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Exploring the Relationship Between TOEIC Listening and Reading Scores and Test-Taking Strategies Among University Students

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ABSTRACT

English proficiency remains a critical determinant of academic and professional readiness, with TOEIC serving as a key indicator of real-world communication skills. Understanding how listening and reading interact—and how test-taking behaviors shape outcomes—offers meaningful guidance for both instruction and assessment. This study investigated the relationship between TOEIC Listening Comprehension (LC) and Reading Comprehension (RC) scores and explores the test-taking strategies employed by high-scoring university students. Quantitative data were drawn from 727 TOEIC mock test records collected over four academic years at Asia-Pacific International University, while qualitative insights were obtained from reflective responses of 30 students scoring between 700 and 990. Pearson correlation analysis revealed a strong positive association between LC and RC ($r = .899$, $p < .01$), with LC accounting for 81% of the variance in RC scores ($R^2 = .809$), confirming listening proficiency as a significant predictor of reading performance. Correlations remained moderate across proficiency bands, though the LC–RC gap widened among lower scorers, indicating disproportionate weaknesses in reading. Thematic analysis identified seven strategy categories: strategic time management, pre-reading and predictive listening, selective attention, elimination and inference, focus and concentration control, emotional regulation and stress management, and test familiarity practices. Findings underscore the need for integrated receptive-skill instruction and holistic strategy training that combines cognitive, metacognitive, and affective approaches. These insights inform curriculum design and pedagogical interventions aimed at improving TOEIC outcomes and enhancing learners' readiness for global communication.

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INTRODUCTION

The Test of English for International Communication (TOEIC), developed by Educational Testing Service (ETS) in 1979, assesses English proficiency for individuals working or aspiring to work in global business environments (Im & Cheng, 2019). Over the past four decades, TOEIC has gained worldwide recognition and is now used by language training programs, government agencies in over 160 countries, and approximately 14,000 corporations (Educational Testing Service, 2023). The assessment comprises two main components: the listening and reading test (TOEIC LR), which measures receptive language skills, and the speaking and writing test (TOEIC SW), which evaluates productive abilities. Test-takers may choose either section or both, depending on their goals (Im & Cheng, 2019). Additionally, ETS offers the TOEIC Bridge test for beginner to intermediate learners, covering all four language skills (Taladngoen et al., 2023).

In Thailand, TOEIC serves academic, professional, and immigration purposes. Many individuals take the test to meet graduation requirements, secure employment, or gain admission to language programs (Educational Testing Service, 2022). This underscores TOEIC's role as a key indicator of English proficiency in the international job market (Taladngoen et al., 2023). Notably, in 2022, about 47% of TOEIC LR test-takers were from Thailand, primarily for employment or academic qualifications (Educational Testing Service, 2022). Consequently, TOEIC LR has become a critical standardized measure of communicative competence in workplace settings (Hsieh, 2023).

Reflecting this trend, Asia-Pacific International University (AIU) requires senior students to take TOEIC LR as a graduation benchmark. Thai program students must achieve a minimum score of 500, while international program students need 700, aligning with the B1 level of the Common European Framework of Reference for Languages (CEFR) (Sittisuwan & Sitthitikul, 2019). These standards aim to ensure graduates possess adequate English proficiency for professional contexts. However, program chairs report that many students fail to meet these requirements annually.

Despite TOEIC's growing importance in Thai higher education, research has not fully addressed key questions about student performance. Although the listening and reading sections are often treated as separate skill domains, their interrelationship remains underexplored (Im & Cheng, 2019; Taladngoen et al., 2023). Understanding whether these receptive skills correlate could inform instructional strategies and enhance language proficiency (Hsieh, 2023). Furthermore, limited research examines the test-taking strategies students employ to succeed in TOEIC LR. While prior studies highlight cognitive and metacognitive strategies—such as skimming, scanning, inferencing, and time management—in high-stakes testing (Maliwan, 2020; Lee, 2018), few focus on TOEIC preparation in Thai universities. Investigating these strategies could reveal effective practices and guide pedagogical interventions to improve outcomes. Therefore, this study aims to (1) explore the relationship between TOEIC listening and reading scores and (2) identify test-taking strategies used by university students. The findings seek to deepen understanding of receptive language performance and support more effective instruction and preparation in EFL contexts.

LITERATURE REVIEW

TOEIC in Higher Education Contexts

The TOEIC test has become a widely adopted tool in higher education, particularly in Asia, where it is used to assess students' readiness for the workforce and to meet institutional language benchmarks (Im & Cheng, 2019; Sittisuwan & Sitthitikul, 2019; Taladngoen, 2023).

In particular, in many universities, including those in Thailand, TOEIC serves as a graduation requirement or a prerequisite for job applications, reflecting its perceived alignment with real-world communicative demands (Taladngoen et al., 2023; Sittisuwan & Sitthitikul, 2019). Beyond its administrative use, research suggests that TOEIC's influence extends beyond assessment, shaping curricula and instructional goals. While some studies report that TOEIC preparation can enhance students' receptive language skills and test awareness (Lertcharoenwanich, 2022; Rochman & Widjajanti, 2025), others caution against overreliance on test-oriented teaching, which may limit opportunities for developing broader communicative competence (Masrul & Rasyidah, 2023; Taladngoen & Esteban, 2022).

With respect to learning outcomes, empirical findings reveal mixed results. For instance, Hsieh (2023) and Lee (2018) found moderate to strong correlations between TOEIC scores and general English proficiency, suggesting the test's predictive validity in academic settings. Nevertheless, Masrul and Rasyidah (2023) and Hoang et al. (2021) observed that many students underperform on TOEIC due to a lack of strategy use, limited practice, and insufficient alignment between instruction and test demands. Taken together, the literature highlights both the functional role and the pedagogical implications of TOEIC in higher education. Therefore, understanding how students engage with the test—particularly the strategies they use—can offer insights into improving language instruction and supporting test performance.

Receptive Language Skills: Listening and Reading

The four core language skills—listening, speaking, reading, and writing—are inherently interconnected and function synergistically rather than in isolation. Language proficiency emerges from their integrated application, not from the mere sum of individual skills. Within this framework, receptive skills—listening and reading—share a stronger cognitive link compared to productive skills like speaking and writing (Cain et al., 2000; Protopapas et al., 2012; Tilstra et al., 2009). The Simple View of Reading (Gough & Tunmer, 1986) reinforces this connection by defining reading comprehension as the product of decoding and listening comprehension, underscoring listening's foundational role in reading development. Empirical evidence supports this perspective. Bozorgian (2012) found that listening correlates more strongly with reading than with speaking, while Nan (2018) argued that listening enhances responsiveness to language input, fostering reading fluency. Conversely, reading expands vocabulary and content knowledge, which strengthens listening comprehension (Padma et al., 2025; Yuniasih et al., 2025). Although the degree of correlation between listening comprehension (LC) and reading comprehension (RC) may vary by task and text type, comprehension theory affirms their interdependence as critical for linguistic competence (Diakidoy et al., 2005). Consequently, listening and reading tend to develop in tandem rather than as separate domains (Royer et al., 1990; Park et al., 2020).

Research further highlights the strong association between receptive skills and overall English proficiency among EFL learners (Brooks et al., 2023; Jung, 2010; Victoriano & Dimaano, 2023; Zhang & Zhang, 2022). Park et al. (2020) confirmed that LC and RC are closely linked and emphasized the role of grammatical and lexical knowledge in reading outcomes. These findings underscore the pedagogical value of integrating listening and reading instruction, particularly in EFL contexts, where such integration can accelerate language acquisition and improve test performance.

Despite extensive research on receptive skills, few studies have examined their interaction within standardized assessments like TOEIC (Im & Cheng, 2019; Taladngoen et al., 2023). Given TOEIC's widespread use for academic and professional purposes,

understanding the relationship between listening and reading scores is vital for optimizing test preparation and informing curriculum design. This study addresses this gap by analyzing the correlation between TOEIC Listening and Reading scores and exploring strategies students employ to enhance performance in both areas.

Test-Taking Strategies

Test-taking strategies (TTS) are widely recognized as essential tools for navigating language assessments, particularly when linguistic knowledge is limited or test items are complex (Tran & Nguyen, 2023). These strategies include reading instructions carefully, managing time, identifying keywords, skipping difficult questions, and reviewing answers for accuracy (Bachman & Palmer, 2022; Cohen & Upton, 2007; Rahayu et al., 2022). Dodeen (2015) further conceptualizes TTS as cognitive abilities that enable individuals to regulate performance regardless of content knowledge, empowering test-takers to handle unfamiliar material through procedural awareness and decision-making.

In receptive language assessments such as reading and listening comprehension, TTS often align with language learning strategies. Phakiti (2008) and Cohen (2021) classify these into memory, compensation, cognitive, metacognitive, and affective strategies. Memory strategies activate prior knowledge and linguistic experience to interpret new input, often unconsciously during tests (Grabe, 2008; Singh et al., 2021; Vu et al., 2024; Yunus & Chaudhary, 2023). Compensation strategies help learners infer meaning using context and syntax when facing lexical or structural gaps (Chanderan & Hashim, 2022; Pasumbu & Macora, 2020). Cognitive strategies involve manipulating input through summarizing, translating, or reorganizing text for better comprehension (Agustin et al., 2021; Oxford, 2001). While learners employ diverse strategies, focused research on TTS in standardized tests like TOEIC remains critical for improving preparation and performance (Duong et al., 2021; Tran & Chau, 2021).

Despite extensive studies on TOEIC for academic and employment readiness, gaps persist regarding the integration of receptive skills in standardized assessments. Although prior research confirms links between listening and reading skills (Bozorgian, 2012; Park et al., 2020), few studies explore their correlation within TOEIC LR tests, especially in Thai higher education. Similarly, while TTS are acknowledged as vital (Cohen, 2021; Tran & Nguyen, 2023), little attention has been given to strategies used by high-scoring students. This is particularly relevant for institutions like Asia-Pacific International University, where meeting TOEIC benchmarks is a graduation requirement. Addressing these gaps will provide insights into how students prepare for high-stakes tests and inform targeted interventions to improve outcomes. Accordingly, this study investigates the relationship between TOEIC listening and reading scores and examines the strategies employed by high-achieving students. Two research questions guide this inquiry:

1. What is the relationship between TOEIC listening and reading scores among university students?
2. What test-taking strategies do high-scoring students use to succeed in the listening and reading sections of the TOEIC exam?

RESEARCH METHODS

Research Design

This study employed a mixed-methods research design, integrating quantitative and qualitative approaches to provide a comprehensive understanding of the relationship between TOEIC listening and reading performance and the strategies used by high-scoring test-takers. The quantitative component consisted of analyzing TOEIC mock test score records from 727 students to identify patterns and correlations between Listening

Comprehension (LC) and Reading Comprehension (RC). To complement and deepen the quantitative findings, the qualitative component explored the test-taking strategies of 30 high-scoring students, selected through simple random sampling. These students provided reflective descriptions of the strategies they employed while completing the TOEIC listening and reading sections.

The quantitative phase established statistical evidence of associations between listening and reading performance, while the qualitative phase offered interpretive insights that clarified how specific strategies may contribute to high outcomes. Using mixed methods strengthened the study by allowing statistical trends and subjective experiences to inform one another, resulting in a more robust and contextually grounded interpretation of TOEIC performance.

Data Collection

To address the study's objectives, quantitative data were collected from TOEIC mock test records administered at Asia-Pacific International University (AIU) over four academic years (2022–2025). The dataset included scores from the Listening Comprehension (LC) section (maximum 495 points) and the Reading Comprehension (RC) section (maximum 495 points) of undergraduate students, ranging from freshmen to seniors, who completed both pre-test and post-test TOEIC mock assessments as part of the university's English proficiency development program. A total of 727 score entries were obtained from institutional mock tests that adhered to the standardized TOEIC Listening and Reading format. Each student's performance was recorded twice—before and after targeted TOEIC preparation sessions. These mock tests served both diagnostic purposes and simulated official TOEIC testing conditions. The dataset comprised individual LC and RC scores as well as total scores, providing a comprehensive basis for analyzing the relationship between receptive language skills.

To explore the test-taking strategies of high-scoring students, a simple random sampling technique was applied to a subgroup of approximately 100 students who achieved TOEIC scores between 700 and 990. Based on a 95% confidence level and a ±10% margin of error, a sample of 30 participants was randomly selected. These participants were invited to participate in the qualitative phase of the study by submitting a short reflective paper (approximately 250-300 words) describing the strategies they employed while attempting the listening and reading sections of the TOEIC exam.

Quantitative Data Analysis

Initial data analysis involved calculating descriptive statistics, including the mean and standard deviation for both LC and RC scores. These statistics provide a foundational understanding of students' performance distribution and allow for preliminary comparison across score categories. Following this, inferential statistical analysis was performed using the Statistical Package for the Social Sciences (SPSS). Specifically, Pearson's correlation coefficient was computed to measure the strength and direction of the linear relationship between LC and RC scores, as well as their combined effect on the total TOEIC score. The Pearson correlation yields a value between -1 and 1, where values close to 1 indicate a strong positive correlation, values near -1 signify a strong negative correlation, and values around 0 suggest no linear relationship. This analysis enables the study to determine whether performance in one receptive skill significantly predicts or relates to performance in the other, thereby offering insights into how these skills develop and interact in the TOEIC testing context.

The findings from this quantitative analysis will form the foundation for identifying participants for the qualitative phase of the study, which aims to explore the test-taking strategies employed by high-scoring students—a process described in the next section.

Qualitative Data Analysis

The qualitative data collected through participants' reflective papers were analyzed using thematic analysis, as outlined by Braun and Clarke (2006). This method was selected for its flexibility and effectiveness in identifying, analyzing, and reporting patterns within qualitative data. Thematic analysis involves six systematic phases: (1) familiarization with the data, where researchers read and reread the reflections to immerse themselves in the content; (2) generating initial codes, during which key phrases and strategy-related expressions were highlighted and labeled across the dataset; (3) searching for themes, where the coded data were grouped into broader categories that represented recurring test-taking strategies; (4) reviewing themes, in which the identified themes were refined and checked for internal coherence and relevance to the research questions; (5) defining and naming themes, where each theme was clearly described and distinguished from others to ensure conceptual clarity; and (6) producing the report, where the final thematic findings were synthesized and supported with illustrative quotations from the participants' reflections. The goal of this analysis is to uncover patterns in how high-scoring students approach the TOEIC listening and reading sections, providing insight into the cognitive and metacognitive strategies they employ during test-taking. Through this analytical process, the study aims to contribute to a deeper understanding of strategic behavior in standardized language testing contexts.

FINDINGS

To address Research Question 1"What is the relationship between TOEIC listening and reading scores among university students?", the study assessed the strength and direction of associations between Listening Comprehension (LC) and Reading Comprehension (RC) across three proficiency levels. Pearson correlation coefficients were computed for three score ranges to determine whether these receptive skills develop in tandem and how their relationship varies by overall performance. The results are summarized in the following tables.

Table 1

Pearson's Correlation for the Overall TOEIC Scores

Descriptive Statistics				Correlations		
Variable	N	Mean	SD	LC	RC	Total
LC	727	300.91	122.17	1	.899**	.973**
RC	727	222.33	131.13		1	.976**
Total	727	523.25	246.87			1

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

Table 1 presents the Pearson correlation coefficients among LC, RC, and Total TOEIC scores for 727 participants. The results show a strong positive correlation between LC and RC scores ($r = .899$, $p < .01$), indicating that students who performed well in one receptive skill tended to perform well in the other. Additionally, both LC and RC scores were highly correlated with the total score, with coefficients of .973 and .976 respectively ($p < .01$).

These findings suggest that both listening and reading skills significantly contribute to overall TOEIC performance.

Table 2
Summary of the Simple Linear Regression Model

Predictor	*R*	*R* Square	Adjusted *R* Square	F	*β*	SE B	B
Listening Comprehension (LC)	0.899	0.809	0.809	3071.524	0.899	57.347	0.965

Note. Dependent variable: Reading Score; Predictors: Listening Score

A simple linear regression examined whether Listening Comprehension (LC) scores predict Reading Comprehension (RC) scores (Table 2). The model was highly significant, $F(1, 725) = 3071.52$, $p < .001$, explaining 81% of the variance in RC scores ($R^2 = .809$). The standardized beta ($\beta = .899$) indicates a strong positive association, and the unstandardized coefficient ($B = 0.965$) suggests that each one-point increase in LC corresponds to an approximate 0.97-point increase in RC. These findings confirm that listening proficiency is a strong predictor of reading performance in the TOEIC test.

Table 3
Mean Scores of LC, RC, and the Gap Between LC and RC for Each Group

Variable	Score Range: 700-990 (n=206)		Score Range: 500-699 (n=143)		Score Range: 95-499 (n=378)	
	M	SD	M	SD	M	SD
LC	453.52	37.03	344.16	41.33	201.39	63.15
RC	396.36	53.40	255.28	42.89	115.03	48.67
Total	849.88	79.32	599.44	56.49	316.42	96.70
Gap between LC & RC	57.16		88.88		86.36	

Table 3 presents mean scores and standard deviations for Listening Comprehension (LC), Reading Comprehension (RC), and total TOEIC scores across three proficiency groups. High scorers (700–990) achieved the highest averages (LC: M = 453.52; RC: M = 396.36; Total: 849.88), followed by mid scorers (500–699) with moderate results (LC: 344.16; RC: 255.28). Low scorers (95–499) recorded the lowest means (LC: 201.39; RC: 115.03; Total: 316.42). The LC–RC gap widened as proficiency declined—57.16 points in the high group versus 86.36 in the low group—indicating greater disparity between listening and reading skills among lower-performing students.

Table 4 reports Pearson correlation coefficients between Listening Comprehension (LC), Reading Comprehension (RC), and total TOEIC scores across three proficiency groups. LC and RC demonstrated moderate positive correlations in all groups (700–990: $r = .523$; 500–699: $r = .465$; 95–499: $r = .487$; all $p < .01$), indicating that listening and reading skills develop in tandem regardless of proficiency level. Strong and significant correlations were observed between LC–Total and RC–Total scores ($p < .01$), confirming the substantial contribution of both skills to overall TOEIC performance. These relationships were most pronounced in the low-score group (LC–Total: $r = .898$; RC–Total: $r = .821$), suggesting that

listening and reading exert consistent but varying influence on total scores across proficiency bands.

Table 4
Correlation Between LC and RC Scores for Each Group

Correlation	Score Range: 700-990 (n=206)	Score Range: 500-699 (n=143)	Score Range: 95-499 (n=378)
LC & RC	.523**	.465**	.487**
p value	.000	.000	.000
LC & Total	.819**	.655**	.898**
p value	.000	.000	.000
RC & Total	.917**	.686**	.821**
p value	.000	.000	.000

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

To address the second research question on test-taking strategies, a thematic analysis was conducted following Braun and Clarke's (2006) framework and Creswell's (2012) coding model. The coding process, illustrated in Figure 1, identified recurring patterns and consolidated them into key themes representing students' strategic behaviors during the TOEIC listening and reading sections.

Figure 1
The Coding Process

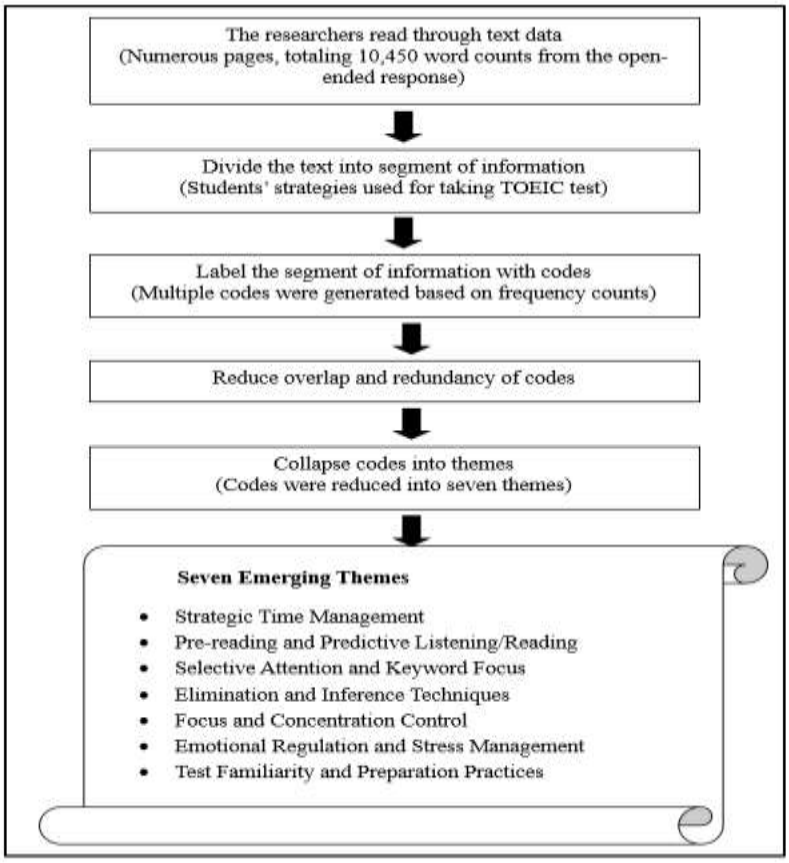

Figure 1 illustrates the stages of thematic analysis employed to examine students' open-ended responses regarding TOEIC test-taking strategies. Following data familiarization, the researchers reviewed approximately 10,450 words of textual data. The responses were segmented into meaningful units reflecting test-taking behaviors, and each segment was assigned initial codes based on frequency and relevance. To ensure analytical rigor, overlapping and redundant codes were refined and merged. Through this iterative process, the codes were consolidated into seven themes, which were organized based on their frequency of occurrence: (1) Strategic Time Management, (2) Pre-reading and Predictive Listening/Reading, (3) Selective Attention and Keyword Focus, (4) Elimination and Inference Techniques, (5) Focus and Concentration Control, (6) Emotional Regulation and Stress Management, and (7) Test Familiarity and Preparation Practices. These themes represent strategies commonly employed by students in the TOEIC listening and reading sections. Tables 5–11 present students' test-taking strategies employed while completing the listening and reading sections of the TOEIC exam. The number in square brackets indicates the frequency of occurrence.

(1) Strategic Time Management [28]

Strategic time management assists test takers in planning and allocation of limited time resources during a task or assessment to maximize efficiency and performance. In TOEIC listening and reading tests, it involves prioritizing questions, pacing oneself across sections, and adjusting time use based on item difficulty and remaining time. This strategy aims to ensure that all questions are attempted, that cognitive overload is minimized, and that overall test performance is optimized under strict time constraints (Cohen, 2021). Table 5 presents illustrative examples of the theme, its corresponding codes, and selected excerpts from participants' responses.

Table 5

Strategic Time Management

Code	Informant	Example of Responses
Efficient time	# ST6	"…I think I need efficient time to make sure that I complete all the questions…"
Time limited	**#** ST10	"…In taking TOEIC test I realize that time is very short, so for me I need to work with time management carefully so that I won't have too much stress…"
Time allocation	# ST15	"…Reading section is long and it contains many different segments, and I must allocate time wisely for each part…"

(2) Pre-reading and Predictive Listening/Reading [23]

This strategy refers to the proactive approach of previewing test content and anticipating possible answers before engaging fully with the listening or reading task. In the TOEIC context, this strategy involves quickly scanning questions and answer choices prior to listening to audio passages or reading texts (Tran & Chau, 2021). Table 6 provides examples of this theme along with its corresponding codes.

Table 6
Pre-reading and Predictive Listening/Reading

Code	Informant	Example of Responses
Look at answer choices	# ST2	"…When I attempt the listening test, I will look at answer choices before the audio starts …"
Quickly review text	**#** ST8	"…I think it is important to quickly review text to identify key ideas when the passage is long …"
Highlight the key terms	# ST13	"…Many times, I will highlight or note the terms when I do the reading and listening test…"

(3) Selective Attention and Keyword Focus [19]
Selective Attention and Keyword Focus in test-taking refers to a strategy where examinees intentionally concentrate on the most relevant information—such as key words, phrases, or signals—while filtering out less important details. This approach helps manage cognitive load and improves accuracy under time constraints (Agustin, et al., 2021). Table 7 presents examples of this theme and its associated codes.

Table 7
Selective Attention and Keyword Focus

Code	Informant	Example of Responses
Skip unimportant phrases	# ST7	"…When time is limited, I often skip unimportant phrases or statements that I guess not so relevant…"
Look for synonymous words	**#** ST19	"…One thing I often do when taking TOEIC reading exam is to look for similar words or synonyms…"
Underline keywords before listening	# ST13	"…Since the audio runs very quick, I will underline keywords before I start to listen to those short conversations…"

(4) Elimination and Inference Techniques [15]
Elimination and Inference Techniques refer to test-taking strategies that involve systematically discarding implausible answer choices and using contextual clues, logical reasoning, and partial understanding to deduce the most likely correct response (Dodeen, 2015). Table 8 presents illustrative examples of the theme, its related codes, and pertinent excerpts from participants' responses.

Table 8
Elimination and Inference Techniques

Code	Informant	Example of Responses
Use context clues to infer meaning	# ST6	"…In taking the TOEIC test I sometimes guess the word from the sentence context appeared in the passage…"
Compare answer choices	**#** ST14	"…Normally I check which choice matched the passage best when I don't have much time left…"
Guess based on logical reasoning	# ST25	"…Sometimes I pick the option that made the most sense when I'm unsure about the correct answer…"

(5) Focus and Concentration Control [11]

Focus and Concentration Control is the deliberate regulation of attention to minimize distractions and maintain mental engagement during the test. In the TOEIC context, this involves staying attentive to audio prompts in the listening section and avoiding lapses in concentration while reading lengthy passages under strict time limits. Table 9 displays representative examples of the theme, its associated codes, and pertinent excerpts from participants' responses.

Table 9

Focus and Concentration Control

Code	Informant	Example of Responses
Sustained attention	# ST17	"…When taking test I would keep reminding myself to stay focused during the long reading passages …"
Active listening	**#** ST26	"…For me, in listening section I try to listen carefully to every word in the audio and avoid thinking about other things…"
Self-regulation strategy	# ST30	"…Whenever I felt distracted, I quickly refocused by rereading the question…"

(6) Emotional Regulation and Stress Management [9]

Emotional regulation and stress management constitute essential psychological processes that underpin effective test performance. Emotional regulation involves the deliberate control of affective responses—such as anxiety, frustration, or nervousness—to prevent these emotions from impairing cognitive functioning (Yunus & Chaudhary, 2023). Complementarily, stress management refers to strategies aimed at mitigating or coping with physiological and psychological stressors that emerge before or during an examination (Santos Alves et al., 2022). Table 10 presents illustrative instances of the theme, along with corresponding codes and relevant excerpts drawn from participants' responses.

Table 10

Emotional Regulation and Stress Management

Code	Informant	Example of Responses
Anxiety control	# ST4	"…Sometime when I take TOEIC exam, I remind myself to stay calm when I feel nervous about the listening section …"
Time pressure coping	**#** ST18	"…I tried not to panic about the clock and focused on one question at a time …"
Breathing exercises	# ST22	"…Before starting the test, I often take breathing exercise to take deep breaths to reduce stress and clear my mind …"

(7) Test Familiarity and Preparation Practices [5]

Test familiarity denotes the extent to which a test-taker possesses prior knowledge of the examination's structure, format, and procedural requirements (Oxford, 2001). This encompasses an understanding of question types, awareness of time constraints, and familiarity with the sequencing of sections, all of which contribute to reducing uncertainty and enhancing performance efficiency. Table 11 provides representative examples of the

theme, accompanied by associated codes and pertinent excerpts from participants' narratives.

Table 11
Test Familiarity and Preparation Practices

Code	Informant	Example of Responses
Understanding test format	# ST7	"…Normally before I take TOEIC exam, I will review the TOEIC structure so I know what to expect in each section …"
Practice with sample tests	**#** ST19	"…For me I take several mock tests to get used to the timing and question styles of the exam …"
Content review	# ST30	"…I spend time revising grammar rules and common TOEIC vocabulary …"

The findings addressing the second research question indicate that students employed a range of test-taking strategies that align closely with established language learning and assessment strategy frameworks (Cohen, 2021; Oxford, 2001). The most prominent strategies involved metacognitive regulation, particularly time management and planning, reflecting learners' ability to monitor task demands and allocate cognitive resources efficiently. Students also reported cognitive strategies, such as previewing questions, predicting content, focusing on key words, and using elimination and inference when answers were uncertain, which correspond to Oxford's cognitive strategy taxonomy. In addition, affective strategies emerged as an important component of test performance, with students emphasizing stress management, concentration control, and emotional regulation during high-stakes testing. Less frequently mentioned but still relevant were test familiarity and preparation strategies, highlighting the role of prior exposure and practice in strategic competence. Overall, the findings suggest that effective TOEIC performance is supported by the integrated use of metacognitive, cognitive, and affective strategies, reinforcing Cohen's view that strategic competence is central to successful language test performance.

DISCUSSION

Strong overall Association between LC and RC

The study found a strong positive correlation between LC and RC ($r = .899$, $p < .01$), indicating that students who perform well in one receptive skill tend to perform well in the other. Moreover, both LC and RC were highly correlated with the total score (LC–Total $r = .973$; RC–Total $r = .976$; $p < .01$), underscoring the centrality of receptive skills to overall TOEIC performance. These findings align with theoretical accounts that emphasize the interdependence of listening and reading, such as the simple view of reading, which positions listening comprehension as foundational to reading comprehension, and empirical work reporting robust links between receptive skills in EFL contexts (Lertcharoenwanich, 2022; Rochman & Widjajanti, 2025). The simple linear regression showed that LC scores explain approximately 81% of the variance in RC scores ($R^2 = .809$; $F(1,725) = 3071.52$, $p < .001$), with a standardized beta of .899 and an unstandardized coefficient indicating that each point increase in LC is associated with ~0.97 points in RC. This predictive relation echoes prior claims that listening facilitates access to language input and supports the development of reading fluency, vocabulary, and syntactic parsing, thereby strengthening reading outcomes (Bozorgian, 2012; Gough & Tunmer, 1986; Nan, 2018; Park et al., 2020).

The LC–RC Relationship Holds across Proficiency Bands, with Notable Disparities.
Across high (700–990), mid (500–699), and low (95–499) bands, LC–RC correlations remained moderate and significant ($r = .523, .465, .487$ respectively; $p < .01$), suggesting a consistent tandem development of receptive skills regardless of proficiency. At the same time, the gap between LC and RC widened as overall scores decreased (≈57 points in the high group vs. ≈86 points in the low group), indicating that lower-performing students show disproportionate weaknesses in reading relative to listening. This pattern is consistent with research highlighting that vocabulary breadth, grammatical knowledge, and strategic text processing can become bottlenecks for reading as task complexity increases; integrating instruction that concurrently targets listening input and reading development may therefore be pedagogically advantageous (Brooks et al., 2023; Victoriano & Dimaano, 2023; Zhang & Zhang, 2022).

The combined evidence suggests that instruction and preparation should integrate listening and reading rather than treating them as discrete competencies (Royer et al., 1990; Park et al., 2020). Approaches that leverage listening to scaffold decoding, inferencing, and lexical growth—and that systematically train reading under time constraints—are likely to yield synergistic gains on TOEIC. Programmatically, given the strong LC–RC–total relationships, curricula that sequence receptive skills together and use mock tests to calibrate difficulty and timing can enhance overall performance and reduce the LC–RC disparity among lower-scoring students (Masrul and Rasyidah, 2023; Park et al.,2020; Hoang et al.,2021). High-scoring students employed a combination of metacognitive, cognitive, and affective strategies that align with established frameworks in language assessment research (Cohen, 2021; Oxford, 2001). The most salient strategies include metacognitive regulation (strategic time management); cognitive strategies (previewing and keyword focus); compensation strategies (elimination and inference); affective strategies (emotional regulation and stress management); and test familiarity and preparation practices.

Metacognitive Regulation (Strategic Time Management)
High-scoring students most frequently reported strategic time management (e.g., pacing, prioritizing, allocation of time by part), reflecting advanced metacognitive monitoring and planning under strict time limits. This maps onto established strategy taxonomies that locate metacognition at the core of successful performance in high-stakes tests (Phakiti, 2008; Cohen & Upton, 2007). The prevalence of time management corroborates prior findings that strategic pacing mitigates cognitive overload and ensures coverage of all items (Vu et al., 2024), thereby stabilizing accuracy under pressure.

Cognitive Strategies (Previewing and Keyword Focus)
Participants employed pre-reading and predictive listening/reading techniques, such as scanning questions and answer choices before engaging with audio or text, previewing long passages to identify key ideas, underlining keywords, and noting synonyms. These strategies reduce search costs, prime attention for selective uptake, and facilitate efficient processing under time constraints. Such behaviors are consistent with evidence that previewing activates schema and narrows attentional focus, thereby enhancing comprehension during input (Agustin et al., 202; Protopapas et al., 2012; Tilstra et al., 2009; Tran & Chau, 2021).

Compensation Strategies (Elimination and Inference)
When faced with unfamiliar vocabulary or complex structures, students relied on logical reasoning and contextual clues to infer meaning and eliminate implausible options. These strategies enable test-takers to overcome lexical or structural gaps by leveraging partial understanding to select the most plausible answer—a practice widely recognized as effective in standardized reading and listening assessments (Dodeen, 2015; Pasumbu & Macora, 2020).

Affective Strategies (Emotional Regulation and Stress Management)
High-scoring students reported using calming techniques, breathing exercises, positive self-talk, and coping mechanisms to manage anxiety and maintain focus under time pressure. These affective strategies play a critical role in preserving working memory and sustaining attentional stability during high-stakes testing, thereby reducing panic-driven errors and supporting sound decision-making (Vu et al., 2024). Their prominence in participants' reflections underscores the psychological dimension of test success and complements cognitive and metacognitive approaches. Prior research confirms that emotional regulation and stress management enhance cognitive functioning and improve performance in timed assessments (Yunus & Chaudhary, 2023; Santos Alves et al., 2022).

Test Familiarity and Preparation Practices
Although mentioned less frequently, strategies related to test familiarity and preparation—such as understanding the exam format and sequencing, engaging with mock tests, and reviewing targeted content—play a crucial role in reducing uncertainty and enhancing performance. Prior exposure to item types and timing improves situational awareness, enabling efficient application of strategies like previewing and elimination (Lee, 2018; Maliwan, 2020). These practices help calibrate pacing and facilitate the transfer of learned strategies from practice sessions to the actual test. Research consistently highlights that familiarity with test structure fosters confidence and strengthens strategic competence, thereby contributing to more effective test-taking (Cohen, 2021; Oxford, 2001; Rahayu et al., 2022).

IMPLICATIONS

The findings underscore the need for integrated instructional approaches that simultaneously develop listening and reading skills rather than treating them as isolated competencies. Given the strong predictive relationship between Listening Comprehension and Reading Comprehension ($R^2 = .809$), curricula should leverage listening activities to scaffold decoding, inferencing, and vocabulary acquisition while reinforcing reading fluency under time constraints. This integration is particularly critical for lower-performing students, who exhibit a widening LC–RC gap, suggesting disproportionate weaknesses in reading. Pedagogical interventions should therefore combine receptive-skill training with explicit strategy instruction, emphasizing metacognitive regulation (e.g., time management), cognitive techniques (e.g., previewing, keyword focus), and compensation strategies (e.g., inference and elimination). Additionally, affective strategies such as stress management and emotional regulation should be incorporated to maintain attentional stability during high-stakes testing. Institutions should also promote test familiarity through mock exams and targeted content review to reduce uncertainty and enhance strategic competence. Collectively, these measures can improve TOEIC outcomes and better prepare students for professional communication in global contexts.

CONCLUSION

This study reveals a strong interrelationship between TOEIC listening and reading performance, confirming that listening proficiency significantly predicts reading outcomes. The consistent LC–RC correlation across proficiency levels, coupled with the observed disparity among lower scorers, highlights the importance of integrated receptive-skill instruction. Furthermore, high-scoring students' reliance on metacognitive, cognitive, affective, and preparatory strategies demonstrates that strategic competence is central to test success. These insights call for a holistic approach to TOEIC preparation that combines skill integration, strategy training, and psychological readiness. By embedding these elements into language programs, educators can enhance students' performance on standardized assessments and equip them with transferable skills for real-world communication.

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REFERENCES

Agustin, W., Wahyudin, A. Y., & Isnaini, S. (2021). Language learning strategies and academic achievement of English Department students. *J. Arts Educ, 1*(1), 19-29.

Bachman, L., & Palmer, A. (2022). *Language assessment in practice: Developing language assessments and justifying their use in the real world*. Oxford University Press

Bozorgian, H. (2012). The Relationship between listening and other language skills in International English language testing system. *Theory and Practice in Language Studies, 2*(4), 657–13. https://doi.org/10.4304/tpls.2.4.657-663

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77-101

Brooks, G., Clenton, J., & Fraser, S. (2023). Exploring the importance of vocabulary for English as an additional language learners' reading comprehension. *In EAL Research for the Classroom* (pp. 35-58). Routledge.

Cain, K., Oakhill, J., & Bryant, P. (2000). Investigating the causes of reading comprehension failure: The comprehension-age match design. *Reading and Writing,12*(1), 31–40. https://doi.org/10.1023/A:1008058319399

Chanderan, V., & Hashim, H. (2022). Language learning strategies used by ESL undergraduate students. *Creative Education, 13*(3), 768-779.

Cohen, A. D. (2021). Test-taking strategies and task design. In *The Routledge handbook of language testing* (pp. 372-396). Routledge.

Cohen, A. D., & Upton, T. A. (2007). I want to go back to the text: Response strategies on the reading subtest of the new TOEFL®. *Language testing, 24*(2), 209-250. https://doi.org/10.1177/0265532207076364

Creswell, J. W. (2012). *Educational research: Planning, conducting and evaluating quantitative and qualitative research* (4th Ed.). Boston, MA: Pearson Education Inc.

Diakidoy, I., Stylianou, P., Kareflillidou, C., & Papageorgiou, P. (2005). The relationship between listening and reading comprehension of different types of text at increasing grade levels. *Reading Psychology, 26*(1), 55–80. https://doi.org/10.1080/02702710590910584

Dodeen, H. (2015). Teaching test-taking strategies: Importance and techniques. *Psychology Research, 5*(2), 108-113.

Duong, T. M., Tran, T. Q., & Nguyen, T. T. P. (2021). Non-English majored students' use of English vocabulary learning strategies with technology enhanced language learning tools. *Asian Journal of University Education (AJUE), 17*(4), 455-463. https://doi.org/10.24191/ajue.v17i4.16252

Gough, P. B., & Tunmer, W. E. (1986). Decoding, reading, and reading disability. *Remedial and Special Education, 7*(1), 6-10. https://doi.org/10.1177/074193258600700104

Grabe, W. (2008). *Reading in a second language: Moving from theory to practice.* Cambridge University Press. https://doi.org/10.1017/CBO9781139150484

Educational Testing Service. (2023). *Unlock global opportunities with proven business English- language proficiency.* Retrieved from https://toeicglobal.com/.

Educational Testing Service. (2022). *Report on test takers worldwide: TOEIC listening and reading test.* Retrieved from https://www.ets.org/pdfs/toeic/toeic-listening-reading-report-test-takers-worldwide.pdf

Hoang, T. D., Phan, T. L., & Le, H. P. (2021). Non-English major students' perceptions towards TOEIC online learning and testing. *AsiaCALL Online Journal, 12*(5), 114-128.

Hsieh, C. N. (2023). Evaluating the use and interpretation of the TOEIC® listening and reading test score report: Perspectives of Test Takers in Japan. *ETS Research Report Series*.

Im, G. H., & Cheng, L. (2019). The test of English for international communication (TOEIC®). *Language Testing*, *36*(2), 315-324.

Jung, H. (2010). Wash back effects of new TOEIC on Korean college students' English. *Teaching and Learning English, 23*(3), 183–207. https://doi.org/10.35771/engdoi.2010.23.3.009

Lee, J. Y. (2018). The use of test-taking strategies and students' performances in answering TOEIC reading comprehension questions. *Taiwan Journal of TESOL, 15*(2), 33-64.

Lertcharoenwanich, P. (2022). The effect of communicative language teaching in test preparation course on TOEIC score of EFL business English students. *Journal of Language Teaching and Research*, *13*(6), 1188-1195.

Maliwan, S. (2020). Enhancing TOEIC listening skills by applying bottom-up and top-down listening strategies for students of aviation personnel development institution at Kasem Bundit University. In *RSU International Research Conference 2020 Proceedings of RSU International Research Conference* (pp. 2016-2020).

Masrul, M., & Rasyidah, U. (2023). Washback effect of TOEIC listening and reading as a college exit test in Riau, Indonesia. *Journey: Journal of English Language and Pedagogy, 6*(3), 698-712.

Nan., C. (2018). Implications of interrelationship among four language skills for high school English teaching. *Journal of Language Teaching and Research, 9*(2), 418–423. https://doi.org/10.17507/jltr.0902.26

Oxford, R. L. (2001), Language learning style and strategies. In Celcie, Murcia. (eds.), *Teaching English as a second or foreign language. 3rd Edition.* Heinle & Heinle Publishers.

Padma, D., Male, H., & Naibaho, L. (2025). Students' perception of English reading practice using LINE Webtoon application. *Journal of English Teaching, 11*(1), 118-137.

Park, S., Kwak, E. J., Tak, J. Y., & Tate, T. (2020). Investigation on TOEIC score trends in Korea and its pedagogical implications. *Cogent Education, 7*(1), 1796557. https://doi.org/10.1080/2331186X.2020.1796557

Pasumbu, H., & Macora, Y. (2020). Compensation as a strategy in teaching reading to EFL junior high school students. *Sintuwu Maroso Journal of English Teaching, 4*(1), 39-42.

Phakiti, A. (2008). Construct validation of Bachman and Palmer's (1996) strategic competence model over time in EFL reading tests. *Language testing, 25*(2), 237-272. https://doi.org/10.1177/0265532207086783

Protopapas, A., Simos, P. G., Sideridis, G. D., & Mouzaki, A. (2012). The components of the simple view of reading: A confirmatory factor analysis. *Reading Psychology, 33*(3), 217–240. https://doi.org/10.1080/02702711.2010.507626

Rahayu, N., Hamied, F., Sukyadi, D., & Yusuf, F. (2022). Novice students' experience of taking TOEIC preparation class: a phenomenological case study. *English Review Journal of English Education, 10*(3), 1023-1034. https://doi.org/10.25134/erjee.v10i3.6648

Rochman, M., & Widjajanti, S. (2025). The implementation of TOEIC preparation to improve TOEIC scores of semester VI at Polytechnic Alkon Kalimantan. *Journey: Journal of English Language and Pedagogy, 8*(1), 13-20.

Royer, J., Sinatra, G., & Schumer, H. (1990). Patterns of individual differences in the development of listening and reading comprehension. *Contemporary Educational Psychology, 15*(2), 183–196. https://doi.org/10.1016/0361-476X(90)90016-T

Santos Alves Peixoto, L., Guedes Gondim, S. M., & Pereira, C. R. (2022). Emotion regulation, stress, and well-being in academic education: Analyzing the effect of mindfulness-based intervention. *Trends in Psychology, 30*(1), 33-57.

Singh, C. K. S., Ong, E. T., Singh, T. S. M., Maniam, M., & Mohtar, T. M. T. (2021). Exploring ESL learners' reading test taking strategies. *Studies in English Language and Education, 8*(1), 227-242. https://doi.org/10.24815/siele.v8i1.18130

Sittisuwan, M. N., & Sitthitikul, P. (2019). *Expectations of Thai undergraduate students on future employability based on their TOEIC score: evidence from a human resource perspective* (Doctoral dissertation, Thammasat University).

Taladngoen, U., & Esteban, R. H. (2022). Assumptions on plausible lexical distractors in the redesigned TOEIC question-response listening test. *LEARN Journal: Language Education and Acquisition Research Network, 15*(2), 802-829.

Taladngoen, U., Pratumtone, K., Thong-ngamkham, T., Palawatwichai, N., Rakprang, K., & Thapkrathok, M. (2023). I want it that way!—Engineering students' needs for English language preparation for the TOEIC listening and reading test. *THAITESOL Journal*, *36*(1), 21-45.

Tilstra, J., McMaster, K., Van Den Broek, P., Kendeou, P., & Rapp, D. (2009). Simple but complex: Components of the simple view of reading across grade levels. *Journal of Research in Reading, 32*(4), 383–401. https://doi.org/10.1111/j.1467-9817.2009.01401.x

Tran, T. Q., & Chau, N. H. L. (2021). English-majored students' motivation in English language learning and their use of reading strategies: Research perspectives. *VNU Journal of Foreign Studies, 37*(1), 109-119. https://doi.org/10.25073/2525-2445/vnufs.4661

Tran, T. Q., & Nguyen, T. N. (2023). Unpacking Vietnamese EFL learners' deployment of reading test-taking strategies for the new TOEIC test format. *World Journal of English Language, 13*(5), 101-101.

Victoriano, M.G. & Dimaano, M.H. (2023). Reading and listening ability relative to students' level of performance. *International Journal of Educational Management and Development Studies, 4* (2), 27-40. https://doi.org/10.53378/352976

Vu, D. C., Nguyen, T. V., & Kitjaroonchai, N. (2024). Exploring the relationship between working memory capacity and L2 oral fluency. *Theory and Practice in Language Studies, 14*(7), 2002- 2012.

Yuniasih, W. S., Waluyo, P. S., & Arochman, T. (2025). Students' perception of reading alternative universe to develop English vocabulary. *Journal of English Teaching, 11*(1), 79-91.

Yunus, M., & Chaudhary, P. K. (2023). The role of emotion regulation in stress management: An overview. *Journal of Clinical Research and Applied Medicine, 3*(1), 9-12.

Zhang, S., & Zhang, X. (2022). The relationship between vocabulary knowledge and L2 reading/listening comprehension: A meta-analysis. *Language Teaching Research, 26*(4), 696-725.