



.....

## The Development of a Self-Learning Video Package to Enhance English Proficiency for TOEIC Preparation for Thai Undergraduate Students at Rajamangala University of Technology Tawan-ok

Received: May 15, 2025

Revised: May 24, 2025

Accepted: July 31, 2025

Apapan Tiyawong<sup>\*</sup>

Arisa Rungruengphol<sup>\*\*</sup>

Pisan Tongnoppakun<sup>\*\*\*</sup>

### Abstract

This study aimed to (1) develop an effective self-instructional video package for TOEIC preparation based on the 80/80 efficiency criterion, (2) compare learning achievement between an experimental group and a control group, and (3) examine students' satisfaction and opinions toward the developed media. The participants consisted of 92 undergraduate students, divided equally into an experimental group (n = 46) and a control group (n = 46). The research instruments included seven instructional video lessons, an achievement test, a satisfaction questionnaire, and a semi-structured interview. Data were analyzed using the E1/E2 efficiency indices, t-tests, and qualitative content analysis.

The findings revealed that the developed media met the specified efficiency criterion (E1 = 80.11, E2 = 87.26). The experimental group showed significantly higher post-test achievement scores than the control group at the .05 level of significance. Students reported a high level of satisfaction, particularly with the content quality and the learning system. Suggestions for improvement included adding interactive activities, providing content summaries, and enhancing system stability. The media design was grounded in Knowles' theory of andragogy and Grow's Self-Directed Learning (SSDL) Model, supporting a structured and progressive approach to autonomous learning. The instructional package shows potential for

---

<sup>\*</sup>Lecturer, Faculty of Social Technology, Rajamangala University of Technology Tawan-ok, Thailand

<sup>\*\*</sup>Assistant Professor Dr., Faculty of Social Technology, Rajamangala University of Technology Tawan-ok, Thailand

<sup>\*\*\*</sup>Assistant Professor Dr., Faculty of Social Technology, Rajamangala University of Technology Tawan-ok, Thailand

Corresponding Author E-mail Address: Pisan\_to@rmutto.ac.th



.....  
adaptation in English courses aimed at standardized test preparation or other specific purposes in various educational contexts.

**Keywords** : Instructional Media/ TOEIC Preparation/ Self-Directed Learning/ Andragogical Approach/ SSDL Model/ English Language Proficiency

## Introduction

English communication has long been a major challenge for Thai learners. This issue is evident in Thailand’s consistently low performance on the English Proficiency Index (EPI) published annually by EF Education First, a renowned international education organization. In 2023, Thailand ranked 101st out of 113 countries worldwide and 21st out of 23 countries in Asia, maintaining a classification of “very low proficiency.” Comparatively, Thailand ranked 97<sup>th</sup> out of 111 countries in 2022 and 74<sup>th</sup> out of 100 in 2019 (Adminedu, 2023: 1). This downward trend suggests a persistent national struggle with English language acquisition, especially among individuals outside of professional sectors. English usage tends to be limited among the general population, with some exceptions in professions that involve foreign interactions such as government officials, educators, tourism personnel, business practitioners, and graduates from overseas institutions (Tourism Thailand, 2020: 1).

In response to labor market demands, many organizations—both public and private—require standardized English proficiency tests for employment. Among these, the Test of English for International Communication (TOEIC) is widely recognized and used as a criterion for job placement, with score requirements varying by position and organization (Teacher Jane, 2025: 1). Acknowledging this, Rajamangala University of Technology Tawan-ok has prioritized English proficiency as a means of enhancing students’ employability. The university has supported online learning initiatives through its Institute of Innovation and Lifelong Learning Education, aligning with national policies to promote lifelong learning with the slogan “Anywhere, Anytime.”

Modern educational settings have embraced hybrid learning environments that integrate face-to-face instruction with online tools such as Zoom, Microsoft Teams, Google Classroom, Canvas, Moodle, Kahoot!, and Quizlet (Rohitsathien, 2023: 1). However, challenges persist. Learners often lack motivation to explore supplementary materials outside the classroom, struggle to select level-appropriate resources, and have limited knowledge of TOEIC test formats due to a curriculum-focused learning approach.



.....

To address these issues, this study adopted Knowles (1975: 19) theory of andragogy, which emphasizes learner autonomy, relevance to personal experience, and practical application. The instructional design was further informed by Grow (1991: 4) Staged Self-Directed Learning (SSDL) Model, which categorizes learners based on their capacity for self-direction and guides educators in selecting appropriate roles and strategies at each stage.

With these frameworks in mind, the researcher—an English instructor—developed a self-directed online learning package tailored for TOEIC preparation. The materials consisted of seven short video-based lessons aligned with the proficiency levels of undergraduate students across various disciplines at Rajamangala University of Technology Tawan-ok. Each lesson included content explanations, mock test-based practice activities, and pre- and post-tests. The lessons were narrated by the researcher, using a mix of Thai and English to foster a relaxed learning environment and encourage active engagement via Google Classroom.

Additionally, the instructor provided motivational support and guidance to promote learner autonomy, encouraging learners to revisit the lessons as needed. This flexibility aligns with findings by Phuwijit (2021: 3), who reported that online media facilitates accessible, cost-effective, and personalized learning experiences. Students benefit from reduced travel time, on-demand access, and the ability to review materials at their own pace, fostering deeper understanding and supporting differentiated instruction.

This self-directed learning package was implemented as a supplementary course outside of regular class hours. This decision stemmed from the observation of academic performance among undergraduate students enrolled in the English for Study Skills course during the 2024 academic year. Although the course emphasized practical activities such as reading comprehension, summarizing academic texts, analytical writing, and group presentations in English, overall learning outcomes remained unsatisfactory. Notably, students struggled with listening for main ideas, constructing academic sentences, and using academic vocabulary accurately and effectively.

Evaluations and student feedback revealed that many learners were unable to apply their English skills effectively in academic contexts. A lack of confidence and motivation to practice outside of class was also evident. Due to time constraints within the formal course schedule, students had limited opportunities to engage in in-depth practice. These limitations made it impractical to directly incorporate the newly developed learning package into the official English for Study Skills course.



.....

To address this challenge without interfering with the course's grading and structure, the learning package was implemented as an optional extracurricular program. Participants remained the same students enrolled in the English for Study Skills course, but they joined the supplementary program voluntarily. The learning system was designed to be flexible and user-friendly. Students received initial guidance on how to use the platform, along with close support during the early stages to resolve any technical or content-related issues. Those who demonstrated lower-than-expected performance were given personalized feedback and additional resources tailored to their proficiency levels and interests.

The intended outcome was an improvement in students' TOEIC scores, along with enhanced English language skills aligned with the demands of the job market—especially in terms of practical communication and workplace language use. For employers, graduates with job-ready English skills can help reduce basic training costs and shorten onboarding time. Academically, this study contributes to the development of adaptive learning materials that can be expanded to other English and skills-based courses in the future.

### **Research Objectives**

1. To develop a self-directed learning package with multimedia materials and self-paced activities to enhance English achievement for TOEIC preparation, based on the 80/80 efficiency criterion.
2. To compare the pre-test and post-test learning achievement of an experimental group and a control group through the use of the developed self-directed learning package for TOEIC preparation.
3. To examine students' satisfaction toward the self-directed learning package designed to enhance English learning achievement for TOEIC preparation.
4. To examine students' opinions and suggestions toward the self-directed learning package designed to enhance English learning achievement for TOEIC preparation.

### **Research Questions**

1. What are the components and efficiency of the self-directed learning package with multimedia materials and self-paced activities—developed to enhance English achievement for TOEIC preparation, based on the 80/80 criterion?



2. Is there a significant difference in English learning achievement between the experimental group and the control group before and after using the self-directed learning package for TOEIC preparation?

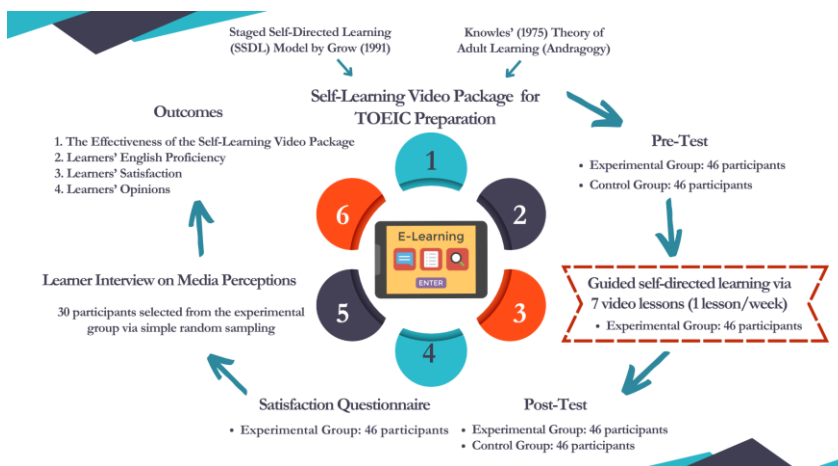
3. What is the level of students' satisfaction toward the self-directed learning package designed to enhance English learning achievement for TOEIC preparation?

4. What are students' opinions and suggestions toward the self-directed learning package designed to enhance English learning achievement for TOEIC preparation?

### Research Hypotheses

1. The self-directed learning package will achieve an efficiency level of at least 80/80.
2. The experimental group will demonstrate significantly higher post-test scores than the control group.
3. Students will report high satisfaction with the self-directed learning package.
4. Students will provide constructive suggestions for improving the learning package.

### Conceptual Framework



**Figure 1 :** Conceptual Framework of the Study

In this study, Knowles' (1984) Theory of Adult Learning (Andragogy) and Grow's (1991) Staged Self-Directed Learning (SSDL) model were collected and synthesized. They served as the foundation for establishing the conceptual framework and designing appropriate learning materials for the target population.

The two theories were integrated to make sure that the instructional design aligned with the characteristics of adult learners such as the need for autonomy, relevance, and internal motivation. Moreover, it also guiding learners progressively through the stages of self-directed



.....  
learning. Knowles' principles informed the learner-centered content and flexible learning environment, whereas Grow's SSDL model shaped the structure and support levels of the learning process. This way, learners to gradually build independence in their learning journey.

In practice, the integration of both theories was reflected throughout six key stages of the study. In Stage 1 (Pre-Test), the learners' baseline proficiency was assessed to see their prior knowledge and experiences, as emphasized by Knowles. Stage 2 (Guided Self-Directed Learning via 7 video lessons), Grow's SSDL approach was applied to providing structured guidance while encouraging learners to take increasing responsibility for their learning. In Stage 3 (Post-Test), learning outcomes were measured to evaluate students' progress. This aligned with Knowles' emphasis on goal-oriented learning and the importance of assessing achievement based on clearly objectives. In Stage 4 (Satisfaction Questionnaire) and Stage 5 (Learner Interview on Media Opinions), data were collected to reflect adult learners' needs for self-reflection and feedback. These stages also provided valuable insights into their level of autonomy and internal motivation, which are central elements in Knowles' theory of adult learning. Finally, Stage 6 (Outcomes) all findings were synthesized to evaluate the overall effectiveness of the instructional design, that was grounded in both Knowles' Theory of Adult Learning and Grow's Staged Self-Directed Learning Model.

The process started by selecting Knowles and Grow' original document, studying both domestic and international research that applied the theories in their self-learning environment, and reviewing literature from databases in Google Scholar, ERIC, Scopus, and TCI. After that, the data was analyzed for synthesized main ideas, teacher roles, learner characteristics, learning activity formats and outcomes of theoretical application.

The synthesis of Knowles and Grow theories was utilized for defining the conceptual framework by linking learner characteristics from andragogy with the SSDL learning process, designing learning materials that allowed learners to control their own learning pace, and selecting a research methodology that included both experimental and control groups, using quantitative and qualitative measures to comprehensively assess the effectiveness of self-directed learning based on these theoretical foundations.

## Research Methodology

**Population** The participants were 120 undergraduate students enrolled in the course English for Study Skills during the first semester of the 2024 academic year.



.....  
**Samples** The sample size was determined using the Krejcie and Morgan formula. The participants in this study were divided into two groups:

1. The sample for the comparison of learning achievement consisted of 120 undergraduate students enrolled in the course English for Study Skills. A total of 92 students were selected using simple random sampling with a table of random numbers. The selected sample were randomly reassigned using the same simple random sampling method and evenly divided into an experimental group (n = 46) and a control group (n = 46). To ensure group equivalence, students with varying English proficiency levels (high, medium, and low) were evenly distributed across the experimental and control groups.

2. The sample for the study of students' satisfaction and opinions toward the self-directed learning package for TOEIC preparation consisted of 30 students. These participants were drawn from the experimental group that used the self-directed learning package. Simple random sampling was conducted using a lottery method.

**Research Instrument** This study employed a mixed methods research design, integrating both quantitative and qualitative approaches. Four types of research instruments were utilized:

1. Self-Directed Learning Package for TOEIC Preparation: The instructional media consisted of seven online video-based lessons aligned with the current TOEIC test structure. The lessons were organized as follows:

- |  |   |
|--|---|
| Lesson 1: Photographs (32 minutes)           | Lesson 2: Question-Responses (21 minutes) |
| Lesson 3: Conversations (25 minutes)         | Lesson 4: Short Talks (19 minutes)        |
| Lesson 5: Incomplete Sentences (54 minutes)  | Lesson 6: Text Completion (49 minutes)    |
| Lesson 7: Reading Comprehension (39 minutes) |   |

The lessons were delivered via Google Classroom as supplementary learning outside regular class hours. Students were encouraged to engage in self-directed study, and their learning outcomes contributed 10% to their final grade in the English for Study Skills course.

2. Learning Achievement Test: A 35-item multiple-choice test was developed to assess students' achievement across all seven TOEIC-related content areas:

- |                                 |                                |                               |
|---------------------------------|--------------------------------|-------------------------------|
| Photographs (3 items)           | Question-Responses (4 items)   | Short Conversations (6 items) |
| Short Talks (6 items)           | Incomplete Sentences (5 items) | Text Completion (3 items)     |
| Reading Comprehension (8 items) |                                |                               |



.....

3. Student Satisfaction Questionnaire: This instrument was used to measure students' levels of satisfaction with the self-directed learning package. It focused on content quality, presentation, comprehensibility, and ease of use.

4. Student Interview Protocol: A semi-structured interview was conducted to gather in-depth qualitative data regarding students' opinions and experiences with the self-directed learning package.

### **Instrument Development Procedures**

**Experimental Instrument** 1. Development of the Self-Directed Learning Package The researcher designed seven TOEIC-based online lessons following the structure of the actual test. The content was delivered through video lectures, incorporating both Thai and English to promote comprehension and reduce learner anxiety. Upon completion, the lessons were submitted to three experts in instructional media for content validation. The Index of Item-Objective Congruence (IOC) was calculated at 0.86, which is considered acceptable ( $\geq 0.50$ ). In addition, the interobserver agreement (IOA) among the three experts was found to be 91.3%, indicating a high level of consistency in their evaluations and further confirming the overall quality and clarity of the instructional materials.

A pilot study was then conducted with 30 students representing varying proficiency levels—low, medium, and high. The results indicated that the media achieved an efficiency level of  $E1 = 80.11$  and  $E2 = 87.26$ , confirming its suitability for implementation with the main sample.

**Achievement Instruments** Development of the Learning Achievement Test The development process involved the following steps:

1.1 Reviewing and collecting TOEIC sample questions from both domestic and international sources.

1.2 Analyzing and categorizing the items according to the TOEIC test sections.

1.3 Constructing a multiple-choice test consisting of four options per item.

1.4 Submitting the test to three experts for evaluation of content relevance and alignment with learning objectives. The resulting average IOC score was 0.87, meeting the acceptable threshold ( $\geq 0.50$ ).

1.5 Revising the test items based on expert feedback.

1.6 Conducting a pilot test with 30 students.



.....

1.7 Analyzing item quality: Difficulty Index (p): ranged from 0.25 to 0.75 and Discrimination Index (r): ranged from 0.31 to 0.60. These values indicate that the test items were of acceptable quality for measuring learning achievement.

1.8 Calculating the overall reliability of the test using appropriate statistical methods, yielding a reliability coefficient of 0.93, which is considered high.

2. Development of the Student Satisfaction Questionnaire The researcher developed a questionnaire to assess students' satisfaction with the self-directed learning package, following systematic procedures in educational measurement:

2.1 Review of relevant theories and literature: Concepts related to educational assessment and satisfaction surveys were reviewed to ensure comprehensive content coverage.

2.2 Definition of constructs: The questionnaire was structured around five dimensions: (1) Content, (2) Learning Management System, (3) Instructional Media, (4) Achievement Test, and (5) Instructor.

2.3 Drafting and content validation: The initial questionnaire consisted of 5-point Likert scale items ranging from "Very High" to "Very Low." It was reviewed by three experts for content relevance. The average IOC was 0.85, which met the acceptable standard ( $\geq 0.50$ ).

2.4 Revision based on expert feedback: The items were revised for clarity, appropriateness, and alignment with the target group before actual administration.

3. Development of the Student Interview Protocol A semi-structured interview protocol was developed to collect qualitative data on students' opinions regarding the self-directed learning package. The interview focused on attitudes, understanding, perceived benefits, and suggestions for improvement. Open-ended questions were organized around six key areas: (1) Understanding and attitudes toward TOEIC, (2) Content, (3) Learning Management System, (4) Instructional Media, (5) Achievement Test, and (6) Instructor.

The draft interview protocol was reviewed by three experts to assess content validity and alignment with the study objectives. The calculated IOC average was 0.86, which is within the acceptable range ( $\geq 0.50$ ).

For data collection, a simple random sampling technique was employed to select 30 participants from the experimental group. This approach ensured a diverse and representative sample of the target population.



---

## Data Collection

1. The researcher explained the research objectives and procedures to the participants in both the experimental and control groups to ensure accurate understanding and to obtain informed and voluntary consent for participation.

2. Both groups completed a pre-test consisting of 35 multiple-choice items based on the online English lessons for TOEIC preparation. The testing session lasted 1 hour and 30 minutes and was used to assess baseline learning achievement prior to exposure to the instructional media.

3. The experimental group engaged in self-directed learning through the researcher-developed online video lessons (7 lessons in total), delivered via Google Classroom. Each lesson was scheduled for one week, and students were eligible for bonus points toward their course grade as a motivational incentive. The control group, in contrast, received equivalent learning content in the form of printed handouts for independent study, but did not access the researcher-developed video lessons.

4. After completing all seven lessons, both groups took the post-test—the same 35-item test used in the pre-test—under identical conditions (1 hour and 30 minutes), to compare learning achievement outcomes.

5. The experimental group was asked to complete a student satisfaction questionnaire regarding the online TOEIC preparation lessons, in order to collect quantitative data on their opinions of the instructional media.

6. To collect qualitative data, the researcher conducted semi-structured focus group interviews with 30 students from the experimental group. These interviews explored students' opinions and suggestions concerning the online learning package, with a focus on perceived benefits, content quality, instructional design, and areas for improvement.

**Data Analysis** The data analysis in this study was categorized into three main types: quantitative data analysis, instrument quality analysis, and qualitative data analysis, as detailed below:

1. Quantitative Data Analysis Descriptive and inferential statistics were used to analyze data obtained from the achievement tests and satisfaction questionnaires. The procedures included:

1.1 Calculating the mean and standard deviation of pre-test and post-test scores.

1.2 Analyzing the instructional media efficiency using the E1/E2 efficiency index.



1.3 Comparing the post-test learning achievement between the experimental and control groups using an independent samples t-test.

1.4 Analyzing students' satisfaction with the online learning package using descriptive statistics, including the mean and standard deviation for each dimension of the questionnaire.

2. Instrument Quality Analysis The quality of the research instruments was examined through the following procedures:

2.1 Analyzing the difficulty index ( $p$ ) and discrimination index ( $r$ ) of the achievement test items.

2.2 Calculating the reliability coefficient of the entire test using the KR-20 formula.

2.3 Evaluating the content validity of both the questionnaire and the interview protocol using the Index of Item-Objective Congruence (IOC).

3. Qualitative Data Analysis The qualitative data obtained from semi-structured interviews were analyzed using thematic analysis to identify and synthesize key themes, suggestions, and learner perspectives regarding the use of the online English learning package for TOEIC preparation.

## Findings

**Table 1** Analysis of the Efficiency of the Self-Directed Learning Package for Enhancing English Learning Achievement in TOEIC Preparation Based on the 80/80 Criterion

Pilot Group	Number of Students	During Instruction (35)		After Instruction (35)		Efficiency Index
		Mean	% E1	Mean	% E2	E1/E2
	30	28.04	80.11	30.54	87.26	80.11/87.26

As shown in Table 1, the average score during the learning process using the self-directed learning package was 80.11%, while the average post-learning score was 87.26%. Therefore, the self-directed learning package designed to enhance English learning achievement for TOEIC preparation demonstrated an efficiency of 80.11/87.26, which exceeds the established criterion.

**Table 2** This table presents a comparison of learning achievement between the experimental group, which used the researcher-developed self-directed learning package for TOEIC preparation, and the control group, which studied independently using printed materials without the media.



Sample Group	N	$\bar{x}$	S.D.	t	sig.
Experimental Group	46	31.63	2.27	7.92*	.000
Control Group	46	25.15	4.64		

\*p<.05

Table 2 presents a comparison of post-test learning achievement between the experimental and control groups. The experimental group, which engaged in self-directed learning using the researcher-developed instructional media for TOEIC preparation, achieved a mean post-test score ( $\bar{x}$ ) of 31.63 with a standard deviation (S.D.) of 2.27. In contrast, the control group, which studied independently using printed instructional materials, obtained a mean post-test score ( $\bar{x}$ ) of 25.15 with a standard deviation (S.D.) of 4.64.

An independent samples t-test was conducted to assess the statistical significance of the difference between the two groups' post-test scores. The analysis yielded a t-value of 7.92 and a significance level (p-value) of .000, which is less than the conventional alpha level of .05. This result indicates a statistically significant difference in post-test learning achievement between the experimental and control groups at the 0.05 significance level.

**Table 3** Student Satisfaction with the Self-Directed Learning Package for Enhancing English Achievement in TOEIC Preparation

1. Content Evaluation	$\bar{x}$	S.D.	Satisfaction Level
1.1 The content is complete, accurate, and applicable to TOEIC preparation.	4.53	0.57	Very High
1.2 The material suits learners' English proficiency levels.	4.50	0.57	Very High
1.3 The content is current and relevant to the TOEIC test.	4.17	0.87	High
1.4 Lessons are logically sequenced with clear examples for better understanding.	4.40	0.67	High
1.5 Topics are concise and appropriately paced.	4.43	0.63	High
1.6 Knowledge from each lesson can be applied to other English learning contexts.	4.60	0.62	Very High
<b>Total Score for Content Evaluation</b>	<b>4.44</b>	<b>0.66</b>	<b>High</b>
2. Learning Management System Evaluation	$\bar{x}$	S.D.	Satisfaction Level
2.1 Learners are satisfied with studying through the e-learning system.	4.40	0.56	High
2.2 The learning management system is structured, efficient, and user-friendly.	4.50	0.51	Very High
2.3 Learners can access the system anytime and anywhere at their convenience.	4.57	0.57	Very High
2.4 Learners can apply the skills gained from using the e-learning system to other subjects.	4.33	0.71	High
<b>Total Score for Learning Management System Evaluation</b>	<b>4.45</b>	<b>0.59</b>	<b>High</b>



.....			
<b>3. Self-Directed Learning Media Evaluation</b>	$\bar{X}$	S.D.	Satisfaction Level
3.1 The media is of high quality, suitable for self-directed learning, with clear visuals and audio.	4.43	0.63	High
3.2 The content is easy to understand and effectively enhances learners' English skills.	4.33	0.71	High
3.3 The media is convenient for learning and allows unlimited review at any time.	4.47	0.68	High
3.4 The design and organization of the content are engaging and motivate learners to explore further.	4.30	0.75	High
3.5 The file size is appropriate and can be downloaded for offline study.	4.47	0.68	High
3.6 The accompanying documents or e-books are well-aligned with the learning media.	4.43	0.68	High
<b>Total Score for Self-Directed Learning Media Evaluation</b>	<b>4.41</b>	<b>0.69</b>	<b>High</b>
<b>4. Test Evaluation</b>	$\bar{X}$	S.D.	Satisfaction Level
4.1 The pre-test and post-test are appropriate and accurately reflect the format of the actual TOEIC exam.	4.30	0.79	High
4.2 The end-of-lesson tests are aligned with the content covered in each respective lesson.	4.50	0.63	Very High
4.3 All test items are up-to-date and relevant, enabling learners to apply their knowledge to the current TOEIC examination.	4.27	0.74	High
4.4 The tests reinforce and deepen understanding of the lessons.	4.20	0.81	High
4.5 Learners' post-test scores improved after using the self-directed learning package.	4.33	0.66	High
<b>Total Score for Test Evaluation</b>	<b>4.32</b>	<b>0.73</b>	<b>High</b>
<b>5. Instructor Evaluation</b>	$\bar{X}$	S.D.	Satisfaction Level
5.1 The instructor demonstrates accurate knowledge of English communication principles and delivers content in an engaging manner.	4.40	0.72	High
5.2 The instructor clearly presents TOEIC test-taking strategies for each section in an understandable way.	4.40	0.67	High
5.3 The instructor organizes the content systematically, helping learners better understand and retain the lessons.	4.43	0.57	High
5.4 The instructor uses appropriate tone and gestures that capture learners' attention.	4.27	0.74	High
5.5 The instructor encourages further self-directed learning through credible online resources.	4.47	0.63	High
<b>Total Score for Instructor Evaluation</b>	<b>4.39</b>	<b>0.67</b>	<b>High</b>
<b>Total</b>	<b>4.40</b>	<b>0.67</b>	<b>High</b>

Table 3 summarizes students' satisfaction with the self-directed learning media for TOEIC preparation. The overall satisfaction level was high (Mean = 4.40, S.D. = 0.67), with consistently high ratings across five key areas: content, learning management system, media, test, and



.....  
instructor. Content evaluation received high satisfaction (Mean = 4.44, S.D. = 0.66). The highest-rated item was the ability to apply knowledge to other English courses (Mean = 4.60). Learning Management System was rated highly (Mean = 4.45, S.D. = 0.59), especially for accessibility anytime and anywhere (Mean = 4.57). Self-directed learning media evaluation was also rated high (Mean = 4.41, S.D. = 0.69), with learners valuing its convenience and offline usability (Mean = 4.47). Test evaluation scored a mean of 4.32 (S.D. = 0.73), with strong alignment between test content and lesson material (Mean = 4.50). Instructor evaluation showed high satisfaction (Mean = 4.39, S.D. = 0.67), with students appreciating encouragement for further learning and clear content delivery (Mean = 4.47, 4.43).

The findings of the study exposed that the self-directed learning package developed for TOEIC preparation met 80/80 efficiency criterion. An average score during instruction was 80.11 % and an average score of after instruction was 87.26 %. Moreover, the experimental group that utilized the package demonstrated significantly higher learning achievement than the control group at the 0.05 level of significance. A mean posttest score of the experimental group was 31.63 (S.D. = 2.27), while A mean posttest score of the control group was 25.15 (S.D. = 4.64). The t-test was that  $t = 7.92$  and  $p = .000$ . This showed that the self-directed learning package has a significant effect on learning. In terms of student satisfaction, results showed a high overall level of satisfaction with the self-directed learning package. Learners expressed particularly high satisfaction with content quality, learning management system accessibility, the usefulness of the media, the alignment of the tests with the lessons, and the instructor's role in facilitating learning. These findings confirm that the developed learning package was both effective and well-received by learners in the context of TOEIC preparation.

## Discussion

1 . This study aimed to develop a self-directed learning package to enhance English language achievement for TOEIC preparation, targeting the efficiency benchmark of 80/80. The findings indicated that the developed media achieved an E1 score of 80.11 and an E2 score of 87.26, surpassing the established standard and confirming its instructional effectiveness. The development process followed a systematic approach, beginning with an analysis of learners' proficiency, followed by content design aligned with the actual TOEIC format and structured lesson sequencing. Formative assessments were integrated via Google Classroom to support ongoing learner self-evaluation. Importantly, the instructional design was based on Grow's (1991: 5) Staged Self-Directed Learning (SSDL) Model, which categorizes learners according to



.....  
their level of self-directedness and defines the instructor's role accordingly. This framework allowed the media to be tailored to progressively foster learner autonomy and engagement at appropriate stages. The content was reviewed by three experts for content validity and alignment with learning objectives, with revisions implemented prior to deployment. This process ensured that the lessons were accurate, reliable, and contextually appropriate. These results are consistent with previous studies by Thaipradit and Thabthieng (2020: 36) and Boonprasom (2024: 84), which demonstrated that well-designed self-directed learning materials for English preparation not only exceed the 80/80 efficiency benchmark but also enhance learners' comprehension and real-world application of language skills. Moreover, the use of the Google Classroom platform allowed learners to access materials flexibly, anytime and anywhere, which helped reduce anxiety and increase motivation. This aligns with findings from Saenum and Phachop (2023: 176), who emphasized the effectiveness of structured online instruction, and Saowapha (2023: 109), who confirmed that e-learning via personal devices enhances learners' engagement, interest, and flexibility in the learning process.

2 . To compare the pre-test and post-test learning achievement between the experimental and control groups, the findings revealed that the experimental group—who studied through the self-directed learning media achieved significantly higher post-test scores than the control group at the .05 level. A significant difference was also found between the pre-test and post-test scores within the experimental group, indicating that the developed media effectively enhanced English learning achievement in the TOEIC context, particularly in professional listening and reading skills. This may be attributed to the effectiveness of the self-directed learning package, which was designed to promote learner autonomy, engagement, and consistent practice through structured and interactive content. The media design was grounded in Knowles' (1975: 20) Andragogy, which emphasizes learner-centeredness, clear learning goals, real-world applicability, and intrinsic motivation. It was also aligned with Grow's (1991: 10) Staged Self-Directed Learning (SSDL) Model, supporting the progressive development of self-directed learning skills. Lessons were clearly structured, matched to learners' readiness levels, and included formative assessments via Google Classroom, enabling learners to identify strengths and weaknesses and review content as needed. These results align with the studies of Yimsakul (2024: 14), Boonprasom (2024: 92-93), and Wongtongcharoen (2023: 75), which found that interactive media with immediate feedback enhances comprehension, reduces boredom, and significantly improves post-learning outcomes. Moreover, the flexibility of online learning—allowing learners to control time and space—reduces pressure from traditional classroom



.....  
settings and supports long-term motivation. This is further supported by Saowapha (2023: 109), who found that learners showed increased engagement, interest, and academic achievement in both TOEIC preparation and professional English usage.

3 . To investigate students' satisfaction regarding the self-directed learning media developed for TOEIC preparation, quantitative data from the satisfaction questionnaire revealed that students were highly satisfied, particularly with the content, learning management system, and media quality. These findings align with Charoennet et al. (2023: 83), who reported that self-directed learning materials effectively enhance learners' knowledge, comprehension, and motivation. Both questionnaire and focus group interview results indicated that students perceived the lesson content as clear, comprehensive, and applicable—especially the test-taking strategies focusing on grammar, vocabulary, listening, and reading, which helped increase their confidence in the TOEIC exam. These findings reflect Knowles' (1975: 21) Andragogy framework, which emphasizes internal motivation, learning flexibility, and practical application for adult learners. The materials also align with Grow's (1991: 9) Staged Self-Directed Learning (SSDL) Model, which supports gradual development of learner autonomy through clearly structured content and a shift in the instructor's role from a guide to a facilitator, with feedback mechanisms appropriate to learners' readiness levels.

4. In addition, students provided constructive suggestions for further improvement, such as issues with low audio volume, slow loading times, requests for content summaries in the form of mind maps, automatic progress tracking, and more interactive in-lesson activities to boost engagement—particularly for learners with lower English proficiency who may need more time to adjust. These suggestions align with Mayer's (2009) theory that interactivity and immediate feedback are key components of multimedia learning that reduce cognitive load and enhance comprehension. Similarly, Thongdee (2022: 39) found that tools like mind maps and graphic organizers can help learners better organize and connect information. Qualitative data from student interviews further supported these findings. Learners expressed appreciation for the ability to review lessons at their own pace.

Especially, learners could clearly understand the instruction and image examples in the video. Several participants said that using both Thai and English languages could reduce anxiety and help them understand complex vocabulary and grammar points. However, some learners suggested that there should be short quizzes after each subtopic to reinforce understanding and maintain focus. These insights highlight the need for greater personalization and scaffolding



.....  
in self-directed learning environments, especially for students with lower English proficiency or limited prior exposure to TOEIC-style tasks.

In summary, students expressed a high level of satisfaction with the self-directed learning media, particularly in terms of content clarity, system accessibility, and practical application to TOEIC test-taking. Both quantitative and qualitative data confirmed that the materials supported learner autonomy, motivation, and comprehension. Suggestions for improvement, such as adding interactive activities, mind maps, and short quizzes, reflect learners' needs for flexibility, engagement, and tailored support—especially for those with lower English proficiency. These findings highlight the effectiveness and adaptability of the developed media, as well as its alignment with adult learning principles and self-directed learning frameworks.

## Recommendations

### Recommendations based on the Research Findings

1. Since learners differ in their language proficiency and levels of motivation, instructors should provide positive reinforcement to foster learners' enthusiasm and commitment throughout the learning process.
2. As the TOEIC test evolves over time, instructors are encouraged to use up-to-date sample test items that closely reflect the current format and content.
3. Instructors should continuously explore and keep up with emerging self-directed learning technologies in order to improve instructional materials, given the rapid pace of technological advancement.

### Recommendations for Future Research

1. Future studies should include a more diverse sample to enhance the generalizability of the findings, such as students from other institutions, vocational learners, or employees in the private sector.
2. It is recommended to develop and compare different types of learning media, such as real-time interactive platforms, educational games, or AR/VR tools, to evaluate their relative effectiveness in improving English learning outcomes.
3. A longitudinal study should be conducted to assess whether the use of self-directed learning media leads to long-term retention and practical application of knowledge in TOEIC testing and workplace contexts.



## New Insights from the Research

1. Instructional design based on Andragogy and the Staged Self-Directed Learning (SSDL) model effectively promotes self-directed learning by addressing adult learners' needs for flexibility, intrinsic motivation, and real-world application.

2. Students with varying levels of English proficiency (high, medium, and low) can benefit equally from the self-learning video package, provided that the content, activities, and support are appropriately tailored to their readiness levels.

3. The instructor's role as a facilitator is essential in supporting self-directed learning, especially through providing timely feedback, encouragement, and personalized guidance.

4. Interactive media elements such as short quizzes, mind maps, and immediate feedback activities help reduce cognitive load, enhance comprehension, and sustain learner motivation.

5. The self-learning video package can be adapted for use in other courses by considering the instructional context, learner characteristics, and learner-centered design principles.

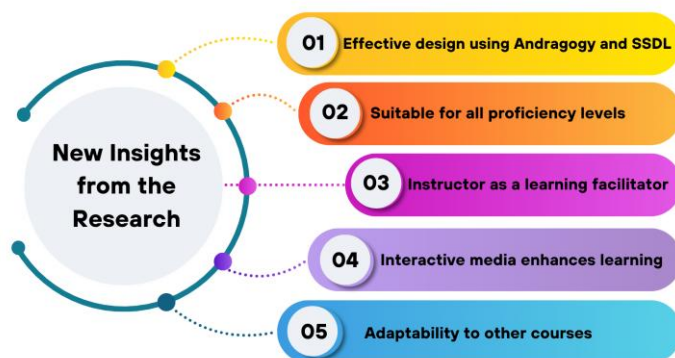


Figure 2 New Insights from the Research

## Summary

1. The developed self-directed learning media demonstrated higher-than-standard efficiency ( $E1 = 80.11$ ,  $E2 = 87.26$ ), indicating its suitability for effectively enhancing English learning achievement in preparation for the TOEIC exam.

2. Students in the experimental group who used the media achieved significantly higher post-test scores than those in the control group at the .05 level, demonstrating the media's effectiveness in improving learning outcomes—particularly in professional listening and reading skills.

3. Students expressed a high level of satisfaction with the media, especially in terms of content quality, learning management system, and media design. Additional suggestions for improvement included the incorporation of interactive activities, mind map summaries, and automatic progress tracking features.



4. Students emphasized the benefits of bilingual instruction, clear visual examples, and the flexibility to review lessons at their own pace. They also highlighted the need for more scaffolding and personalized support, particularly for those with lower English proficiency, reinforcing the importance of adaptive and learner-centered media design.

## References

- Adminedu. (2023, November 28). *English Language Rankings in Thailand for 2023*.  
<https://shorturl.asia/xpFMj>
- Boonprasom, C. (2024). Development of Interactive Multimedia for Self-Learning on Computer and Technology for Students in Primary Educational Service area 3 of Ubonratchathani. *Journal of Industrial Education*, 23(3). (in Thai)
- Charoennet, C., Thongruang, A., Chanbuala, K., Faikhoksung, P., and Phaengraksaa, W. (2023). Knowledge Transfer on Technology through Instructional Media to Promote Self-Learning Among Members of the Non Malai Community Enterprise Group Hin Lek Fai Subdistrict Khu Mueang District Buriram Province. *Journal of Interdisciplinary Management, Buriram Rajabhat University*, 7(1). (in Thai)
- Grow, O. G. (1991). Teaching Learners to be Self-Directed. *Adult Education Quarterly*, 41, (3), 1-36.
- Knowles, M. (1975). *Self-Directed Learning: A Guide for Learners and Teachers*. Association Press Follett Publishing Company.
- Mayer, R. E. (2009). *Multimedia Learning*. (2<sup>nd</sup> ed.). Cambridge University Press.
- Phuwijit, C. (2021, May 1). *Efficiency in Online Learning Management of Digital Age*.  
<https://shorturl.asia/KZpjn>.
- Rohitsathien, B. (2023, October 2). *Study Anywhere Anytime. Study for Free and Have a Job "Putting the Learner at the Center" towards a Lifelong Learning Society*.  
<https://shorturl.asia/4lKtM>.
- Saenhum, A., and Phachop, S. (2023). The Effects of the 5Es Inquiry-based Learning Management Combined with Google Classroom on Learning Achievement in Science and Technology Learning Areas of Grade 12 Students. *Journal of the Association of Professional Educational Administration of Thailand (JAPDEAT)*, 5(4), 174–185. (in Thai)
- Saowapha, P. (2023). The Study of Learning Achievement in TOEIC through the LMS System Among Third-Year Students at Phetchaburi Rajabhat University. *Phetchaburi Rajabhat University Academic Journal*, 13(1), 101–111. (in Thai)



.....  
Teacher Jane. (2025, June 6). *What is TOEIC? Why Do You Have to Take It?*. <https://shorturl.asia/ORbC6>.

Thaipradit, K., and Thabthieng, S. (2020). The Development of a Computer-Assisted Instruction in English Vocabulary for TOEIC Test Preparation. *Journal of Educational Measurement Mahasarakham University*, 18(3), 30–38. (in Thai)

Thongdee, J. (2022). *The Development of Reading Comprehension Ability of Matthayomsuksa 2 Students Using Jigsaw Technique with Graphic Organizer*. [Unpublished Masters' thesis]. Silpakorn University. (in Thai)

Tourism Thailand. (2020, January 8). *Language and Communication*. <https://shorturl.asia/gS6oW>

Wongtongcharoen, B. (2023). The Development of Web-based Instruction on Computer of Prathomsuksa 2 Students, Demonstration School, Buriram Rajabhat University. *Disciplinary Journal*, 7(1), 69–76. (in Thai)

Yimsakul, P. (2024). Development of Self-Learning Materials to Enhance English Communication Skills for Tourism Entrepreneurs in Kudi Jeen community. *DRIRDI Research for Community Service Journal*, 10(2), 44–59.