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Exploring Reading Self-Efficacy among EFL Learners from Different Academic Disciplines

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Abstract

Reading self-efficacy plays a crucial role in the academic success of EFL learners, yet the extent to which it varies across academic disciplines remains underexplored. This study aims to (1) examine the level of reading self-efficacy among EFL learners from business, social sciences, and sciences; (2) investigate the relationship between different components of reading self-efficacy; and (3) compare self-efficacy levels across these academic disciplines. A total of 217 university-level EFL students in Thailand participated in the study. A 25-item reading self-efficacy questionnaire with strong reliability (Cronbach's alpha = 0.915) was employed. Data were analyzed using descriptive statistics, Pearson correlations, and ANOVA. The results reveal significant positive correlations between assessment of content (AOC) and summary of content (SOC) ($r = 0.522$, $p < 0.001$), and between opinion on content (OOC) and SOC ($r = 0.387$, $p < 0.001$). ANOVA results indicate significant differences in recognition of content elements (ROE) across disciplines, with business students scoring higher than science students ($p = 0.015$). Business students also demonstrated significantly higher self-efficacy in OOC compared to social science and science students ($p = 0.001$). These findings suggest that reading self-efficacy is influenced by students' academic disciplines, supporting the view that self-efficacy is task-specific and context-dependent. Therefore, EFL instructors should implement tailored instructional approaches that address discipline-specific reading challenges to enhance students' reading confidence and academic performance.

Keywords: Academic disciplines, EFL learners, education, reading self-efficacy, reading skills, university level.

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1. INTRODUCTION

Self-efficacy is essential for completing reading tasks in English. As for EFL learners, possessing self-efficacy in reading translates to numerous possibilities. Students are more willing to interact with challenging reading materials if they believe they possess essential self-efficacy, even in academic writing (Jonathan et al., 2025). A major advantage of believing one can read is the increased likelihood of understanding what they read. Students will use efficient reading methods that facilitate comprehension, including summarizing, predicting, and questioning, prompting greater retention of information as well as enhancement of comprehension and recall (Zimmerman, 2000). Moreover, high self-efficacy may positively influence motivation (Almayez et al., 2025). Schunk (1991) points out that students' faith in their reading competence translates to willingness to work and spend time to develop their language competence.

Furthermore, self-efficacy affects academic achievement in general. According to Pajares (1996), students with high self-efficacy have higher academic goals and exhibit greater perseverance toward achieving these goals. Such resilience is crucial among EFL learners, who confront additional challenges like unknown vocabulary and complicated sentence structures in English texts. With a high belief in their potential to succeed, these students are more likely to overcome such barriers and achieve academic success. Positive attitudes towards learning English are also a result of high reading self-efficacy (Tsang & Yeung, 2024). This highlights the importance of developing high self-efficacy among EFL learners to enable them to achieve greater motivation, more sophisticated learning strategies, and better academic outcomes.

While it is understood that self-efficacy plays an important role in English reading, the issue of whether such self-efficacy differs from one academic discipline to another remains. More specifically, the purpose of the present study is to determine whether students from different disciplines such as business, social sciences, and sciences demonstrate have differing degrees of self-efficacy in reading. Certain academic disciplines may have specific reading requirements and challenges that may affect the students' perception of their reading proficiency. In business subjects, students are often exposed to specialized texts that contain technical vocabulary such as case studies and industry reports. If students understand these texts, their self-efficacy may increase, but if students have difficulty understanding them, it may be a source of anxiety that reduces self-efficacy (Bandura, 1986). On the other hand, students in social sciences deal with different kinds of texts such as theoretical papers and empirical studies. Self-efficacy may be enhanced by critical thinking and analytical ability demonstrated in these areas if students perceive themselves to be competent. Students in sciences, however, face a different set of problems. They read complex scientific articles, research reports, and even manuals which are technical in nature. These texts are high-level both in terms of content and the scientific vocabulary used. Successfully comprehending these texts can bolster self-efficacy, whereas difficulties can hamper it. The variation between the texts as well as the reading proficiency needed in these disciplines indicates that the students' self-efficacy in reading English texts is likely to differ greatly based on their area of specialization (Alzukari, 2024; Hasyim, 2018; Tsang & Yeung, 2024).

Despite growing evidence of the importance of reading self-efficacy in EFL learning (Oranpattanahai, 2023; Pajares, 1996; Schunk, 1991; Zimmerman, 2000), little research has examined how academic disciplines shape these beliefs. Self-efficacy theory emphasizes that confidence is task-specific and context-sensitive (Bandura, 1997; Pajares, 2003), meaning that students' perceptions may vary depending on the demands of their field. If learners face texts beyond their familiarity or content knowledge, their reading self-efficacy may decline regardless of general proficiency (Bandura, 1997; Zimmerman, 2000). Academic disciplines involve distinct literacy practices—business requires case study analysis, social sciences emphasize theoretical interpretation, and sciences demand comprehension of technical research (Hyland, 2004). These disciplinary differences likely influence students' self-efficacy beliefs, yet empirical research remains scarce, especially in EFL contexts (Alderson, 2000; Grabe & Stoller, 2020). In Southeast Asian contexts such as Thailand, this discipline-based perspective on EFL reading self-efficacy is particularly underexplored.

This study addresses this gap by investigating how EFL learners' reading self-efficacy differs across academic disciplines. Specifically, it aims to: (1) assess the reading self-efficacy of business, social science, and science students; (2) examine interrelationships among different components of reading self-efficacy; and (3) analyze how variations in self-efficacy are shaped by disciplinary demands. By focusing on the intersection of reading self-efficacy and academic disciplines, this research seeks to uncover hidden challenges EFL learners face in specific subject areas and inform more targeted, discipline-sensitive instructional practices.

2. LITERATURE REVIEW

2.1 Factors of Reading Self-Efficacy

Self-efficacy in reading within EFL contexts is influenced by numerous factors that shape learners' beliefs concerning their reading skills. Bandura (1997) has pointed out some self-efficacy factors such as mastery experiences, vicarious experiences, and social, emotional and affective beliefs. These factors combine to determine the level of EFL learners' self-efficacy in comprehending and reading English texts (Tsang & Yeung, 2024). One crucial element is the experience of mastery, which refers to one's level of success achieved within a reading task. Bandura (1986) suggests that reading self-efficacy is positively related to one's success in reading because learners feel more confident when their achievement levels increase. For instance, when EFL learners are able to accurately discern main ideas, understand supporting details and grasp the underlying concepts embedded within the texts, they tend to possess high self-efficacy in reading. Achieving such milestones leads to further enhancement of one's self-belief in his or her reading capabilities.

In addition, witnessing other students successfully interacting with English texts can improve learners' self-efficacy (Oranpattanahai, 2023; Pajares, 1996). When students observe their peers' abilities to make predictions, draw comparisons, and interpret ideas, they are more likely to feel confident in executing such tasks themselves. Such learning gives rise to further improvement in one's reading self-efficacy. Encouragement and feedback from peers and instructors are yet another social influence. Constructive comments and positive praise are vital in building students' confidence. When EFL learners can summarize content, answer questions, and explain meanings, their self-efficacy is enhanced with each acknowledgment. Their ability and motivation increase due to the help of teachers and other students.

Self-efficacy in reading is also affected by emotional and physiological conditions. According to Usher and Pajares (2008), a positive emotional state can enhance self-efficacy, but anxiety and stress tend to negatively affect it. For instance, EFL learners who can state their feelings about the material and can visualize what happens in the texts have higher self-efficacy. Thus, having a positive learning environment and being able to cope with stress improve their reading confidence. Other factors include comprehension skills and reading strategies. It is important to note that mastery of contextual, visual, and lexical clues is pivotal for understanding. Scanning and skimming are also effective reading strategies that lead to higher reading self-efficacy. Students' self-efficacy is enhanced by self-regulated learning strategies (Almayez et al., 2025) that increase their ability to independently perform reading tasks. Furthermore, while self-efficacy in EFL reading is primarily influenced by task-related factors such as mastery experiences, peer comparisons, and emotional states, it is also shaped by broader contextual variables that deserve consideration (Bandura, 1997; Mills et al., 2007). Technology integration in language learning, for instance, has increasingly become a significant factor influencing EFL students' self-efficacy (Al-khresheh & Alkursheh, 2024).

Students can enhance mastery experiences and lessen reading anxiety through the use of digital platforms, which grant them access to self-paced reading applications, reading texts, and interactive materials. However, students lacking in digital literacy or access to technology may have their reading confidence dwindle instead (Dörnyei, 2007). Most importantly, if not more, the teacher impacts the learner's self-efficacy because the teacher has the most influence on the

student's reading self-efficacy through self-regulated feedback, instructional strategies, and classroom ambience (Usher & Pajares, 2008). Particularly when facing difficult English texts, teachers who provide scaffolding and positive feedback tend to enhance students' self-efficacy. Moreover, effective reading modeling also aids them (Bandura, 1997; Schunk, 1991). On the other hand, excessive error correction without acknowledgement of endeavors is damaging to self-efficacy beliefs and therefore can discourage students from tackling difficult tasks.

Apart from language barriers and emotional factors, disciplinary differences in reading materials and expectations may further shape EFL learners' self-efficacy beliefs. Hyland (2004) argued that each academic field requires unique literacy practices, meaning that business students often engage with practical reports, social science students analyze theoretical arguments, and science students work with technical and research-heavy texts. These discipline-specific demands may affect students' perceived competence when engaging with reading tasks (Alderson, 2000; Hyland, 2004). Furthermore, Grabe and Stoller (2020) highlighted that effective reading comprehension in academic contexts involves integrating various reading strategies tailored to the text type and purpose. For example, business students might prioritize skimming and extracting key data, while science students need to extract precise details and interpret research findings accurately.

2.2 Previous Research on Reading Self-Efficacy in EFL Contexts

The past few years have seen an increase in research on reading self-efficacy among EFL learners, but self-efficacy studies across various academic fields are still underexplored. At the same time, several EFL studies which relate to reading self-efficacy and its implications in reading comprehension, motivation, and performance have been conducted (Almayez et al., 2025; Oranpattanahai, 2023; Tsang & Yeung, 2024). Pajares (1996) noted the importance of self-efficacy, arguing that it is a strong predictor of students' performance in academic activities, including reading. At the same time, Zimmerman (2000) also pointed out the impact of self-efficacy on students' willingness to deal with difficult texts, in second and foreign languages. There were strong positive correlations found among motivation, self-regulated learning strategies, and English self-efficacy for Saudi EFL learners employing online language apps according to Almayez et al. (2025). These studies provide a frame for theorizing about the relationship between self-efficacy and achievement in reading in EFL contexts.

This link is further supported by practical research. Indonesian EFL students with high self-efficacy showed greater effort and comprehension of academic texts as compared to those with low self-efficacy, according to Hasyim's (2018) study on the influence of self-efficacy on reading motivation. Alzukari (2024) studied how achievement influenced self-efficacy among international students and noticed that those who possessed self-efficacy also tended to perform well in intensive reading courses. More recent studies have added to this conceptualization by contextualizing and localizing the variables to EFL settings. Moreover, Tsang and Yeung (2024) indicated self-efficacy positively predicted all dimensions of EFL proficiency of the Grade 5 learners in Hong Kong and filled out a questionnaire evaluating their English storybook appreciation alongside their English reading self-efficacy and self-administered proficiency tests of vocabulary size, word reading, reading fluency, and comprehension. These studies align with Bandura's (1997) theory but at the same time show the importance of exploring self-efficacy within blended learning paradigms of EFL teaching and learning.

In the Thai context, Sukserm et al. (2023) performed an exploratory factor analysis on reading self-efficacy of EFL tertiary students and observed important factors such as content recognition, opinion formation, and summarization. The study gives credence to Bandura's (1997) proposition that self-efficacy is multi-dimensional and context-bound; however, it did not consider whether self-efficacy differed within disciplines, which is the gap that the present study aims to address. Also, Oranpattanahai (2023) found that the Thai engineering students' perceived reading self-efficacy was moderate, and there was a correlational relationship between reading comprehension and self-efficacy in reading. Consequently, groundbreaking work on disciplinary literacy maintained that students from different disciplines interact with different types of texts,

which has implications for their reading behavior and self-concept. Research in this area has since evolved in scope, connecting the complexity of discipline-oriented texts to EFL learners' self-efficacy. For instance, Cheng et al. (2025) noted that STEM-oriented EFL learners tended to have lower reading self-efficacy than non-STEM counterparts due to the overwhelming amount of vocabulary and research-based texts they were required to read, in comparison to the task-centered documents commonly read by non-STEM students. This corresponds to the outcomes of Shehzad et al. (2020), who studied Saudi EFL learners and stated that learners demonstrated more reading anxiety, which was detrimental to their self-efficacy.

Additionally, EFL reading within the context of technology-enhanced higher education is no longer restricted to books and requires basic additional literacy skills. More recent research shows that depending on the EFL learner's level of digital competence and available resources, technology may either enhance or impede their reading self-efficacy. Chen and Xiao (2024) suggest that students' confidence in using ICT tools and understanding digital reading materials may increase, leading to greater self-efficacy in digital reading performance. Yu et al. (2023) also supported that high perceived ICT literacy could drive appropriate ICT use, and this could contribute to improving digital literacy performance. Apart from that, at the school level, Dadandi and Dadandi (2022) studied Turkish EFL school students utilizing PISA data, revealing a significant correlation between self-efficacy in reading and comprehension skills of the participants. All these studies are part of the shift in EFL research towards a greater focus on digital environments and reflect an awareness of the need to consider reading self-efficacy as interrelated with students' skills in information technology.

3. METHODS

3.1 Participants

The sample size for the study was set using G*Power Software, a recognized tool for power analysis in the social and behavioral sciences (Kang, 2021). The calculation was conducted based on an effect size of 0.3, alpha (α) level of 0.05, and power level of 0.95, which aligns with J. Cohen's (1988) sample size benchmarks. This analysis indicated a minimum of 115 participants. However, in order to improve statistical reliability and generalizability, the sample size was increased to 220 students for two primary reasons. First, larger sample sizes achieve greater precision and reliability in statistical estimates and findings (Hair et al., 2018). With a larger sample size, standard error is reduced, thereby increasing the reliability of group comparisons and correlation coefficients (L. Cohen et al., 2018). Second, to ensure adequate representation from the three academic domains, stratified random sampling requires sufficient subgroup sample sizes to allow valid group comparisons (Creswell & Creswell, 2018). Of the 220 students invited, 217 completed the questionnaire, yielding a 98.64% response rate, which reduces concerns regarding nonresponse bias (Dörnyei, 2007).

The subjects were undergraduate participants from a Thai public university who majored in business, social sciences, or sciences. They were enrolled in an EFL course required a minimum of three years of English studies in high school, suggesting they possessed intermediate English skills. Most respondents were first-year undergraduate students, including both male and female students, although for the purposes of this study gender balance was not relevant. They were chosen through stratified random sampling, a technique that is commonly suggested in educational research for ensuring representation of all subgroups (L. Cohen et al., 2018; Creswell & Creswell, 2018). Students from different business, social sciences, and sciences programs were selected as separate strata. Ethical approval was granted by the Ethical Review Board for Research with Human Subjects (IRB No 296/67) and informed consent was collected from all participants. Participants were made aware of their ability to withdraw anytime during the study, while confidentiality was maintained throughout the research in accordance with the standards of educational research ethics (Creswell & Creswell, 2018).

3.2 Research Instrument

The research tool was a reading self-efficacy questionnaire made especially for measuring EFL learners' reading self-efficacy in English. The construction of the questionnaire was based on self-efficacy theory (Bandura, 1997) and was supplemented with reference to relevant frameworks for evaluating reading self-efficacy (Anderson & Krathwohl, 2001; Grabe & Stoller, 2020; Nuttall, 1996; Sukserm et al., 2023). The questionnaire contains 25 items grouped into six subscales, each measuring a distinct facet of reading self-efficacy, as follows:

1. Recognition of content elements (ROE) evaluated students' self-reported levels of confidence regarding the identification of text elements such as theme, intention of the author, main ideas, the author's ideas, and supporting details.
2. Assessment of content (AOC) measured students' ability to perform higher-level thinking processes of evaluation and analysis of textual information, such as distinguishing facts from opinions, argument analysis, outcome prediction, and the evaluation of advantages and disadvantages.
3. Summary of content (SOC) measured students' self-efficacy in providing a summarized version of the most important ideas captured in a text, along with relevant details of supporting arguments, which required identification of ideas, paraphrasing, and answering comprehension questions.
4. Opinion on content (OOC) evaluated learners' self-efficacy concerning the expression of their independent viewpoints and interpretations about the content, including visualizing events, determining causative relationships, and articulating feelings towards the text.
5. Comprehension of content (COC) evaluated learners' understanding of the text in terms of comprehension of the vocabulary used in conjunction with its context.
6. Reading strategies on content (RSOC) measured learners' self-reported reading proficiency when skimming for main ideas and scanning for details in a text.

Participants rated each item using a four-point Likert scale from 1 (strongly disagree) to 4 (strongly agree). Content validity was secured through expert judgement from three EFL experts, who evaluated the degree of each item's correspondence to reading self-efficacy using the Item-Objective Congruence Index (IOC). The IOC score ranged from 0.67 to 1.00, meeting the accepted threshold (≥ 0.67) and therefore indicating satisfactory content validity (Plengkham et al., 2025). The questionnaire was pilot tested with 30 EFL learners during the pre-testing phase to aid in estimating the appropriateness and clarity of the instrument (Plengkham et al., 2025). Based on the pilot study, the wording of some items was modified to more closely match the reading level of participants. The internal consistency reliability of the survey, as computed by Cronbach's alpha, was 0.915, which is considerably greater than the 0.70 level accepted as sufficient in educational research (Nunnally, 1978, as cited in Limgomolvilas & Sukserm, 2025; Plengkham et al., 2025; Tavakol & Dennick, 2011).

3.3 Data Collection

Participants completed the self-efficacy questionnaire via Google Forms, which is regarded as an effective and reliable method for gathering survey data in education. The online format provided a greater scope of samples across different fields, as well as reducing the chances of human error in data entry (Bryman, 2016). On average, it took participants 20 to 25 minutes to complete the questionnaire. Upon submission, the responses were checked for sufficiency and logical validation. Four weeks were allocated for data collection in order to allow students from different disciplines to answer within the time frame.

3.4 Data Analysis

Reading self-efficacy within academic disciplines was analyzed with multiple steps. Descriptive statistics of participants' reading self-efficacy scores for the six components, including means, standard deviations, and percentages, were calculated. Pearson correlation

analysis was applied to investigate the correlation between all the six components using Pearson's *r* (L. Cohen et al., 2018). Variance in reading self-efficacy was analyzed with a one-way ANOVA, with the independent variables being business, social science, and science students. ANOVA is a well-established statistical technique for identifying differences in means across three or more groups. This approach was chosen because the independent variable (academic discipline) was categorical across the three groups, and the dependent variables (reading self-efficacy components) were continuous, meeting the parametric test assumptions. Post-hoc tests (Scheffé and Dunnett T3) were employed to pinpoint specific group differences when ANOVA results were significant, as recommended when multiple comparisons are made (Pallant, 2020). However, prior to inferential tests, assumptions of normality and homogeneity of variance were checked using Kolmogorov-Smirnov and Levene's test, ensuring that the validity of the parametric methods was achieved (Field, 2018). These analytical techniques align with practices in quantitative educational research, particularly in self-efficacy and EFL studies, ensuring accurate interpretation of data and reliable conclusions.

4. RESULTS

The first purpose of the study was to compare reading self-efficacy among EFL learners across three different academic fields: business, social science, and science students. Table 1 provides general information regarding the self-efficacy indicators among students in these categories. Descriptive statistics for each indicator were also presented to facilitate comparison across the three groups.

Table 1. Reading self-efficacy among students in three fields.

Reading self-efficacy	Business		Social science		Science		Total	
	n = 75 (34.56%)		n = 71 (32.72%)		n = 71 (32.72%)		n = 217 (100%)	
	M	SD	M	SD	M	SD	M	SD
Recognition of content elements (ROE)	3.03	0.52	2.82	0.47	2.79	0.61	2.88	0.54
Assessment of content (AOC)	3.01	0.47	2.83	0.42	2.86	0.56	2.90	0.49
Summary of content (SOC)	2.98	0.41	2.89	0.42	2.94	0.54	2.94	0.46
Opinion on content (OOC)	3.11	0.47	2.80	0.44	2.84	0.63	2.92	0.53
Comprehension of content (COC)	3.47	0.44	3.39	0.47	3.30	0.48	3.39	0.47
Reading strategies on content (RSOC)	3.33	0.52	3.43	0.49	3.23	0.28	3.33	0.45

With regard to recognition of content elements (ROE), business students obtained the highest mean score of 3.03 (*SD* = 0.52), which suggests that they could confidently assess central ideas, the writer's purpose, and relevant details within the reading sections. Social science students had a mean score of 2.82 (*SD* = 0.47) and science students had a lower mean score of 2.79 (*SD* = 0.61). The mean score of all students was 2.88 (*SD* = 0.54).

For assessment of content (AOC), business students obtained the highest mean score of 3.01 (*SD* = 0.47). Social-science students obtained a mean score of 2.83 (*SD* = 0.42), while students from the science disciplines obtained a mean score of 2.86 (*SD* = 0.56). The overall mean score was 2.90 (*SD* = 0.49), which indicates a moderate level of self-efficacy. In terms of summary of content (SOC), business students achieved a mean score of 2.98 (*SD* = 0.41), which represents a medium level of confidence in summarizing reading texts. Students from social sciences earned the lowest mean score of 2.89 (*SD* = 0.42).

In the category of opinion on content (OOC), business students attained the highest mean score of 3.11 (*SD* = 0.47), which indicates a high level of self-confidence in imagining and interpreting the texts they engage with. However, social-science students had the lowest mean score of 2.80 (*SD* = 0.44), while science students scored 2.84 (*SD* = 0.63). The overall mean score was 2.92 (SD = 0.53).

For comprehension of content (COC), business students outperformed the rest of the groups and scored a mean of 3.47 (*SD* = 0.44). The overall mean score was 3.39 (*SD* = 0.47), which was

also the highest of all six factors. Finally, in reading strategies on content (RSOC), the highest score of 3.43 (*SD* = 0.49) was achieved by the social science students, while business students scored a mean of 3.33 (*SD* = 0.52) and science students followed with 3.23 (*SD* = 0.28), which showcases all three groups' capable use of reading strategies, including skimming and scanning.

The results indicate that business students tended to have higher ratings in most measures of reading self-efficacy, suggesting stronger self-perception than social science and science students. The social science students exhibited the weakest self-efficacy level regarding summarization and opinion formulation. In contrast, business students demonstrated the strongest self-efficacy concerning content understanding.

Prior to applying the inferential statistics, normal distribution was checked using the Kolmogorov-Smirnov test since the sample size was greater than 50. This test shows that the data were normally distributed ($p = 0.083$). Consequently, parametric statistics, which include Pearson correlations and ANOVA, were employed. The correlation analysis examined relationships among reading self-efficacy components using Pearson coefficients to determine their strength and direction.

Table 2. Correlation of reading self-efficacy of academic disciplines.

Reading self-efficacy		**ROE**	**AOC**	**SOC**	**OOC**	**COC**	**RSOC**
ROE	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	217					
AOC	Pearson Correlation	0.207**	1				
	Sig. (2-tailed)	< 0.001					
	N	217	217				
SOC	Pearson Correlation	0.274**	0.522**	1			
	Sig. (2-tailed)	< 0.001	< 0.001				
	N	217	217	217			
OOC	Pearson Correlation	0.248**	0.402**	0.387**	1		
	Sig. (2-tailed)	< 0.001	< 0.001	< 0.001			
	N	217	217	217	217		
COC	Pearson Correlation	0.09	0.02	0.007	0.160*	1	
	Sig. (2-tailed)	0.18	0.79	0.917	0.02		
	N	217	217	217	217	217	
RSOC	Pearson Correlation	-0.170*	0.04	-0.07	-0.03	0.11	1
	Sig. (2-tailed)	0.01	0.53	0.322	0.66	0.1	
	N	217	217	217	217	217	217

*$p = 0.05$ level (2-tailed). **$p = 0.01$ level (2-tailed).

The results show that there were many significant correlations between the given factors. The strongest correlation was between AOC and SOC, with a Pearson's correlation coefficient of 0.522, indicating a moderate relationship (Schober et al., 2018). It can be inferred that students with a good capacity for content assessment also tended to perform well in content summarization tasks. Another notable correlation was between AOC and OOC, with a coefficient of 0.402. This moderate correlation suggests that students with high content evaluation skills tended to hold strong content-related opinions. A similar correlation was observed between SOC and OOC ($r = 0.387$). These results indicate that students who effectively summarize content also have strong opinions on the materials that they read.

In contrast, the correlation between ROE and SOC was only 0.274, demonstrating a weak (Schober et al., 2018) but significant relationship. This implies that the recognition of content items had some relationship with summarizing the content. Furthermore, ROE and OOC had a weak correlation of 0.248, which points towards a very limited relationship between recognition of content items and opinions about content. In some cases, students using reading strategies on content were found to have lower ability to recognize content items. This was indicated by RSOC having a negative correlation with ROE ($r = -0.170$). Weak as it is, this nevertheless suggests that these skills did not always go together. What the findings demonstrate is that some factors of reading self-efficacy seemed to be connected quite a bit. In particular, the moderate relationships

between rating the content, summarizing the content, and opinion on the content show that those skills are deeply intertwined.

Moreover, the research objective to compare reading self-efficacy across different disciplines was achieved by conducting an ANOVA analysis. The results provided in Table 3 illustrate the significant differences in self-efficacy among business, social sciences, and sciences students. This analysis also provided an overview of the variance components and significance levels across the groups.

Table 3. Results of ANOVA analysis of reading self-efficacy among different disciplines.

Reading self-efficacy		Sum of squares	df	Mean square	F	Sig.
ROE	Between groups	2.462	2	1.231	4.275	0.015*
	Within groups	61.630	214	0.288		
	Total	64.093	216			
AOC	Between groups	1.394	2	0.697	2.920	0.056
	Within groups	51.078	214	0.239		
	Total	52.472	216			
SOC	Between groups	.324	2	0.162	0.762	0.468
	Within groups	45.464	214	0.212		
	Total	45.788	216			
OOC	Between groups	4.179	2	2.089	7.809	0.001*
	Within groups	57.262	214	0.268		
	Total	61.441	216			
COC	Between groups	1.008	2	0.504	2.343	0.098
	Within groups	46.031	214	0.215		
	Total	47.039	216			
RSOC	Between groups	1.381	2	0.691	3.493	0.032*
	Within groups	42.310	214	0.198		
	Total	43.691	216			

*$p < 0.05$

The ANOVA analysis of students' recognition of content elements (ROE) shows a significant difference when comparing the groups ($F_{(2, 214)} = 4.275$, $p = 0.015$). Self-efficacy in ROE appears to differ significantly across academic disciplines. For assessment of content (AOC), the differences did not quite reach statistical significance, ($F_{(2., 214)} = 2.920$, $p = .056$). This near-significant result indicates that future studies with larger or different samples are needed to determine whether true differences exist or whether the lack of significance persists in how students from various disciplines evaluate and critique reading material.

No noticeable difference was observed in summary of content (SOC), implying that students' self-efficacy in summarizing text was approximately the same regardless of academic fields. This consistency may be attributed to the general nature of summarizing skills, which can be used in all disciplines. Similarly, the analysis of comprehension of content (COC) does not show significant differences, which indicates that the capacity to comprehend the use of language and context was similar in all fields.

Nonetheless, substantial discrepancies were discovered in the opinion on content (OOC) category ($F_{(2, 214)} = 7.809$, $p = 0.001$). Such a major difference suggests that students' self-efficacy in forming personal contexts and mental pictures from their reading differed across subjects. These differences may stem from the varying types of texts, alongside the differing levels of analysis that each discipline poses. Important differences between groups were also found in the reading strategies on content (RSOC) ($F_{(2, 214)} = 3.493$, $p = 0.032$). These results imply that students' implementation of reading techniques, such as skimming and scanning, differed by academic fields because of the distinct reading requirements and approaches within business, social sciences, and sciences.

Prior to performing the post-hoc analysis, checking the homogeneity of variances with Levene's test is important. The results of the Levene test regarding the various components of reading self-efficacy among EFL learners of different disciplines are presented in Table 4. The Levene test helps choose appropriate post hoc tests in ANOVA analysis. The Scheffé post hoc test was applied when variances were homogenous ($p > 0.05$), while the Dunnett T3 test was used

when variances were heterogeneous ($p < 0.05$). Levene test results demonstrated that the variances for recognition of content elements (ROE) were homogeneous across groups ($p = 0.204$). This shows that the homogeneity of variance assumption was satisfied, so the Scheffé post hoc test was performed next. On the other hand, the Levene test found statistically significant variance for opinion on content (OOC) ($p = 0.006$) and reading strategies on content (RSOC) ($p < 0.001$), indicating that these groups were heterogeneous. For these, the appropriate post hoc test for OOC and RSOC was the Dunnett T3 test, which adjusts for uneven variances.

Table 4. Levene test for homogeneity of variances.

Reading self-efficacy	Levene statistic	df1	df2	Sig.
ROE	1.599	2	214	0.204
AOC	1.975	2	214	0.141
SOC	1.020	2	214	0.362
OOC	5.272	2	214	0.006*
COC	0.596	2	214	0.552
RSOC	13.214	2	214	< 0.001*

*$p < 0.05$

The Scheffé test for recognition of content elements (ROE) within various academic disciplines revealed, as demonstrated in Table 5, that certain groups exhibited significant differences. The table also displays the mean differences, standard errors, significance levels, and confidence intervals. The results show which combinations of academic disciplines exhibited significant differences in recognition of content elements (ROE).

Table 5. Results from the Scheffé post-hoc test.

Reading self-efficacy	Disciplines	Disciplines	Mean difference	Std. error	Sig.	95% Confidence interval	
						Lower bound	Upper bound
Recognition of content elements (ROE)	Business	Social	0.207	0.089	0.069	-0.012	0.426
		Science	0.238*	0.089	0.029	0.019	0.457
	Social	Business	-0.207	0.089	0.069	-0.426	0.012
		Science	0.031	0.090	0.943	-0.191	0.253
	Science	Business	-0.238*	0.089	0.029	-0.457	-0.019
		Social	-0.031	0.090	0.943	-0.253	0.191

*$p < 0.05$

Comparing business and science students yields a mean difference of 0.238 with standard error of 0.089, which was statistically significant ($p = 0.029$). This suggests that business students held significantly more self-efficacy in recognizing content elements when compared to science students. On the other hand, the comparison between business and social science students yields a mean difference of 0.207 with a standard error of 0.089, which was not statistically significant ($p = 0.069$). The difference between social science and science students was also not statistically significant ($p = 0.943$). This means that social science and science students did not differ in self-efficacy in recognition of content elements.

As shown in Table 6, the post-hoc analysis with a Dunnett-T3 test for opinion on content (OOC) and reading strategies on content (RSOC) with varying academic disciplines displayed a gap between certain groups. With regard to opinion on content (OOC), the difference between the means of business students and social science students was 0.311, which achieved statistical significance ($p < 0.001$). This suggests that social science students reported significantly lower self-efficacy regarding expressing opinions when compared to business students. Additionally, the comparison of means between business and science students showed a difference of 0.268, which was statistically significant as well ($p = 0.012$). This indicates that business students had higher self-efficacy when it came to forming opinions about content when compared to science students. On the other hand, no statistically significant difference in OOC was found when comparing social science and science students.

When comparing academic disciplines in regard to reading strategies on content (RSOC) there was a significant mean difference ($p = 0.011$) between social science and science students. This finding suggests that social science students demonstrated greater self-efficacy in the use of reading strategies as compared to science students. However, business students did not differ significantly from social science and science students in this factor.

Table 6. Results from the Dunnett-T3 post-hoc test.

Reading self-efficacy	Disciplines	Disciplines	Mean difference	Std. error	Sig.	95% Confidence interval	
						Lower bound	Upper bound
Opinion on content (OOC)	Business	Social	0.311*	0.075	< 0.001	0.130	0.492
		Science	0.268*	0.092	0.012	0.046	0.491
	Social	Business	-0.311*	0.075	< 0.001	-0.492	-0.130
		Science	-0.042	0.091	0.954	-0.263	0.178
	Science	Business	-0.268*	0.092	0.012	-0.491	-0.046
		Social	0.042	0.091	0.954	-0.178	0.263
Reading strategies on content (RSOC)	Business	Social	-0.103	0.084	0.525	-0.305	0.099
		Science	0.094	0.069	0.433	-0.072	0.261
	Social	Business	0.103	0.084	0.525	-0.099	0.305
		Science	0.197*	0.067	0.011	0.036	0.359
	Science	Business	-0.094	0.069	0.433	-0.261	0.072
		Social	-0.197*	0.067	0.011	-0.359	-0.036

*$p < 0.05$

5. DISCUSSION

5.1 Reading Self-Efficacy

The findings of this study reveal that the overall reading self-efficacy levels among the EFL students were moderate, suggesting that students generally felt somewhat confident in their ability to engage with various reading tasks. This result aligns with previous research by Mills et al. (2007), who found that self-efficacy in language learning tends to be moderate among university students in non-English-speaking contexts. However, the moderate self-efficacy levels observed in this study may also reflect the unique challenges faced by EFL learners in Thailand such as limited exposure to authentic English texts and the linguistic complexity of academic reading materials (Alderson, 2000; Grabe & Stoller, 2020). Bandura's (1997) self-efficacy theory highlights that students develop their confidence through mastery experiences, but in EFL contexts, students often encounter failures due to unfamiliar vocabulary and cultural references. This may explain why self-efficacy levels did not reach a high level.

As noted in the results of this present study, EFL students from different areas exhibited remarkable variations in reading self-efficacy. In particular, business students tended to demonstrate higher self-efficacy levels than their social science and science counterparts. Evidence for this was particularly salient with respect to recognition of content elements (ROE), assessment of content (AOC), and opinion on content (OOC), and this seems to confirm that business students could potentially perceive themselves as more confident in reading activities that involve content evaluation and critical thinking. The relatively low confidence levels in these areas among the other two groups is consistent with the findings of Shehzad et al. (2020), who reported that EFL students often exhibit stronger self-efficacy in basic reading strategies. Such differences suggest that while students are confident in surface-level reading tasks, their self-efficacy declines when required to engage in deeper cognitive processes (Zimmerman, 2000). Such a tendency might, to some extent, correspond to Bandura's (1997) claim that self-efficacy beliefs arise from mastery experiences and the demands of a domain. Business students are likely to engage in practical reading tasks such as case studies and business reports, which could foster

confidence in evaluative and critical reading. This is consistent with Zimmerman (2000), who noted that students with task-related experiences have stronger self-efficacy.

The social science and science students appeared to have lower self-efficacy, particularly in regard to ROE and OOC. This may suggest that these students might be faced with more theoretical or abstract paradigms, which perhaps renders them less confident in their content recognition or evaluative judgments. According to Pajares (2003), self-efficacy is frequently dependent on context, so when students perceive materials as too dense or too far out of their contextual understanding, they are likely to lose confidence in their reading abilities. Moreover, comprehension of content (COC) and reading strategies on content (RSOC) were relatively higher in all three groups, which means that most students from all disciplines believed they could apply reading strategies and understand what they read. This may support Zimmerman and Schunk (2001), who contended that self-efficacy was enhanced as a result of strategic practices which were perceived as offering learners control over the reading process. However, it is possible that students might have overestimated their strategic reading abilities because self-assessment of this nature is prone to cognitive bias (Alderson, 2000).

In addition, the relatively lower scores in ROE reported by social science and science students indicate a possible area that needs educational intervention. Guthrie and Wigfield (2000) noted that students' self-efficacy within reading tasks is often linked to their engagement with those tasks. If recognizing essential content elements is deemed as being too difficult by students, their consequent lack of motivation could make self-efficacy development even harder. As such, instructors may need to pay more attention to helping students recognize content, especially when teaching students from social science and science disciplines.

There may, however, be other factors influencing these disciplinary disparities. Each discipline, as Hyland (2004) noted, has different discursive practices, which means that what is considered an effective reading strategy in business may not be regarded as such in social sciences or sciences. Thus, the disparities in self-efficacy may not reflect the deficiencies of some groups, but instead, represent the various reading norms and task expectations of different disciplines.

5.2 Relationship between Reading Self-Efficacy Components in Different Disciplines

The results demonstrated statistically significant positive correlations between several self-efficacy components, such as assessment of content (AOC) and summary of content (SOC), as well as opinion on content (OOC) and SOC. These findings indicate that EFL students who feel confident evaluating a text's content are also likely to feel capable of summarizing it, and those confident in summarizing are more likely to express opinions based on the text. This supports Zimmerman's (2000) view that self-efficacy is interconnected with self-regulated learning processes, where the mastery of one skill often enhances confidence in other related skills (Almayez et al., 2025). Grabe and Stoller (2020) also emphasized that evaluation, summarization, and synthesis are closely linked to higher-order reading skills. As students become more proficient in one aspect such as summarizing, they are likely to gain confidence in forming their own opinions and critically analyzing text content. Tsang and Yeung (2024) also showed that self-efficacy positively predicted all dimensions of EFL proficiency. This supports Bandura's (1997) concept of mastery experiences, implying that a positive component serves as a contributor to other reading areas.

However, it is noteworthy that the correlations were moderate rather than strong, implying that some students may still perceive these components as distinct and may struggle to transfer their confidence from one skill to another (Pajares, 1996). Likewise, the outcome is consistent with Oranpattanahai (2023) who found that Thai engineering students' perceived reading self-efficacy was moderate, alongside a correlational relationship between reading comprehension and self-efficacy in reading. This moderate relationship suggests that reading instruction should emphasize integrating these components, helping students understand how evaluation, summarization, and opinion formation support each other (Grabe & Stoller, 2020; Zimmerman, 2000). Task-based learning activities that require students to evaluate, summarize, and discuss a

text could facilitate this process, promoting interconnected self-efficacy development (Hyland, 2004).

One striking observation seems to be the moderate positive relationship between assessment of content (AOC) and summary of content (SOC). This might suggest that students who are confident in evaluating the text's content also consider themselves proficient in summarizing the text. This illustrates how advanced reading skills, which necessitate evaluation as well as synthesis, may be interrelated (Zimmerman & Schunk, 2001). This in turn reflects Bloom's (1956) claim that higher order processes such as evaluation and synthesis are intricately linked. However, this study contrasts with Houtveen and van de Grift (2007), who found that younger students often develop summarizing skills before evaluation abilities, suggesting a linear development. The results of the present study imply that among university-level EFL learners, these skills may develop in parallel, perhaps due to the integrated nature of academic reading tasks.

Another important correlation was found between opinion on content (OOC) and both AOC and SOC. These associations may mean that students who think they can evaluate and summarize the content of a given text may also perceive themselves capable of articulating an opinion on it. Rosenblatt (1978) emphasized that the more a person interacts with a text, the more one strives to understand the concepts, and this understanding, together with the ability to summarize, can enhance the comprehension process. Moreover, the relationship between ROE, SOC and OOC may be viewed in that successfully identifying important pieces of information constitutes a lower-level reading process, which may then enable higher level processes of summarization and opinion expression to take place. This is consistent with Guthrie and Wigfield (2000), who claimed that basic reading skills commonly serve as a foundation for more sophisticated reading actions.

A noteworthy observation was the weak negative correlation observed between the reading strategies on content (RSOC) and the recognition of content elements (ROE). This implies that students who use reading techniques such as skimming and scanning do not seem to recognize content elements very well. This is probably because they concentrate on more general ideas instead of specific details. Nuttall (1996) has noted that while some methods, like skimming, help in understanding the larger concept quickly, they may restrict the reader from noticing details, which partially explain this negative correlation. However, it is important to note that although this correlation was significant, it was very weak. As Hair et al. (2018) pointed out, correlations lower than .30 are generally perceived as weak. Thus, while this finding was meaningful, caution should be exercised so as to avoid over-interpretation. Also, self-efficacy beliefs need to be considered in context, including the text's level of difficulty, students' prior knowledge, and the level of guidance provided (Bandura, 1997; Zimmerman, 2000).

In addition, several correlations were found to be statistically non-significant, such as those between COC and ROE or between RSOC and SOC. This suggests there is not enough evidence for a relationship existing between these variables. For example, the lack of correlation between COC and ROE may indicate that vocabulary comprehension is not necessarily accompanied by effective recognition of key elements of the content, which is consistent with the observations of Grabe and Stoller (2020), who suggested that vocabulary knowledge and content recognition involve different cognitive processes. Therefore, these findings underscore that reading self-efficacy is a multi-faceted construct in which certain skills such as evaluation and summarization are closely linked, while other skills such as strategy use and content recognition may not always align. The absence of significant differences across disciplines in summary of content (SOC) and comprehension of content (COC) contrasts with prior research suggesting that science students often struggle more with content comprehension due to technical complexity (Alderson, 2000; Hellekjær, 2009). This finding may indicate that basic summarizing and general comprehension skills are at a similar stage of development across disciplines among first-year EFL students, possibly due to their shared experience with foundational English education in secondary school. The findings underscore the importance of promoting both lower-level skills (e.g., recognition) and higher-level skills (e.g., evaluation) to improve students' overall reading self-efficacy, as

suggested by Anderson and Krathwohl (2001). Understanding the relations of the different parts of reading self-efficacy will enhance targeted and guided instructional methods.

5.3 Differences in Reading Self-Efficacy across Disciplines

The study found statistically significant differences in reading self-efficacy levels across the three academic disciplines. Business students reported the highest self-efficacy in recognition of content elements (ROE) and opinion on content (OOC), while science and social science students demonstrated comparatively lower self-efficacy levels in these components. These results align with Hyland's (2004) concept of disciplinary literacy, which emphasizes that the nature of academic texts and reading expectations varies across fields. Business students often engage with structured, task-oriented texts like reports and case analyses, allowing them to develop confidence in extracting key information and forming practical judgments (Grabe & Stoller, 2020; Hyland, 2004).

Science students, by contrast, frequently encounter research articles and technical manuals, which involve dense terminology and data-driven content, making it more difficult for EFL learners to recognize key ideas quickly or express personal opinions (Alderson, 2000; Hellekjær, 2009). Social science texts often present abstract theoretical discussions, requiring interpretation rather than straightforward content identification, which may undermine students' self-efficacy (Hyland, 2004). The finding that science students reported lower self-efficacy in ROE and OOC is consistent with Shehzad et al. (2020), who found that EFL learners often struggle with complex reading materials, leading to reduced confidence levels.

The lack of substantial variations in COC and SOC from different disciplines is of interest, however. This is different from Hellekjær's (2009) work, which suggests that students within the sciences often have a difficult time understanding texts because of their high level of technicality. One possible explanation is that students in their initial years of university learning, regardless of their discipline, may possess similar English foundation education, and therefore their self-efficacy in these basic skills is similar. Furthermore, it could be the case that students have not had adequate exposure to reading specific tasks related to their disciplines during their first year. This points to the need for future studies focusing on the progression of self-efficacy in relation to reading as students advance through different stages of a program, particularly in the later years when greater emphasis is placed upon reading texts related to their chosen disciplines.

Moreover, contrasting results were found for opinion on content (OOC), with business students scoring higher compared to social science and science students. This suggests that business students may be more willing to express personal views regarding the content of reading assignments, which may be a result of their exposure to evaluative and decision-making processes characteristic of business education. This is consistent with Zimmerman (2000), who noted that self-efficacy is more likely to develop in self-regulatory contexts that require evaluative judgment as one of the primary tasks. Furthermore, analysis of reading strategies on content (RSOC) scores revealed a noteworthy gap between social science and science students, as social science students outperformed their peers. This suggests that social science students view themselves as more proficient in applying strategic reading techniques. Guthrie and Wigfield (2000) pointed out that self-efficacy toward reading strategies is more likely to be developed when students are invited to take an analytic approach to the text provided to them. Social science courses tend to focus on reading various theoretical approaches and analyzing multifaceted arguments, thus boosting self-efficacy regarding strategic reading.

It is critical to note, though, that caution should be taken when interpreting these differences. Hyland (2004) pointed out that academic disciplines have different discursive conventions; therefore, confident reading in business may not be the same as in sciences or social sciences. Furthermore, the lack of notable differences in other components, such as assessment of content (AOC), summary of content (SOC), and comprehension of content (COC), might suggest there is not much variation between these groups as regards the level of reading self-efficacy in identifying content items. This goes along with Pajares (2003) who observes that while there are notable differences in task specific efficacy beliefs, some enduring academic skills are cross

disciplinary. As Tuckman and Monetti (2010) noticed, reading self-efficacy is subject to students' prior knowledge of the content and the cognitive demands in their field of study. It is reasonable to assume that students in both business and social sciences have adequate content identification skills because they utilize both analytical and descriptive reading materials.

6. CONCLUSION

This study examined EFL learners' reading self-efficacy across different fields of study and found significant disciplinary differences: business students reported higher self-efficacy, likely due to frequent engagement with technical language and structured texts, whereas social science and natural science students showed lower self-efficacy, possibly because of the abstract or technical nature of their reading materials. The findings highlight the context-bound nature of reading self-efficacy, showing that it varies by discipline and relates to students' perceived competence in tasks such as evaluation, summarizing, and opinion forming. Practically, business students may benefit from advanced critical reading tasks, while science students require support in content extraction and vocabulary development, and social science students in interpreting abstract arguments and synthesizing diverse viewpoints.

Even though the current research sheds light on reading self-efficacy among EFL learners in different fields of study, there are some shortcomings that have to be considered. Firstly, although the sample size was adequate for statistical purposes, and stratified random sampling ensured representation from business, social science, and science disciplines, the sample was drawn from a single institutional context, which may not reflect the diversity of academic environments across other Thai universities or international settings. Furthermore, the sample consisted predominantly of young students, who may experience self-efficacy differently from older or more experienced learners. Secondly, the study relied on self-reports from questionnaires, which are known to be biased. Also, the study did not consider any other factors that might affect reading self-efficacy, such as prior academic achievements, socioeconomic status, or use of English outside the classroom. Such factors are likely to contribute towards self-efficacy. Regardless of these shortcomings, the study points towards significant areas that need to be addressed to improve self-efficacy among EFL learners, as well as offering robust suggestions for further research.

The findings of this study suggest several potential avenues for further studies. One suggestion is that the students' prior academic achievement, social status, and possible exposure to English outside the classroom be included in research on reading self-efficacy. These factors could deepen the understanding of self-efficacy and make it possible to design more effective interventions. Additionally, the relationship between self-efficacy in reading and other language skills, such as writing, speaking, and listening, should be studied. Such an approach would provide better understanding of EFL learners' language ability and how competencies interrelate. Experimental studies could investigate the effects of discipline-specific reading interventions on self-efficacy, exploring whether tailored instruction enhances students' reading confidence and performance. Finally, interviews and focus groups would help gain students' perspectives and personal accounts of their reading self-efficacy. Such qualitative information would enhance the quantitative evidence and reveal more intricate details of aspects that affect EFL learners' self-efficacy.

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