university students regarding English reading.
Consequently, their overall improvement and development in their English reading abilities may be hindered.

2. Participants and Measures

2.1 Participants

The research design in this paper involves using a self-rated questionnaire to gather data from undergraduate students in three universities in China. The research was conducted in China and targeted college students from three universities, constituting a total student population of approximately 35,000. A Raosoft Sample Size Calculator was used to measure the sample size, and 457 students participated in the survey and submitted the questionnaire. The questionnaire utilized a 4-point Likert scale for responses. Among them, 300 girls took part, 65.6 percent, while 157 males took part, making up 34.4 percent. 279 first-year students comprised 61.1 percent, 144 second graders comprised 31.5 percent, and only four seniors comprised 0.9 percent. Of all the survey respondents, 390 non-English majors comprised 85.3 percent, and 67 English majors made up 14.7 percent. These findings offer a wide angle of view for the research and help better understand the relation between reading strategies, reading engagement, and reading anxiety. The researcher conducted a trial of 30 students and sent out the questionnaires to the large-scale investigation to ensure the tool was effective. A university statistician computed the Cronbach Alpha Factor to validate the validity of the results, and a large amount of data was collected with the consent of all participants.

2.2 Measures

2.2.1 The Reading Strategies Scale

The Reading Strategies Scale is designed to assess the reading strategies used by Chinese EFL learners. This scale is based on Yuan's (2013) Master's Dissertation titled "An Investigation of Applying Reading Strategies to College English Study at Hebei University," which categorized the scale into three subscales. The scale consists of 28 questions, rated on a 4-point Likert scale, primarily measuring the frequency of students' use of specific reading strategies. The high-reliability score obtained for this scale indicates that the measures taken are reliable.

2.2.2 Reading Engagement Scale

In this study, the measurement of Chinese EFL undergraduates' reading engagement was conducted using Zhu's (2023) Master's Paper. The scale used in this study consists of 24 questions that assess reading engagement and are rated on a 4-point Likert scale. The main objective of this research is to examine students' performance in terms of reading engagement and provide practical insights for enhancing reading engagement strategies. The specific dimensions and details of reading participation measured in the questionnaire may vary depending on the survey's purpose and the specific study being conducted.

2.2.3 Reading Anxiety Scale

Chinese EFL undergraduates' reading anxiety was measured using a scale adapted from Demir's (2021) master's thesis. The survey consists of 30 questions, where students are asked to rate how much they believe various concerns impact their reading. Additionally, students are requested to identify the specific reading behaviors that cause them the most significant levels of anxiety. This
study seeks to assess the presence and impact of anxiety among Chinese EFL learners about their reading abilities.

2.3 Data Analysis

Non-parametric tests, such as the independent samples t-test and analysis of variance (ANOVA), were utilized to assess significant differences between groups. The Pearson Product Moment Correlation was employed to examine the significant relationships between the three variables. Additionally, post hoc tests were conducted to analyze the data further.

Data collection involved using a Likert scale to assess the variables, with responses ranging from "Strongly Agree" to "Strongly Disagree." This scale allows participants to express their agreement or disagreement with various statements.

For data analysis, the statistical software PASW version 26 (formerly known as SPSS) was used to process and interpret the data. To determine the statistical significance of the findings, an alpha level (significance level) of 0.05 and 0.01 was chosen.

3. Results and Discussion

3.1 The Evaluation of English Reading Strategies among Chinese EFL College Students

The problem-solving strategies rank first, and their weighted mean is 3.07. The Global policy strategies came in second place (Weighted Mean=3.03). Auxiliary Strategies rank last, with a weighted mean of 2.95. The composite mean of reading strategies is 3.02.

Ahmadian (2008) [14] found that EFL learners who utilized effective reading strategies had higher reading proficiency levels.

Furthermore, Chen and He (2010) [15] conducted a study on the impact of reading strategies on reading comprehension among EFL learners. They found that using specific reading strategies, such as predicting, summarizing, and questioning, significantly improved comprehension skills.

Studies have demonstrated a significant variation in the frequency and preference of learners when it comes to reading. The research conducted by Shen and Huang (2007) [16] at Jiangsu University of Technology, using a Reading Strategy Survey Questionnaire, supports this notion. The findings indicate that problem-solving tactics are more frequently employed than global policy strategies, while auxiliary strategies are used the least.

These results imply that integrating meta-cognition and problem-solving techniques into college English instruction is feasible. By effectively utilizing meta-cognitive strategies, students can enhance their comprehension, previewing, prediction, and summarization of the content. Additionally, implementing problem-solving techniques necessitates students to be mindful of their learning objectives, monitor their reading behavior, identify crucial elements, and recall relevant information. These measures contribute to improving students' reading abilities (Gu, 2021) [17].

3.2 The Evaluation of English Reading Engagement among Chinese EFL College Students

Behavioral engagement ranks first with a weighted mean of 3.01. Cognitive engagement came in second place (Weighted Mean= 3.00). Emotional engagement came in third place (Weighted Mean= 2.91). The composite mean of engagement is 2.97.

In this chart, behavioral engagement ranks at the top. Chinese students have better behavioral participation. This is mainly reflected in the communication and mutual trust between students. Chinese students have a relatively harmonious teacher-student relationship and a friendly and mutually supportive classmate relationship. Students communicate with each other, collide to create
sparks of knowledge, and jointly build a knowledge system. Research showed that mutual assistance among students can form certain behavioral norms and strive towards a common and correct direction, which promotes student learning enthusiasm and academic achievement. Behavioral engagement also involves students actively engaging in communication and interaction with teachers and classmates and participating in classroom activities in a positive state, both physically and mentally (Guthrie et al., 2012) [4].

Emotional engagement shows the students’ active mood when they engage in their studies. The table shows that the weighted average of emotional engagement is relatively low. The negative emotions of Chinese students are mainly reflected in fear of failing exams, high academic pressure, fear of not being able to complete their studies on time, inability to understand the learning content taught by teachers, boredom with learning, and lack of interest in learning. Chinese students have lower self-efficacy, and lack of confidence is also a significant reason for their lower emotional engagement.

Cognitive engagement is a kind of approach that involves trying to explain, analyze, and comprehend, creating logical ideas instead of remaining on a superficial level, like memory. The weighted average of Cognitive Engagement is 3.00. The findings suggest that Chinese EFL learners can effectively complete linguistic and literary tasks and develop their own understanding and recognition of language content. They also demonstrate the capacity to supervise and regulate their learning. This ability can be attributed, to some extent, to the strict thoughts and instructions of Chinese students, which contribute to their capability to control and adjust their study process.

Furthermore, cognitive engagement combines ideas from learning motivation and correlates with learning strategies. This implies that the level of learner engagement in their studies is influenced by their motivation to learn and the strategies they employ (Kong, 2003) [5].

3.3 The Evaluation of English Reading Anxiety among Chinese EFL College Students

Error-based anxiety ranks 1st with a weighted mean of 2.94, and text-genre and text-length anxiety ranks 2nd with a weighted mean of 2.76. Reading anxiety is in third place, with a weighted mean of 2.72. No anxiety ranks 4th with a weighted mean of 2.69. The composite mean of reading anxiety is 2.70.

This chart shows that error-based anxiety ranks first (Weighted Mean=2.94). Fear of errors is probably the biggest source of anxiety in reading. According to Liu (2010) [11], students may encounter difficulties such as misunderstandings of words and misinterpretation of words that have similar shapes and sounds. Additionally, stress can impact their ability and lead to poor grammatical performance.

Text genre and text length anxiety rank second (Weighted Mean=2.76). Wallace (2001) [18] has discovered that people who have no interest in or familiarity with the subject matter of their studies will find it hard to be a good reader. As for unknown subjects, it is hard for the reader to judge whether they are competent enough to comprehend the text thoroughly. Students who do not know the text might question their linguistic competence, making them more anxious and stressed.

No anxiety ranks fourth (Weighted Mean=2.69). These results show a low degree of anxiety about English reading in China. Students show medium anxiety in the process of reading, and EFL learners in China are not strongly resistant to reading.

Reading order-based anxiety ranks fifth (Weighted Mean=2.65). Peer-based anxiety ranks sixth (Weighted Mean=2.63). Teacher-based anxiety ranks 7th, and the weighted mean is 2.62. Reading classroom-based anxiety ranks eighth (Weighted Mean=2.57).

The classroom teaching behavior of Chinese teachers is relatively reasonable. Teachers generally do not criticize students in public. The teacher shows great respect to the students. So, Chinese
students do not feel depressed or discouraged during reading classes and are willing to attend them. Similarly, peer-based anxiety ranks sixth. It also shows that the Chinese EFL class does not have apparent competition anxiety, nor does the fear of being laughed at or looked down on. However, there is competition between students, so there will inevitably be some pressure. The English lessons in Chinese schools are comparatively rational, arranged on preview homework and after-class tasks. Therefore, students can study organized and form good relationships between students, teacher-student relationships, and good classroom order.

### 3.4 Relationship between Reading Strategies and Engagement in English Reading

Based on the information provided, there is a high correlation between students' use of reading strategies and their engagement. Taboada (2021) [19] explored the relationship between successful task completion, cognitive reading, and intrinsic motivation among students. The findings revealed a significant positive correlation between successful task completion, cognitive reading abilities, and intrinsic motivation.

Appleton et al. (2008) [15] also indicated that behavioral engagement can be cultivated over a lifetime. There can be a positive relationship between global policy strategy, problem-solving strategy, auxiliary strategy, and behavioral engagement. Global policy strategies, which involve observing, supervising, planning, and administering, can provide a framework for effective decision-making and implementation of reading objectives.

When students use problem-solving strategies, they actively identify and overcome challenges encountered during their reading tasks. This proactive approach promotes critical thinking, analysis, and comprehension.

Auxiliary strategies, such as note-taking, underlining important information, or using graphic organizers, can enhance students' understanding and retention of the material they read. These strategies help students actively engage with the text and organize information meaningfully.

By setting specific goals and aligning them with reading objectives, students can have a clear direction for their reading activities. This clarity helps them focus their efforts and motivates them to achieve those targets.

In addition, concrete behavioral objectives provide students with measurable targets that can be tracked and assessed. This allows them to monitor their progress and make adjustments if necessary. Having measurable objectives also adds a sense of accountability and purpose to their reading practices.

Furthermore, there is a positive correlation between cognitive engagement and global policy strategies. Cognitive engagement involves understanding the text, adjusting reading strategies, and managing reading time. Cognitive participation and overall policy strategies are closely related to specific reading behaviors. Blumenfeld et al. (2005) [20] also demonstrated a strong correlation between cognitive engagement and learning strategies. Global reading strategies can enhance cognitive engagement to the most significant extent.

Finally, there is a strong relationship between auxiliary strategies and behavioral engagement. Auxiliary strategies, such as using dictionaries, taking notes, and emphasizing key points, help learners understand the text and enhance their engagement.

These findings highlight the importance of employing various reading strategies to promote student engagement in reading activities.

### 3.5 Relationship between Reading Strategies and Anxiety on English Reading

Table 1 shows that there is a positive relationship between the application of reading strategies and anxiety, but there is a slight negative relationship between global policy strategies and reading
classroom-based anxiety. The Global Policy Strategy is about more in-depth reflection and comprehension of the text. In contrast, classroom-based anxiety is the kind of anxiety that occurs in class when students are not prepared well enough to follow the course.

Table 1: Relationship between Global Policy Strategies and Anxiety on English Reading

<table>
<thead>
<tr>
<th>Global Policy Strategies</th>
<th>r-value</th>
<th>p-value</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Error-based Anxiety</td>
<td>.150**</td>
<td>0.001</td>
<td>Highly Significant</td>
</tr>
<tr>
<td>Text-Genre and Text-Length Anxiety</td>
<td>.104*</td>
<td>0.026</td>
<td>Highly Significant</td>
</tr>
<tr>
<td>Teacher-based Anxiety</td>
<td>.105*</td>
<td>0.025</td>
<td>Highly Significant</td>
</tr>
<tr>
<td>Peer-based Anxiety</td>
<td>.098*</td>
<td>0.036</td>
<td>Highly Significant</td>
</tr>
<tr>
<td>Reading Order Based Anxiety</td>
<td>.117*</td>
<td>0.012</td>
<td>Highly Significant</td>
</tr>
<tr>
<td>Reading Classroom Based Anxiety</td>
<td>0.073</td>
<td>0.121</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Reading Anxiety</td>
<td>.127**</td>
<td>0.007</td>
<td>Highly Significant</td>
</tr>
<tr>
<td>No Anxiety</td>
<td>.332**</td>
<td>0.000</td>
<td>Highly Significant</td>
</tr>
</tbody>
</table>

Legend: Significant at p-value < 0.01

Global policy, problem-solving, and auxiliary strategies have the most vital positive relationship with no anxiety. This suggests that those who apply the strategies have lower anxiety levels and greater confidence in their reading. By applying reading tactics, readers will be more confident and can comprehend more easily (Lien, 2011) [21].

While supportive strategies can help alleviate reading anxiety, it is essential to be mindful of the potential drawbacks. Students who rely heavily on these tactics may feel nervous because they need more confidence in comprehending the content independently. Over time, this dependence on supportive strategies may increase anxiety and insecurity.

The study by Haidet et al. (2004) highlights the need for a balanced approach to reading strategies. While it is beneficial to employ supportive strategies, it is also important to gradually build students' confidence and encourage independent comprehension. By gradually reducing reliance on supportive tactics, students can develop the necessary skills and self-assurance to read without excessive anxiety.

Different individuals may experience varying anxiety levels when it comes to reading, depending on their language skills, prior knowledge, and familiarity with the text. Employing contextual inference, prediction and repetition, previewing, and concluding techniques can help some students alleviate reading anxiety. However, these strategies may also pose challenges that can increase anxiety in specific individuals.

3.6 Relationship between Engagement in English Reading and Anxiety in English Reading

Table 2: Relationship between Emotional Engagement in English Reading and Anxiety on English Reading

<table>
<thead>
<tr>
<th>Emotional Engagement</th>
<th>r-value</th>
<th>p-value</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Error-based Anxiety</td>
<td>0.066</td>
<td>0.157</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Text-Genre and Text-Length Anxiety</td>
<td>0.000</td>
<td>0.999</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Teacher-based Anxiety</td>
<td>0.089</td>
<td>0.056</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Peer-based Anxiety</td>
<td>0.008</td>
<td>0.865</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Reading Order Based Anxiety</td>
<td>0.037</td>
<td>0.424</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Reading Classroom Based Anxiety</td>
<td>0.027</td>
<td>0.561</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Reading Anxiety</td>
<td>0.050</td>
<td>0.289</td>
<td>Not Significant</td>
</tr>
<tr>
<td>No Anxiety</td>
<td>.532**</td>
<td>0.000</td>
<td>Highly Significant</td>
</tr>
</tbody>
</table>

Legend: Significant at p-value < 0.01
The analysis's findings underscore the crucial role of behavior and cognition in reading participation. They reveal a significant positive relationship, indicating that higher levels of behavioral and cognitive engagement in reading can lead to increased anxiety. Conversely, table 2 shows that a negative relationship is observed between emotional participation and anxiety, suggesting that greater emotional involvement is associated with reduced anxiety. These findings are of paramount importance in understanding the complex dynamics of reading and anxiety.

The data indicating a significant relationship between behavior engagement, cognition participation, and anxiety suggests that higher levels of cognitive and behavioral engagement can potentially lead to increased anxiety. On the other hand, emotional participation is negatively correlated with anxiety, implying that when students actively engage emotionally in their learning, it can help alleviate anxiety.

The study by Taboada et al. (2021) [22] highlights the negative impact of reading anxiety on class engagement activities. In task-based reading activities, where learners are required to perform specific tasks or complete related assignments, anxiety can impede their ability to participate effectively. Excessive stress may reduce students' motivation to engage and hinder their performance. Anticipating problems or barriers in the learning process can also contribute to heightened anxiety levels.

It is essential to strike a balance in learning activities. While studying is beneficial, excessive demands for negotiation and cooperation may create additional stress, especially if students feel overwhelmed or lack confidence in their abilities (Robinson, 2019) [23].

Specifically, active participation in class and collaborative interaction with peers can have a significant impact on students' self-confidence and anxiety levels. When students feel rejected or lack support from their peers, it can negatively affect their self-esteem and increase their anxiety.

The study by Udomkit et al. (2003) [24] highlights that students should actively participate in discussions, group activities, and collaborative projects, which can foster a sense of belonging and promote self-confidence. Conversely, an environment where students feel ignored or excluded can have detrimental effects on their self-esteem, leading to increased anxiety.

Teachers play a crucial role in fostering a positive classroom climate where all students feel valued and supported. By promoting cooperation, respect, and inclusion, educators can help reduce students' anxiety and enhance their self-confidence in learning.

Cognitive and behavioral involvement in reading can cause anxiety due to the demanding nature of the learning process. Learning includes adapting and integrating all kinds of reading techniques, taking on complicated tasks and bearing the pressure of intelligence, which can result in feelings of anxiety.

Reducing anxiety in reading participation will be one of the priorities for further studies since it is essential to establish a supportive setting and development of strategies to reduce the adverse effects of anxiety.

4. Conclusion

Based on the research findings, English significant students and female participants demonstrated higher reading strategies, reading engagement, and reading anxiety than other groups. This suggests that English majors and female students may possess better reading skills and actively participate in reading activities but also experience higher levels of anxiety when it comes to reading tasks.

The study also discovered a significant correlation between reading strategies and reading anxiety, as well as between reading engagement and reading anxiety. It suggests that when individuals employ higher reading strategies, they may experience higher levels of reading anxiety.
Similarly, higher levels of reading engagement may also be associated with higher reading anxiety. There is a positive relationship between reading strategies and reading engagement. The higher the utilization of reading strategies, the higher the reading engagement.

To promote more effective English reading skills among Chinese university students, it is crucial to encourage active engagement with the text and promote a deeper understanding of the material. This can be achieved by incorporating more interactive and collaborative activities in the classroom, such as group discussions, debates, and reflective exercises.

Teachers should also encourage students to develop reading strategies, such as skimming and scanning, making predictions, and asking questions while reading. These strategies help students extract meaningful information, understand the structure of texts, and make connections between different ideas.

In addition, teachers should provide ample opportunities for students to practice critical thinking skills, such as analyzing arguments, evaluating evidence, and synthesizing information from multiple sources. This can be done through the use of authentic materials, such as newspaper articles, research studies, and academic journals.

Moreover, creating an active and inclusive study environment is essential for developing the learners’ confidence in speaking and taking risks. Students not afraid of being judged or criticized will be more willing to participate in the study and improve their reading ability. Teachers have an essential role in creating such an atmosphere by giving them support, encouragement, and constructive feedback that will assist them in overcoming their fears and difficulties.

References