Personality and Reading Comprehension in EFL Learners: A Mixed Methods Approach

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Abstract

Reading comprehension plays an important role in enabling students to access and understand information in an academic context. However, many students continue to struggle with understanding long and complex texts, and the influence of personality on reading comprehension remains unclear. Previous studies have reported inconsistent findings regarding the relationship between personality and language learning outcomes, while most have relied on quantitative approaches, which provide limited insights into how learners with different personality types approach reading tasks. Therefore, this study aims to examine the relationship between personality and reading comprehension and to explore how students with different personality types approach reading tasks in EFL learning. This study employs a sequential explanatory design with a mixed-method approach involving 67 participants. The quantitative phase used personality questionnaires and reading comprehension tests, with data analyzed through Spearman correlation and the Mann-Whitney U test. The qualitative phase consisted of semi-structured interviews analyzed thematically. The findings revealed no significant relationship between personality and reading comprehension, as well as no significant difference in reading performance between introverted and extroverted students. Students demonstrate self-regulation skills, face similar linguistic challenges, and use learning strategies both independently and collaboratively. These findings indicate that reading comprehension is more influenced by reading strategies, linguistic competence, and learning flexibility than by personality traits.

Keywords: *EFL, extrovert, introvert, personality, reading comprehension*

INTRODUCTION

Reading comprehension remains a serious and ongoing challenge for English as a Foreign Language (EFL) students in higher education, especially when they are required to understand complex academic texts. In many EFL classrooms, students often struggle to interpret meaning, identify main ideas, draw conclusions, and connect information in the text with prior knowledge. These difficulties can impact students' academic performance because reading comprehension plays a crucial role in accessing information and supporting language development (Sari et al., 2024). Reading comprehension is also essential in helping students learn more efficiently, improve academic performance, and develop a broader understanding through reading activities (Fahira et al., 2024). At the university level, students are required to process complex information, interpret arguments, and connect prior knowledge with new ideas, all of which require advanced cognitive and linguistic skills. However, many EFL learners still struggle with reading comprehension due to limited vocabulary, insufficient syntactic knowledge, and weakness in strategic reading processing (Grabe & Stoller, 2020; Nation, 2001; Zhang & Zhang, 2015). Additionally, students often struggle to connect textual information with cultural or real-life contexts, which limits their ability to interpret meaning, draw conclusions, and engage

critically with reading materials (Samudera & Lolita, 2025). This phenomenon indicates that reading comprehension issues among EFL learners remain unresolved and continue to require further investigation.

Recent studies emphasize that reading comprehension is not only a linguistic skill, but also a multidimensional construct involving cognitive, metacognitive, and affective processes. (Afflerbach et al., 2015; Manurung et al., 2024). Therefore, reading comprehension can be understood as a complex intellectual process involving several interrelated skills through which readers construct meaning from a text (Permadi, 2019). In this process, students often rely on rereading, inference monitoring, and other strategic behaviors to fully grasp the author's intended message. Consequently, reading is essential not only for acquiring information but also for supporting critical thinking and academic development. (Rojabi, 2018) Given its significant contribution to academic success, identifying the factors that influence reading comprehension remains a significant issue in applied linguistics research.

Among the various individual difference factors, personality, particularly the dimensions of introversion and extroversion, is often discussed as a factor that can influence language learning. According to Eysenck's personality theory, introversion and extroversion are related to differences in cognitive processing, social interaction, and learning preferences (Eysenck & Wilson, 1991). Some studies suggest that introverted learners may perform better on cognitively demanding tasks because they tend to think deeply and process information carefully, whereas extroverted learners may benefit more from interaction and collaborative learning environments (Astriani & Tiarina, 2025; Yusuf et al., 2021). However, findings regarding the relationship between personality and language skills in the EFL context remain inconsistent. Some recent studies report weak or non-significant relationships between personality and reading comprehension (Anugrah & Indayani, 2025; Astriani & Tiarina, 2025). Similarly, (Rahmi et al., 2025) found that personality traits were not significantly correlated with students' language performance when learners had similar academic experiences and learning exposure. These inconsistent findings suggest that personality alone may not be sufficient to explain differences in reading comprehension performance among EFL learners.

From a theoretical perspective, reading comprehension is better explained through cognitive and metacognitive frameworks, particularly the interactive reading model and self-regulated learning theory. The interactive reading model explains that comprehension involves bottom-up and top-down processes working simultaneously. The bottom-up process refers to the reader's ability to recognize linguistic elements such as vocabulary, grammar, and sentence structure to construct meaning from the text. In contrast, the top-down process involves the reader's use of prior knowledge, experience, predictions, and contextual understanding to interpret meaning beyond individual words and sentences (Grabe & Stoller, 2020). Effective reading comprehension occurs when readers successfully integrate both processes while interacting with the text.

Additionally, self-regulated learning theory emphasizes that successful readers actively monitor and control their own learning processes during reading activities (Zimmerman, 2002). Readers employ strategies such as skimming, inferencing, monitoring comprehension, identifying difficulties, and using corrective strategies when misunderstandings occur (Afflerbach et al., 2015). Readers with self-regulation are also able to evaluate their understanding and adjust strategies according to the demands of the reading task (Zimmerman, 2002). From this theoretical perspective, personality can be viewed as a distal variable that influences students' learning preferences and approaches to reading tasks, while reading strategies and linguistic competence serve as more direct determinants of comprehension (Kim, 2011). For example, introverted students may prefer reflective and independent reading processes, whereas extroverted students may rely more on interaction and collaborative learning. However, both personality types can still achieve

similar comprehension outcomes when they use reading strategies effectively and possess adequate linguistic knowledge. This perspective suggests that personality may not directly predict reading comprehension outcomes but can influence how students regulate their reading behaviour and interact with texts.

Although previous research has examined the relationship between personality and reading comprehension, most studies have focused on identifying statistical correlations between personality types and reading scores. Consequently, previous research has not sufficiently explained how students with different personality orientations approach reading tasks, organize their comprehension processes, respond to linguistic difficulties, or apply reading strategies while comprehending texts. Furthermore, many previous studies primarily employed quantitative correlational designs, thus providing limited insights into students' reading experiences and strategy use within the context of real-world EFL learning. However, the underlying reasons for non-significant findings remain unclear, particularly regarding whether reading strategies, self-regulation, and linguistic competence might play a greater role than personality traits in determining reading comprehension performances.

This study is different from previous research because it not only quantitatively examines the relationship between personality and reading comprehension but also qualitatively explores the processes and experiences students go through in understanding texts. Research gaps lie not only in the limited number of studies but also in the inability of previous research to critically explain why personality often shows a weak or insignificant relationship with reading comprehension in an EFL context. Previous research has also not adequately explained whether students' reading strategies, self-regulation, and linguistic competence can mediate or even more significantly influence the relationship compared to personality during the reading comprehension process. Therefore, the novelty of this study lies in the use of an explanatory sequential mixed-methods design that integrates quantitative analysis and qualitative exploration to provide a more comprehensive understanding of the relationship between personality and reading comprehension.

The objectives of this study are twofold. First, it aims to investigate whether there is a significant relationship between students' personality orientation and their reading comprehension. Second, it aims to explore how students with different personality orientations approach and experience reading comprehension tasks in EFL contexts. The study is guided by two research questions: (1) Is there a significant relationship between students' personality and reading comprehension? and (2) How do students with different personality orientations approach and experience reading comprehension tasks? By answering these questions, this study contributes to a deeper understanding of individual differences in EFL reading. It offers practical implications for teaching by emphasizing the importance of strategy development and adaptive learning rather than assumptions based on personality.

METHOD

Research Design

This study used a mixed-methods explanatory sequential design (Creswell & Creswell, 2018), in which quantitative data were collected and analyzed first, followed by qualitative data collection to explain and deepen the quantitative findings. This design was selected because quantitative analysis alone was insufficient to explain how personality relates to students' reading comprehension processes in EFL contexts. The quantitative phase focused on examining the relationship between personality orientation and reading comprehension, whereas the qualitative phase explored how students with different personality orientations approached reading tasks, regulated comprehension, and experienced reading difficulties. By integrating both quantitative and qualitative

approaches, the study aimed to provide a more comprehensive understanding of EFL students.

Respondents

Quantitative Phase

The population of this study consisted of students from the English Education Study Program at a university in the Riau Islands, Indonesia. The participants were sixth- and eight-semester EFL students aged between 20 and 24 years old who had completed several reading-related courses, including Basic Reading, Intermediate Reading, and Extensive Reading. These students were considered suitable participants because they had sufficient academic exposure to English reading materials and reading strategies.

The quantitative phase involved 67 students selected through purposive sampling based on the following criteria: (1) enrolled in the English Education Study Program, (2) registered as sixth- or eighth-semester students, (3) having completed reading-related courses, and (4) willing to participate in the study. Based on the results of the personality questionnaire, 42 students were categorized as introverts and 25 students as extroverts.

Qualitative Phase

In the qualitative phase, 10 participants were purposively selected to represent both personality orientations, consisting of 5 introverted and 5 extroverted students. Participant selection also considered differences in reading comprehension performance and willingness to participate in the interview process.

Instruments

Three instruments were used in this study: a personality questionnaire, a reading comprehension test, and a semi-structured interview protocol. The personality questionnaire was adapted from Astriani & Tiarina (2025) based on Eysenck's personality theory and consisted of 28 items measured using a four-point Likert scale ranging from Strongly Disagree to Strongly Agree. The questionnaire was validated through expert judgment, and its reliability was tested using Cronbach's Alpha, resulting in a coefficient of 0.606, indicating acceptable reliability for exploratory research.

Table 1. Reliability Statistics

Cronbach's Alpha	N of item
0.606	28

The reading comprehension test was adopted from the Longman Preparation Course for the TOEFL Test by Deborah Philips and consisted of 48 multiple-choice items. The test measured several reading skills, including identifying main ideas, understanding explicit and implicit information, making inferences, identifying supporting details, and understanding vocabulary in context. In addition, a semi-structured interview protocol was developed to explore students' reading experiences, strategy use, linguistic difficulties, self-regulation, and learning orientations during reading comprehension activities. The interview questions were designed based on the research objective and validated by experts to ensure clarity and relevance.

Data Collecting Technique

Quantitative Data Collection

First, quantitative data were collected using a personality questionnaire and a reading comprehension test administered through Google Forms. Before completing the instruments, participants were informed about the purpose of the study and the voluntary nature of their participation. The personality questionnaire was administered first to

identify students' dominant personality orientation, followed by the reading comprehension test completed within a specified time limit. The quantitative findings were subsequently used to determine participants for the qualitative phase.

Qualitative Data Collection

After the quantitative analysis was completed, semi-structured interviews were conducted with 10 selected participants. Each interview lasted approximately 30-45 minutes and was conducted individually. The interviews explored students' experiences in reading English texts, reading strategies, comprehension difficulties, self-regulation, and preferences for independent or collaborative learning. During the interview process, follow-up questions were asked to obtain more detailed explanations of participants' responses. All interviews were audio-recorded with participants' consent and transcribed for analysis.

Data analysis

Quantitative Data Analysis

Quantitative data were analyzed using IBM SPSS Statistics. A Shapiro-Wilk normality test was first conducted to examine the distribution of the data and determine the appropriate statistical procedures. Since the data were not normally distributed, non-parametric statistical tests were employed. Spearman's rank-order correlation was used to examine the relationship between personality orientation and reading comprehension, while the Mann-Whitney U test was conducted to analyze differences in reading comprehension scores between introverted and extroverted students.

Qualitative Data Analysis

Qualitative data were analyzed using thematic analysis. The analysis involved several stages, including data transcription, familiarization with the data, initial coding, categorization of codes, theme generation, and theme refinement. Thematic analysis was used to identify patterns related to students' reading strategies, linguistic difficulties, self-regulation, and learning orientations. Finally, the quantitative and qualitative findings were integrated during the interpretation stage to provide a deeper explanation of the relationship between personality orientation and reading comprehension.

RESULTS

Relationship Between Personality and Reading Comprehension (RQ1):

This section presents the findings related to the first research question regarding the relationship between students' personality and their reading comprehension. Before conducting the main statistical analysis, a normality test using the Shapiro-Wilk method was performed to determine the data distribution. The results of the normality test are presented in Table 2.

Table 2. Normality Test Result

	Shapiro-Wilk	
	Statistics	Sig.
Personality	0.952	0.012
Reading Comprehension	0.915	0.000

The results showed that both personality data (Shapiro Wilk p = 0.012) and reading comprehension data (Shapiro Wilk p = 0.000) were not normally distributed, as all significance values were below 0.05. Therefore, the assumption of normality was not met, and nonparametric statistical tests were applied for further analysis. Since the data were not normally distributed, the Spearman rank-order correlation test was used to examine the relationship between personality and reading comprehension. The analysis results indicate

a weak negative correlation between personality and reading comprehension, with a Spearman correlation coefficient of -0.136 (p = 0.274, N = 67). Since the significance value is greater than 0.05, this relationship is not statistically significant, indicating that personality is not associated with students' reading comprehension performance.

Table 3. Spearman Correlations

			Personality	Reading Comprehension
Spearman's rho	Personality	Correlation Coefficient	1.000	-0.136
		Sig. (2- tailed)	.	0.274
	Reading Comprehension	Correlation Coefficient	-0.136	1.000
		Sig. (2- tailed)	0.274	.

To further investigate whether differences existed in reading comprehension between personality groups, a Mann-Whitney U test was conducted. The findings showed that there was no statistically significant difference between introvert and extrovert students (U = 507.000, Z = -0.235, p = 0.814). This result indicates that both groups demonstrated a comparable level of reading comprehension performance.

Table 4. Test Statistics

	Reading Comprehension
Mann-Whitney U	507.000
Z	-0.235
Asymp. Sig. (2- tailed)	0.814

a. Grouping Variable: 1 = introvert, 2 = Extrovert

Supporting this finding, the rank distribution showed only a very small difference between the two groups, with introvert students (N = 42) obtaining a slightly higher mean rank (34.43) than extrovert students (N = 25; mean rank = 33.28). However, the difference was minimal, suggesting similar performance patterns in both groups.

Table 5. Ranks Distribution

	Ranks			
	1= Introvert, 2= Extrovert	N	Mean Rank	Sum of Ranks
Reading Comprehension	1	42	34.43	1446.00
	2	25	33.28	832.00
	Total	67		

Overall, these findings consistently show that there is no significant relationship or difference between students' personality orientation and their reading comprehension. Therefore, the first research question can be answered by concluding that personality does not significantly influence students' reading comprehension performance.

Students' Reading Experiences Based on Personality

Although the quantitative findings revealed no significant relationship between personality and reading comprehension, these results did not fully explain how students approached and experienced reading tasks in EFL contexts. Therefore, the qualitative phase was conducted to explore students' reading processes, strategies, and learning experiences in greater depth. The findings were organized into three major themes.

Self-Regulated Comprehension as a Dominant Driver

The interview data revealed that students from both introverted and extroverted groups actively regulated their reading comprehension through systematic and strategic reading behaviors. Rather than approaching texts passively, participants described reading as a staged process that involved previewing texts, identifying key information, monitoring comprehension, and repairing misunderstandings when difficulties occurred. Students consistently demonstrated metacognitive awareness by controlling how they approached texts and by adjusting their strategies according to the complexity of the material. The data also showed that students did not immediately depend on external assistance, but instead attempted to construct meaning independently before seeking additional support. This pattern indicates that reading comprehension was strongly shaped by self-regulated learning processes that appeared consistently across personality orientations.

This pattern can be seen in several participants' responses, as stated by the participants as follows.

Extract 1

"Skim the text to get the general idea" (I-1)
"Skimming helps me find the main idea, and scanning helps me find specific information" (I-2)
"I skim the text first, like looking at the title, subtitles, or the first paragraph to get a general idea of the content. After that, I read it more carefully" (E-1).

When facing comprehension difficulties, participants attempted to solve the problem through contextual processing and rereading. Students also monitored their understanding through summarizing and retelling strategies, as reflected in the statements:

Extract 2

"I usually try to figure it out from the context first. If I still don't understand, then I look it up in Google Translate" (I-3).
"I underline the difficult words and reread the previous sentences to understand the context" (I-4).
"I usually summarize it in my own words" (I-5) and "If I can explain it using my own words, it means I understand it well enough" (E-2).

The findings suggest that students' reading performance may be influenced more strongly by their ability to regulate comprehension than by their personality orientation. Although introverted and extroverted students differed in their social preferences, both groups demonstrated highly similar metacognitive behaviors during reading activities. The recurring use of skimming, contextual inferencing, rereading, summarizing, and comprehension checking across participants indicates that strategic regulation functioned as a common mechanism for constructing meaning from texts. This may explain why the quantitative findings showed no significant relationship between personality and reading comprehension. In other words, personality differences appeared less influential because students relied on comparable self-regulated strategies to manage reading tasks and overcome comprehension difficulties.

Linguistic Difficulty as a Common Constraint

The interview data revealed that linguistic difficulties were experienced similarly by both introverted and extroverted students during reading comprehension activities. Participants consistently identified unfamiliar vocabulary, academic terms, and complex sentence structures as the main barriers to understanding English texts. These difficulties appeared

regardless of personality orientation, indicating that linguistic challenges functioned as a shared constraint across learners. The findings also show that students often require additional time and effort to process texts containing dense vocabulary and syntactically complex structures. In response to these challenges, students relied on compensatory strategies such as rereading and consulting dictionaries or translation tools to support comprehension. This pattern is reflected in several participants' responses, as shown below.

Extract 3
"When I come across long texts with lots of unfamiliar vocabulary, I start to struggle and need more time to understand it" (I-1).
"My main difficulty is vocabulary" (I-2).
"usually with uncommon vocabulary and long sentences" (E-3).
"unfamiliar academic vocabulary and long, complex sentences" (E-4).

Participants also expressed confusion and uncertainty when encountering difficult vocabulary. To overcome these challenges, students frequently used external support tools, as reflected in the statement.

Extract 4
"especially a difficult one, I honestly feel a bit nervous. I'm afraid of misunderstanding the content" (I-3).
"I still feel confused sometimes, especially when the text is long and contains many new terms" (E-5).
"I usually look up the meaning directly in a dictionary or on Google" (E-1).

The findings indicate that reading comprehension difficulties were influenced more strongly by linguistic and cognitive demands than by personality orientation. Both introverted and extroverted students encountered similar problems when processing unfamiliar vocabulary and complex academic structures, suggesting that text difficulty affected learners in relatively similar ways. The recurrence of vocabulary-related challenges across participants also indicates that lexical knowledge remained a central determinant of comprehension regardless of students' personality tendencies. Moreover, students' emotional responses, such as nervousness and confusion, appeared to stem primarily from the complexity of the texts rather than from differences in personality orientation. These findings help explain why the quantitative results showed no significant relationship between personality and reading comprehension, as the dominant challenges experienced by students were shared linguistic constraints rather than personality-based differences.

Flexible Learning Orientation Beyond Personality

The interview data revealed that students demonstrated flexible learning orientations when approaching reading comprehension tasks. Although participants showed different preferences for independent or collaborative learning, both introverted and extroverted students adapted their learning approaches according to the level of difficulty and comprehension demands of the text. Many participants described beginning with individual processing to build an initial understanding before shifting to collaborative discussion to clarify difficult concepts or gain additional perspectives. This pattern suggests that students did not rely exclusively on a single learning orientation, but instead combined independent and social learning strategies in complementary ways. The findings also indicate that learning behaviour was more adaptive and situational than rigidly determined by personality orientation alone.

This flexibility can be observed in several participants' responses. Introverted participants frequently emphasized independent processing as an initial step in comprehension.

Extract 5
"When I face difficulties, I usually try to solve them by myself first so I can think more independently. But if I'm really stuck, I don't hesitate to ask friends or others who understand better" (I-1).
"I usually try to solve difficulties on my own first so I can understand more deeply" (I-4)
"I prefer to start on my own so I can focus and understand the basics" (I-5).

In contrast, extroverted participants expressed stronger preferences for discussion-based learning, as stated by the participants below.

Extract 6
"I tend to ask others more often because sometimes it's easier to understand when someone explains it. I'm also the type who enjoys discussion" (E-2).
"I feel more comfortable learning through discussion. So, when reading texts, I often exchange ideas with friends to understand better" (E-3).

However, both groups also acknowledged the value of combining independent understanding with collaborative interaction, as stated by the participants below.

Extract 7
"After that, I like to discuss with others to get new perspectives that I might not have thought about before" (I-2)
"I prefer discussion because when I study with friends, we can explain things to each other and sometimes get new perspectives" (E-4).

The findings suggest that personality orientation influenced students' preferred learning approaches rather than their actual comprehension outcomes. Introverted students tended to prioritize independent meaning construction, whereas extroverted students relied more heavily on collaborative interaction and discussion. Nevertheless, both groups eventually employed similar adaptive patterns by combining self-processing and social support when necessary. This indicates that personality traits functioned more as flexible tendencies than as fixed determinants of reading behaviour. The ability of students to shift between independent and collaborative learning modes may also explain why the quantitative findings showed no significant relationship between personality and reading comprehension. Despite differences in social preference, both introverted and extroverted students were able to reach comparable levels of understanding through different, yet equally effective, learning pathways.

DISCUSSION

The present study found no significant relationship between personality orientation and reading comprehension among university-level EFL students. This finding supports several previous studies reporting weak or non-significant relationships between introversion-extroversion and reading comprehension (Anugrah & Indayani, 2025; Astriani & Tiarina, 2025). Similarly, Rahmi et al. (2025) found that personality traits were not significantly associated with students' language performance when learners shared relatively similar educational experiences and instructional exposure. These studies collectively suggest that personality may not consistently function as a direct predictor of academic language

achievement, particularly in contexts where learners possess relatively comparable linguistic backgrounds and learning experiences. However, the present study extends these earlier findings in important ways. Previous studies primarily relied on quantitative correlational designs that merely identified whether relationships existed statistically, whereas the current study employed an explanatory sequential mixed-method design to explore why personality did not significantly influence reading comprehension. Consequently, the contribution of this study lies not only in confirming the absence of a significant correlation but also in providing a deeper explanation of the cognitive and learning processes underlying the non-significant relationship.

Nevertheless, the present findings contrast with several major studies suggesting that personality traits significantly influence language learning achievement. Previous research has argued that introverted learners tend to perform better on cognitively demanding tasks because they process information more reflectively and maintain stronger concentration during independent learning activities (Hayati, 2021). In contrast, extroverted learners have often been associated with higher classroom participation, greater social interaction, and stronger engagement in collaborative learning, which may facilitate language development (Mustoip et al., 2024). Some studies, therefore, concluded that personality orientation contributes to differences in language achievement because introverted and extroverted learners approach learning tasks differently. However, the present findings suggest that such personality-related tendencies do not necessarily translate into measurable differences in reading comprehension outcomes. One possible explanation is that reading comprehension, unlike highly interactive skills such as speaking, relies more heavily on cognitive and metacognitive processes, including strategic reading, vocabulary processing, inferencing, and comprehension monitoring (Grabe & Stoller, 2020; Koda, 2005). As a result, the influence of personality may become less visible when learners employ similar self-regulated strategies and face comparable linguistic demands during reading activities.

From a theoretical perspective, the findings challenge deterministic assumptions that personality traits directly shape academic achievement. Personality theories such as Eysenck's introversion-extroversion model explain behavioural tendencies, preferences for social interaction, and differences in stimulation processing (Eysenck & Wilson, 1991). However, reading comprehension, particularly in EFL academic settings, appears to depend more heavily on proximal cognitive and linguistic factors than on broad personality dispositions. According to interactive models of reading, comprehension occurs through the integration of bottom-up linguistic processing and top-down meaning construction (Grabe & Stoller, 2020). In this process, learners must decode vocabulary, process syntactic structures, activate prior knowledge, monitor comprehension, and repair misunderstandings during reading. These cognitively demanding processes may reduce the relative influence of personality orientation because successful comprehension depends primarily on how effectively students regulate meaning construction rather than on whether they are introverted or extroverted. Therefore, personality may function more as a contextual preference variable than as a direct determinant of reading achievement.

The qualitative findings strongly support this interpretation. The first theme, self-regulated comprehension as a dominant driver, revealed that students from both personality groups consistently employed similar metacognitive and strategic reading behaviors. Introverted and extroverted students alike used skimming, scanning, rereading, contextual influencing, summarizing, and comprehension monitoring to construct meaning from texts. This suggests that students approached reading through active self-regulation regardless of their personality orientation. The findings align with self-regulated learning theory, which emphasizes that successful learners actively plan, monitor, and evaluate their cognitive processes during academic tasks (Zimmerman, 2000). Recent research has also shown that metacognitive strategy use is among the strongest predictors of reading achievement in

EFL contexts (Lazarus & Anwalimhobor, 2023; Zhang & Zhang, 2015). Consequently, the similarity in strategic behaviour across personality groups may explain why the quantitative analysis did not reveal several significant differences in reading comprehension. In other words, strategic regulation appeared to override the potential influence of personality orientation on performance outcomes.

The findings further indicate that linguistic competence functioned as a more immediate determinant of comprehension than personality orientation. The second theme demonstrated that both introverted and extroverted students experienced similar difficulties related to unfamiliar vocabulary, academic terminology, and complex sentence structures. This finding supports the lexical quality hypothesis, which argues that efficient vocabulary access and integration are fundamental to successful reading comprehension (Kwakkel et al., 2024). Extensive research has consistently identified vocabulary knowledge as one of the strongest predictors of reading achievement across EFL contexts (Jeon & Yamashita, 2014; Nation, 2001). Similarly, syntactic complexity increases cognitive processing demands and can hinder meaning construction when learners encounter unfamiliar academic texts (Rahayu et al., 2025; Vongsawath et al., 2025). The present findings, therefore, suggest that reading comprehension difficulties were shared cognitive-linguistic challenges rather than personality-specific problems. Because both personality groups encountered comparable linguistic obstacles and relied on similar repair strategies, personality orientation accounted for relatively little variation in reading performance.

Another important interpretation emerging from this study concerns the adaptive nature of students' learning orientations. The third theme, flexible learning orientation beyond personality, demonstrated that students did not rigidly adhere to personality-based learning patterns. Although introverted students tended to prefer independent meaning construction and extroverted students more frequently relied on discussion and collaborative interaction, both groups flexibly combined independent and social learning approaches depending on task demands. This finding challenges stereotypical assumptions that introverts always prefer solitary learning, while extroverts consistently depend on interaction (Mustoip et al., 2024). Instead, the data suggest that personality traits operate as flexible tendencies rather than deterministic behavioural categories. This interpretation aligns with contemporary perspectives on personality, which argue that personality traits interact dynamically with contextual and situational factors (Murasing, 2026). It also supports sociocultural theories, emphasizing that learning is constructed through both individual cognition and social interaction (Lantolf et al., 2020; Vygotsky, 1978). Consequently, students were able to compensate for their preferred learning tendencies by adopting alternative approaches when necessary, thereby minimizing the effect of personality differences on reading outcomes.

Compared with previous studies, the present findings provide a more comprehensive explanation for the inconsistent relationship between personality and language achievement frequently reported in EFL research. Some earlier studies suggested that introverted learners perform better in cognitively demanding tasks because they process information more reflectively, whereas extroverted learners benefit more from collaborative interaction (Hayati, 2021; Savitri, 2021; Yusuf et al., 2021). However, the present study suggests that these tendencies do not necessarily translate into measurable differences in reading comprehension performance when learners possess comparable academic exposure, strategic competence, and linguistic resources. This may explain why earlier studies produced contradictory findings across contexts and populations. The relationship between personality and language achievement appears to be indirect and mediated by other variables such as self-regulation, strategy use, motivation, and language proficiency, rather than functioning as a simple linear relationship.

In sum, the integration of quantitative findings suggests that personality orientation is not a primary predictor of reading comprehension among university-level

EFL students. Instead, reading performance appears to be shaped more strongly by students' ability to regulate comprehension, manage linguistic challenges, and adapt their learning approaches according to situational demands. Theoretically, the study contributes to the growing body of literature questioning the predictive power of broad personality dimensions for specific academic outcomes. Practically, the findings imply that reading instruction should prioritize the development of metacognitive awareness, vocabulary knowledge, and strategic reading behaviors rather than relying heavily on personality-based assumptions about learners. By emphasizing adaptive and strategic learning processes, educators may better support students from different personality orientations in achieving successful reading comprehension.

CONCLUSION

This study investigates the relationship between students' personality orientation and reading comprehension, as well as how students with different personality orientations approach reading tasks in the EFL context. The research results indicate that there is no significant relationship between personality and reading comprehension, and there is no significant difference between the reading performance of introverted and extroverted students. Quantitative and qualitative findings indicate that reading, learning, and adaptive learning behaviors are more influenced by personality orientation than by personality orientation itself.

This research contributes to the understanding of individual differences in EFL reading by showing that personality may influence learning preferences and approaches, but does not directly determine reading comprehension outcomes. The research findings also emphasize the importance of using cognitive and metacognitive strategies in supporting students' comprehension processes. Therefore, this study suggests that EFL instruction should place greater emphasis on developing effective reading strategies, linguistic competence, and flexible learning practices rather than focusing on students' personality differences. Despite these contributions, this study has several limitations. The research participants were limited to students from one university in the Riau Islands, Indonesia, and this study only focused on the introvert-extrovert personality dimension. Therefore, future research is recommended to involve a larger and more diverse sample, examine a broader personality framework, and further investigate the interaction between personality, strategy use, motivation, and linguistic competence in reading comprehension across various EFL contexts.

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