

## Effectiveness of In-House Materials on Academic Reading Proficiency of College-Level Omani Students

**Sarath Withanarachchi Samaranayake**

Department of International Language Teaching  
Silpakorn University, Thailand

Corresponding Author: SAMARANAYAKE\_S@su.ac.th

**Suneeta Kositchaivat**

Department of International Language Teaching  
Silpakorn University, Thailand

**Patteera Theienpermpool**

Department of International Language Teaching  
Silpakorn University, Thailand

Received:07/25/2022

Accepted:11/24/2022

Published12/15/2022

### Abstract

Most preparatory students studying at the universities of technology and applied sciences in Oman demonstrate a low proficiency in academic reading. As a result, most students stop their studies at the certificate level without pursuing a higher qualification. Given this issue, this study was conducted to promote level three preparatory students' academic reading proficiency. This study may inspire reading instructors who teach in EFL contexts and depend on commercially produced materials to develop in-house materials appropriate for their students. The research question this study attempted to answer was whether the application of in-house materials helps tertiary-level EFL students to perform better in a standardized reading test (Cambridge Reading B2 First). The study consisted of two treatments and two comparison groups ( $N = 84$ ), instructed using in-house materials (treatment groups) and the prescribed textbook (comparison groups) for one semester. At the end of the intervention, the data were analyzed using descriptive and paired-sample t-tests to determine whether the intervention affected the performance of the treatment groups in the post-test than the comparison groups. The findings indicated a statistically significant ( $p < .001$ ) difference in B2 First Cambridge English Reading Test between the pre-test and the post-test for the treatment group showing a significant improvement in reading proficiency. Based on the findings, it can be concluded that in-house materials are more effective in helping English Foreign Language tertiary level students improve their reading proficiency than commercially produced textbooks in EFL programs in Omani technological education.

**Keywords:** Commercial English Textbooks, in-house materials, intervention, Omani tertiary education, reading proficiency

**Cite as:** Samaranayake, S. W., Kositchaivat, S., & Thienpermpool, P. (2022). Effectiveness of In-House Materials on Academic Reading Proficiency of College-Level Omani Students. *Arab English World Journal*, 13(4) 454-467. DOI: <https://dx.doi.org/10.24093/awej/vol13no4.30>

## Introduction

Victor Hugo, in *Les Miserable* (1862), one of the greatest French historical novels of the 19th century, wrote, "To learn to read is to light a fire, every syllable that is spelled out is a spark" (p. 7). When educators provide students with plenty of opportunities to read by engaging in repeated practice of reading skills, students are more likely to acquire, maintain and generalize skills. Improving the reading proficiency of EFL learners has become an essential issue among EFL/ESL instructors because research has found a strong correlation between reading and academic success at all ages, from primary school to the university level. Given the critical role that reading plays in Omani tertiary-level education, the Higher Education Council in Oman (2008) set out academic standards for general foundation programs in higher education institutions. The two learning outcomes for reading skills in English are as follows: 1). General Foundation Program students should be able to read from one to two pages, identify the main idea(s), and extract specific information in a given period. 2). Read an extensive text broadly relevant to the student's area of study (minimum of three pages) and respond to questions that require analytical skills (Oman academic standards for general foundation program, 2008). Moreover, Tuzlukova, Eltayeb, and Gilhooly (2013) state that teaching reading skills in Oman's tertiary education institutions are vital for all academic courses taught in English Medium Instruction (EMI). Therefore, the students at the colleges of technology in Oman must be proficient in academic reading skills. The College of Technology offers professional courses in Engineering, Business Studies, and Information Technology, leading to certificates, diplomas, and higher diplomas. Given the academic standards for the English Language, the General Foundation Program (GFP) students must acquire a satisfactory level of competence in all language skills. As a result, they can function well in the post-foundation program where they are supposed to study their specializations (Engineering, Business Studies, and Information Technology). Thus, students enrolled in the foundation program in a college of technology must study English, Math, and Information Technology (IT) for one year to develop their English, Math, and basic IT skills to meet the post-foundation study program requirements.

The researchers were English teachers in the foundation program at this college's English Language Center (ELC) for three years. They observed that most foundation students from level three demonstrated low performance in the college-based Mid-Semester (MSE) and the Level Exit (LEE) examinations conducted during 2016-2017. During the academic year of 2017-18, 1142 students from the four levels (one to four) sat for the LEE, and the test result from analysis for the same academic year for the general foundation program (English) indicated that 915 (80%) students passed LEE as a total. (The minimum marks a student should obtain to move from one level to another are 25 out of 50 from all the skills (Reading, Writing, Grammar, Listening, and Speaking). However, 227 students out of nine hundred and fifteen failed the LEE with a percentage of 19 (Test results analysis, 2018). The failure results indicated that most students received low marks (below 10 out of 25) for reading skills. Condition of this nature clearly shows that a fair number of students from all four levels (levels one to four) could have performed better in reading in the LEE. Even though the other levels (one, two, and four) come under the GFP, we limited this study to level three, and we will discuss the rationale for selecting level three for this study below. This study addresses the academic reading issues experienced by level three students in the General Foundation Program at this college.

The Foundation English Program at this college lasts one semester (16 weeks), and during the semester, foundation students must sit for two examinations (MSE and LEE). As described

above, the analysis of exam results in the foundation program for the past two academic years (2016-2018) showed that most students' reading performance in the examinations was below the expected level. Therefore, the Student Support Committee (SSC) of the college hypothesized that there might be a link between the current material and students' performance in college-based examinations (MSE and LEE) because commercially produced textbooks are used for the foundation program. Moreover, the books have not been selected using global or local criteria. The current textbook (*Ready to Read Now*, 2005) has been used as the instructional material in level 3 for the last four years. The book has proved that it is neither interactive nor engaging since the pedagogical implications of current theories and research in linguistics and language learning have not been updated in the textbook. Moreover, this textbook has not been written aiming for a target group, and the students of this college study English for a specific purpose. As noted earlier, these students must study their specializations (Engineering, Business Studies, and IT) in English medium instruction at the post-foundation level. In addition, a discussion that one of the researchers had with students in level three revealed that the reading texts included in the book do not deal with current issues and cover topics of subject areas that they would study at the post-foundation level. In other words, students complain that what they learn from this textbook is not perceived as valuable and relevant (Tomlinson, 2003). As Tomlinson argues that materials should achieve impact, and impact can be achieved through novelty, variety, attractive presentation, and appealing content. To achieve the expected result from the reading course, Student Support Committee decided that the reading textbook, '*Ready to Read Now*' (2005), should be supplemented with in-house materials. Therefore, the SSC requested the instructors to produce an in-house reading, writing, and grammar materials. As such, the researchers created context-specific materials for reading during the first semester. At the outset, material writers agreed to develop and use the materials during the second semester, which started in January and finished in April 2019.

Lack of reading proficiency in the target language constantly becomes an issue for foundation-level students in academic contexts because the foundation-level students at this college should pursue their post-foundation programs (Engineering, Business Studies, and Information Technology) in English medium. As a result, these students must read English books and journals relevant to their specializations to complete compulsory assignments and projects before graduation.

Low performance in reading skills in the college-based examinations suggests that teaching reading using the prescribed textbook does not effectively engage learners in the reading process. Reading involves word recognition, comprehension, fluency, and motivation (Leipzig, 2001). Therefore, given the problem above, the researchers decided to investigate the effectiveness of in-house materials developed by material writers for foundation students (level three). The developed materials included student worksheets and reading texts relevant to their specializations (Engineering, Business Studies, and IT). Authentic texts extracted from magazines and instruction leaflets, different types of activities that focused on developing reading strategies, *PowerPoints*, pictures, and video clips with instructions for teachers on how to use them in the class were also a part of the developed materials. The in-house materials were used to teach the experimental groups (four-five), while the control groups (Groups 12-14) were instructed through the prescribed textbook (*Ready to Read Now*). The main aim of this study was to help students to interact with academic texts and make connections and judgments between texts.

Moreover, to develop learners' critical thinking while the objectives focus on helping level three students improve their reading proficiency to perform better in the Post Foundation Program. College-level students studying English as a foreign language will benefit directly from this study as its findings encourage them to consider that in-house materials are more effective in enhancing their reading proficiency than commercially produced materials in the first place. Secondly, this research may convince EFL reading teachers in tertiary-level institutions that their reading courses. Secondly, the reading instructors teaching in EFL contexts and dependent on commercially produced materials may inspire to design and develop in-house materials appropriate for their learners' reading needs without depending on such materials which are not meant for a target group. Thirdly, this study covers information relevant to in-house reading material design and production and how they are delivered to learners in the classroom to make them more interactive and engaging in reading activities. This study covers most aspects relating to the positive effects of in-house reading material that can be used to help develop students reading proficiency. Thus, other researchers can use this study's results to investigate their effects on EFL tertiary-level learners learning in different contexts of Omani technological education and worldwide. In light of previous research studies and the motivation for the current study, the research question is as follows:

### Research Question

To what extent does the application of in-house materials help tertiary-level EFL students perform better in a standardized reading test (Cambridge Reading B2 First)?

The following sections will describe literature relevant to the present study, followed by the research method used and the findings that emerged, while the discussion section focuses on explaining and evaluating what the study found, indicating how it relates to the literature review and research topic with an argument in support of the study's overall conclusion.

### Literature Review

This section will focus on the research investigating the effectiveness of in-house materials used in reading courses in different teaching contexts worldwide and their relevance to the current study. A common assertion is that instructional materials in any given language program play a crucial role and are generally considered the second most important factor in an EFL classroom after the teacher (Allwright, 1990; Riazi, 2003). Given the importance of instructional materials, Evan and John (1998) stated that materials can serve four purposes: 1)-as a language source. 2)-as learning support. 3)-for motivation and stimulation, and 4)- for reference.

Teaching materials include textbooks, handouts, activity sheets, *PowerPoint* presentations, video and audio tapes, computer software, and visual aids. They contain much content extracted from different sources, from books to websites. Therefore, the contents of teaching materials are rich in linguistics and information in the target language, where learners find them helpful as a language source and learning support. Also, when materials contain visuals and various viewpoints on controversial issues, students learn to explore, analyze and make explicit judgments, clear instructions, and objectives. A study by Sass (1989) asked his classes to recall two recent class periods, one in which they were highly motivated and one in which their motivation was low. Each student listed specific aspects of the two classes that influenced their motivation to be high or low. Students then met in small groups to determine characteristics contributing to high and low

motivation. In over twenty courses, Sass (1989) reported that the students came out with the following eight factors:

1. Instructor's enthusiasm.
2. Relevance of the material.
3. Organization of the course.
4. Appropriate difficulty level of the material.
5. Active involvement of students.
6. Variety
7. Rapport between teacher and students.
8. Use appropriate, concrete, and understandable examples

From the list above, three out of the eight were concerned about materials contributing to students' high level of motivation. Dudley-Evans and John (1998) view print materials as a reference because students can review previously learned information. Furthermore, students can control the pace of their involvement in the learning process and can pause if they need to consult reference materials and make clarifications about the lesson they have already learned.

Given the pedagogical value of materials, as indicated by Riazi (2003) and Dudley-Evans and John (1988), we used the in-house materials in the current study with the assumption that they would enhance Level three learners' academic reading proficiency. Hutchinson and Waters (1987) suggested that the process of material production for a specific language course involves several stages and that material production should be based on the syllabus, which should reflect the language features of the target situation and the learners' needs (Hutchinson & Waters, 1987). Based on the course outline for Level three students at this college, the researchers developed in-house materials following a specific order for each reading topic that should be taught in a semester. The researchers included *PowerPoint* and video clips in the materials because Mayer (2001) observed that information is encoded and remembered better when delivered in multiple modes.

The reading tasks suggested in the prescribed textbook (*Ready to Read Now*) need to be revised to provide students with ample opportunities to practice reading interactively. Both psycholinguistic theories of skill acquisition and second language acquisition suggest that considerable practice is required to automatize a skill (DeKeyser, 2007). Our literature review has shown that only a few studies have investigated the effectiveness of in-house materials over commercially produced materials in enhancing EFL/ESL learners' reading skills in the target language. To this end, Faridi (2010) conducted an experimental study in Indonesia, using developed materials to teach English language skills to elementary students. The researcher first conducted a needs assessment for teaching English, followed by the design of the model materials. The study was carried out in three selected schools to evaluate their effectiveness. The researcher's study consisted of three main study groups: experimental and control groups. The students for this research were selected as follows: The first main study group was chosen from grade six students from the first school, the second main study group was selected from grade five students from the second school, and the third main study group comprised grade four students from the third school. The English teachers of those selected schools assisted the researcher in conducting the study, and each study group consisted of between 30 to 35 students. The experimental groups were instructed with developed materials, while the control groups were taught using commercial ELT textbooks with no modification. After the study, the researcher post-tested the study groups, and the students' post-test results were scored and ranked from zero to 100. The results revealed a difference between the experimental and control groups in the post-test. The researcher provides the reader with percentages of the scores of each experimental and control group received for the main study in the post-test. The grade six experimental group in the first main study received 92.6, while the control group got 78.6. The grade five experimental group in the second main study received 89.8,

while the control group obtained 79.8. The third main study group, which consisted of grade four experimental group from the third school, got 88.7, whereas the control group scored 74.5 out of 100. Based on the English post-test results from the sample schools, the researcher concluded that the developed materials effectively taught English, including reading, to elementary schools in Central Java Province, Indonesia, compared to commercial English textbooks.

The two studies cited below are relevant to the current research on the effectiveness of intervention in reading. Parker, Holland, and Jones (2013) led a reading intervention in a south Texas urban school in the USA and recorded positive results. They included two intervention programs for ninth-grade students, READ 180 and Voyager Journeys III (Computer-based programs). They analyzed students' pre-test and post-test performance on the Scholastic Reviewing Inventory (SRI) and the effect of the programs on the Texas Assessment of Knowledge and Skills (TAKS). The results indicated that the students enrolled in Voyager Journeys III had statistically higher results on SRI post-tests, using the pre-tests as the covariate. In addition, the students who enrolled in the READ 180 program had statistically higher test results on the 2011 ninth-grade Reading TAKS scores than those who enrolled in the Voyager Journeys III for the same year.

Another study by Vaughn et al. (2012) reported the effects of a yearlong intensive reading intervention for eighth-grade students with severe reading difficulties. They demonstrated inadequate response to the intervention program in Grades six and seven. However, at the end of the intervention, the results showed that students in the treatment group had demonstrated significantly higher scores than the comparison group on standardized measures of comprehension (effect size = 1.20) and word identification (effect size = 0.49), even though some students still showed lower proficiency in reading.

The study by Boakye (2021) seems the most relevant to the current research as it was conducted at the tertiary education level. Boakye (2021) found that first-year students studying sociology in a South African institution struggled to read academic texts as they were replete with several abstract concepts relevant to sociology. Given the problem of reading academic texts, the researcher conducted a reading intervention in which she incorporated role plays into the reading of sociology texts to promote deep reading and improve the comprehension ability of learners. The researcher used pre and post-tests and a questionnaire to collect data. Her findings indicated that most students had improved their academic reading proficiency with cognitive and affective benefits.

## Method

### *Participants*

Using a random purposive sampling technique, we selected participants from foundation-level (Level three-2019 Academic year) students for the current study. Of the 14 groups, groups four and five were chosen as the treatment groups, while 12 and 14 were the comparison groups. The rationale for selecting students for this study from level three is that level three students start studying English for specific purposes until they complete their bachelor's degree. The students in level three should conduct mini-projects, write reports, and present at the college. Their ages ranged from 18 to 20 years and consisted of males and females. We did not group the students according to any criterion based on their marks or performance at their previous level. All participants finished studying in levels one and two, where they had studied English in addition to studying at school for 12 years. Most participants came from families whose main occupation was

farming or fishing, except a few whose parents were government servants or businessmen. Given the participants' age and educational and social backgrounds, they were homogenous in the current study.

### ***Research Instruments***

As noted earlier, most students in the foundation program in level three demonstrated low proficiency in reading skills even though they had studied English in school for several years and three semesters at the college. The researchers hypothesized that their students' reading proficiency could be promoted using contextually developed in-house materials delivered in an interactive way where learners could work collaboratively in pairs or groups in the class. Therefore, a unified structure was followed when designing and developing reading materials for level three to make them more effective than the lessons in the prescribed textbook (*Ready to Read Now*). The developed materials included student worksheets, reading texts relevant to their specializations (Engineering, Business Studies, and IT), Authentic texts extracted from magazines and instruction leaflets, different types of activities with clear instructions for students, *PowerPoints*, pictures, and video clips with instructions for teachers on how to use them in the class. A reading lesson consisted of three phases: pre, while, and post-reading, along with the time allocated for each task. The pre-reading task included a video clip and a *PowerPoint* presentation to activate students' prior knowledge of the topic, which the student will bring into the text (schema activation). According to Anderson and Pearson (1984), the Schema theory is based on the belief that "every act of comprehension involves one's knowledge of the world as well." (p. 73). Thus, readers develop a coherent interpretation of a text through the interactive process of "combining textual information with the information a reader brings to a text" (Grabe, 1988, p. 56). During the 'while reading' phase, students worked in pairs/or in groups depending on the task they had to complete while the teacher monitored the class. While reading activities in a reading lesson included various types of tasks such as true or false statements, filling gaps, matching items, cloze items, scanning, skimming, and comprehension questions. In contrast, the post-reading activities were limited to one or two tasks in which students did a quiz or participated in a competition. At the final stage of the lesson, the reading teacher recapitulated the lesson that the class had already studied and discussed any problem/s students still had regarding the task. The three phases of reading tasks (pre-while and post) were the instructional method used with the treatment groups.

A typical lesson that the comparison groups studied during the study included a prescribed textbook (*Ready to Read Now*), in which a reading chapter began with a picture relevant to the teaching strategy the students had to study. The teacher drew the students' attention to the image and asked a few questions to check the learners' understanding of the topic. Then, the teacher explained the reading strategy relevant to the lesson in detail, using more examples for the students to understand. Then, students do the exercises suggested in the lesson. The exercises in the textbook are mostly comprehension questions based on different reading texts. Once students completed the activities, the teacher discussed the correct answers with the whole class and provided the class with feedback. Every chapter follows a similar procedure throughout the text, with some exceptions in a few lessons.

The researchers also used three different research instruments (Reading pre-test, post-test, and intervention tools) to gather data, execute the intervention, and analyze the data.

### ***Reading Pre-test***

The researchers used a sample reading paper (1) from the B2 First English Test administered by the University of Cambridge, ESOLE, as a pre-test to measure the reading proficiency of the study groups before any classroom instruction commenced. The purpose of using the sample reading paper from the B2 First English Test was that the participants' reading proficiency levels closely matched this test. The English First aims at B2 level qualification in the Common European Framework of Reference for Languages (CEFR). The CEFR is an international standard for describing language abilities. The B2 First reading test consists of seven parts, each with different questions (multiple-choice, word formation, keyword transformation, text-based on multiple-choice questions, gapped text, and multiple matching). The reading test has 52 questions, each carrying one mark. As this test paper consisted of questions related to the use of English, we removed those questions because we did not intend to test these learners' abilities relevant to the use of English. We selected 30 questions from this test paper, and each question carried one mark. Since the B2 First is a standard international test with global recognition for its reliability and validity, there was no need to pilot the test. At the end of the pre-test, the answer scripts of the two study groups (treatment and comparison) were evaluated using the answer key provided with the sample test papers. As the sample reading papers of B2 First are available to the public on the IELTS.org website, we verified through a class discussion whether students had done Cambridge English Exam while they were at school or privately before administering the pre-test. The researchers found that no single student had taken any Cambridge English Exam or even heard about them. This view was further confirmed after administering the pre-test because most students said that the test was difficult and the structure of the test items differed from what they had done at school and college for reading.

### ***Reading Post-test***

We used the same sample paper for the reading post-test. After the post-test, answer scripts were rated using the answer key of B2 First.

### ***Intervention Tools***

As described above, the researchers used in-house materials to teach the experimental group, followed by the instructional method described above. The control group was instructed using their prescribed textbook (*Ready to Read Now*), and the instructional procedure described above was applied. Since the intervention lasted 14 weeks, 28 lessons were included in the developed materials (two weekly classes). At the end of the intervention, the researchers investigated the treatment's impact on the study groups' dependent variable (reading proficiency).

### ***Statistical Analysis***

Descriptive and inferential tests were used for the data to be analyzed in this study because there were two main study groups. Independent Samples T-test was used to compare the mean difference between the treatment and comparison groups in the Pre, and post-tests to determine whether there was a statistical difference between the two groups in mean scores on two tests.

### ***Data collection and analysis procedure***

During the class orientation, we informed the four study groups about the study on the first day of the class. Afterward, we administered the reading pre-test (B2 First reading test for all four

groups, and their answers were scored using the answer key of the B2 First Exam. Then, the student’s scores were entered into an excel sheet for later analysis. The study lasted for 14 weeks with 72 hours of classroom instruction. After the intervention, we conducted the post-test for the study groups, and it was scored out of 30 using the same procedure as applied to the pre-test to collect the data. Finally, the data gathered from the three research instruments were analyzed using the descriptive and paired samples T-test (IBM SPSS (20) to determine whether the developed materials affected the treatment groups’ reading scores.

We used the raw score for each participant in the pre and post-tests to calculate the descriptive statistics of the treatment and comparison groups. At the same time, the Paired Samples t-test was performed using the same data sets to compare the mean difference between the experimental and control groups in the Pre and post-tests. Tables one and two show the descriptive and paired samples test results.

**4. Findings**

Table 1. *Descriptive statistics of the Experimental and Control groups between the pre and post-tests*

Group	Test	N	Mean	Std. Deviation	Std. Error Mean
Treatment	Pretest	40	10.7	1.45	.22
Comparison	Pretest	40	10.62	1.62	.25
Treatment	Posttest	40	16.12	1.75	.27
Comparison	Posttest	40	12.2	1.95	.30

As indicated in Table two above, the paired samples t-test was executed to measure the mean variation (0.5) between treatment and comparison groups before the treatment began. The outcomes demonstrated that the means between the treatment group ( $M = 10.7, SD = 1.45$ , and the comparison group ( $M = 10.62, SD = 1.62$ );  $t(79) = -50.39, p = .829$  did not differ between the groups in the reading pre-test indicating that both groups were similar in reading proficiency before the intervention started. However, after the intervention, the treatment group ( $M = 16.12, SD = 1.75$ ),  $t(79) = -36.66, p = .000$  got higher mean values in the post-test than the comparison group ( $M = 12.2, SD = 1.95$ ).

Table 2. *Comparison of reading tests marks between experimental and control groups by Paired Samples T-test*

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	R PRE (T) R PRE (C)	-9.16	1.62	.18	-9.52	-8.80	-50.39	79	.829
Pair 2	R POS (T) R POS (C)	-12.66	3.08	.34	-13.34	-11.97	-36.66	79	.000

RPRE(T)= Reading pre-test treatment group, RPRE (C) = Reading pre-test comparison group, RPOS(T)= Reading post-test treatment group, RPOS (C) = Reading post-test comparison group

However, after the study, the comparison groups also improved in reading proficiency even though it was not statistically significant as the experimental group. In the following section, we will

discuss the possible reasons for the experimental group's substantial progress in reading ability and the non-significant improvement of the control group in detail.

## Discussion

The research question we examined in this study was whether the application of context-specific in-house materials helps tertiary-level EFL students to perform better in reading in an examination setting as measured by the B2 First Reading sample test (2015). To answer the research question, the researchers hypothesized that applying context-specific in-house materials would help tertiary-level EFL students perform better in a standard international reading test.

However, it needs to be emphasized at the outset that even though the participants for the current study were randomly allocated to level three by the Registration Department of the College using a computer program, their proficiency levels in reading were not determined before assigning them to study groups. According to the descriptive statistics, as shown in Table one for the study groups (treatment and comparison), there is a statistically significant difference ( $\alpha = 0.05$ ) between the means of the student's scores in reading between the pre-test and post-tests. As discussed above, both the descriptive and the inferential statistic results revealed that the two study groups were similar in their reading proficiency at the beginning of the study because the mean scores of the two groups were not significantly different at ( $\alpha = 0.05$ ). However, the experimental group received higher mean scores in the post-test than the control group. Given test results as indicated in Tables one and two, it can be concluded that the developed materials and how they were delivered in the classroom largely contributed to the increase in students' scores in the post-test. Given the positive results that emerged from the current study in which in-house materials were used to instruct the treatment group during the intervention, we can conclude that in-house materials are effective in helping college-level EFL students to improve their reading proficiency as measured by the B2 First Cambridge Reading Test (2015).

The possible reasons for the positive results of the treatment group can be ascribed to the effectiveness of the in-house materials. According to Allwright (1981), materials should teach students to learn, and students learn what is presented in the materials. In support of Allwright's view (1981), the in-house materials included student worksheets, video clips, *PowerPoint* presentations, and pictures with the premise that information is encoded and remembered better when it is delivered in multiple modes (verbal and pictorial), sensory modalities (auditory and visual) or media (computers and lectures) than when delivered in only one single way, modality or medium (Mayer, 2001). According to Mayer, this kind of learning is termed 'Dual code and Multimedia effects' in which dual codes provide more prosperous and varied representations that allow more memory retrieval routes. The in-house materials can be assumed to align with the learning principle above. Therefore, the learners in the experimental group had the opportunity to receive information from multiple modes, modalities, and media. In other words, before introducing a reading topic to the experimental group, the students watched a short video relating to the topic at hand so that the students were able to process the new knowledge coherently about existing knowledge frameworks. Thus, the students in the treatment groups could make sense of the text before it was presented. Moreover, most of the class time, students engaged in pair and group work where they were allowed to interact with their peers and the teacher. This kind of interaction with peers and experienced others helps learners move from their current level of performance 'what they can do now, to a level of 'what they can do without assistance' according to the zone of proximal development concept by Vygotsky (1978). Research shows that students

can reach much higher performance levels by working with an expert than they might have worked on their own (Donato, 2000; Ohta, 2000). Therefore, the degree of teacher intervention and the selection of tasks play a crucial role in scaffolding reading.

Another reason for the success of the treatment group can be described as the difficulty level of the reading tasks included in the in-house materials. Researchers have identified several zones that reflect how much learning, memory, mastery, or satisfaction occurs along a continuum of task difficulty, which is sensitive to individual differences among learners. When the material is too easy for the learner, the student is not challenged and may get bored. When it is too difficult, the student acquires very little and gets frustrated. Therefore, given task difficulty, the researchers in the current study took care to include and use just the right level of reading tasks in the intervention. As a result, the experimental groups can be assumed to have found the in-house materials interactive, engaging, and appealing because the materials also allowed them to study reading strategies such as identifying the main idea, scanning, skimming, previewing, and predicting, recognizing sequence, making inferences, and using context clues.

As noted above, the possible explanations for the control group's limited reading performance can be attributed to the reasons below. Firstly, the reading material (*Ready to Read Now*) used to instruct the control group was not interactive and engaged the learners, so they felt no interest as it was not context-specific. Moreover, *Ready to Read Now* has yet to be written for a specific group of learners. Secondly, the examination of the contents of this prescribed textbook reveals that it has been written for general English learners. However, the students of this college need to study academic English because they will have to study their specialization subjects, such as Engineering, Business Studies, and Information Technology in English medium in the post-foundation program. Therefore, the possible lack of "fit" between learner needs and what the book presents may not have appealed to the students in the comparison groups to study it with interest. Thirdly, the instructional procedure used in the textbook followed a fixed pattern throughout the book. This fixed pattern may have made the students feel bored rather than stimulated to read and learn from the materials. Finally, some issues of this textbook can relate to content selection and pedagogical design factors, including choice of activities and exercise types (Richards, n.d.), which are outdated in current perspectives of L2 acquisition.

The results of the current study agree with Faridi's (2010) findings which have shown that the developed materials helped the experimental groups in her research to make more gains in scores than the control groups in the post-test. Likewise, the current study's findings also support Parker, Holand and, Jones's (2013) study which, investigated the effects of two different reading intervention programs. Both interventions yielded more gains in the post-test than in the pre-test results. Moreover, Vaughn et al.'s (2012) findings also corroborate the current study. Vaughn et al. (2012), who conducted a yearlong intensive reading intervention for students with severe reading difficulties, reported that the treatment group got significantly higher scores on standardized comprehension tests than the comparison group at the end of the intervention. Finally, Boakey's (2021) study conducted with tertiary-level students is congruent with the outcomes of the current research that supported preparatory students to improve their academic reading proficiency.

### Limitations of the study

Even if the study results were positive, there are two major limitations, of which the first is sample selection. The investigation was restricted to 84 participants. In this way, it cannot be inferred that the population sample is illustrative of college-level EFL students either in Oman or outside Oman. Subsequently, the outcomes of this study cannot be generalized to a more extensive population of college-level students. The second limitation is that the researchers could not control all the social factors, such as taking English tuition outside the college, reading English texts, and accessing online study materials to improve English reading proficiency, which could have impacted the study results. Further research in other teaching contexts with more college-level students using several research instruments, such as survey questionnaires, and focus group interviews, is necessary to make more informed decisions about using in-house materials to promote tertiary-level students' reading proficiency.

### Conclusion

In conclusion, this study was conducted to help level three foundation program students improve their reading proficiency to perform better in the Post Foundation Program. This study investigated the efficacy of in-house materials in enhancing EFL college-level students' academic reading proficiency as measured by a standard reading test (Cambridge B2 First Reading Test). The significant findings of the study included the results of comparing reading performance between the pre and post-tests. The findings indicated that the mean difference between the experimental and control groups was significant in the post-test ( $\alpha = 0.05$ ). Therefore, based on the experimental group's results, it can be concluded that the instructional procedure consisting of in-house materials is more effective than commercially produced textbooks in enhancing the academic reading proficiency of college-level students in technological education in Oman.

### About the Authors:

**Sarith Withanarachchi Samaranayake** (Ph.D.) is an English lecturer at the Department of International Language Teaching at Silpakorn University, Thailand. He has published several articles in peer-reviewed international journals. His interests include teaching and researching in the domains of ESL and EFL. ORCID ID: <https://orcid.org/0000-0002-6352-726X>

**Suneeta Kositchaivat** (Ph.D.) is an assistant professor at the Department of International Language Teaching at Silpakorn University, Thailand. Her primary interests include communicative language teaching, English camp activities, and English project work. ORCID ID: <https://orcid.org/0000-0002-8300-727X>

**Patteera Theienpermpool (Ph.D.)** is a lecturer at the Department of International Language Teaching at Silpakorn University, Thailand. Her major interests concern vocabulary, material development, testing and evaluation, and language education technology. ORCID ID: <https://orcid.org/0000-0002-9049-2912>

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