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Original Research

The Effect of Reflective Reading on EFL Students' Reading Comprehension achievement and Engagement

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Abstract

The main purpose of this quasi-experimental study was to examine the effect of reflective reading on EFL students' reading comprehension achievements and engagements: the case of Melka Jabdu primary and secondary school. For this purpose, 100 participants were selected from each groups that are for control and experimental groups using convenience sampling. During the 12 week intervention, the experimental group engaged in reflective reading approach while the control group adhered to the traditional method of reading and answering comprehension questions. After the intervention period, data was collected through pre/post-tests by comparing reflective learning students' achievements against those of non-reflective learning students. Results of the paired sample t-test shows that pre-test score before intervention ($M=23.52$, $SD=1.474$) and after taking intervention/training ($M=30.24$, $SD=2.552$) at the 0.05 level of significant $t(49)=15.149$, $n=50$, $p<0.05$, 95% confidence interval for mean difference: 5.829 to 7.611. On average, the post test score of students was about 6.720 marks greater than pretest score before intervention. There is strong evidence that ($t = 15.149$, $p < 0.05$) that the reflective reading intervention improves marks. The estimated improvement is approximately 6.72 marks. Hence the p-values are less than 0.05; there is a statistically significant difference between the pre-test and post-test score means for the control and experimental group.

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INTRODUCTION

Background of the study

The goal of this study is to determine how reflective reading affects the reading comprehension and participation of students learning English as a foreign language. Reading is widely regarded as the key

component of the learning process. A person with strong reading skills will be able to comprehend a wide range of information. This is crucial for enhancing the individual's likelihood of developing their reading skills. Reading is a fundamental life skill, according

to Anderson, Hiebert, Scott, & Wilkinson. It serves as the foundation for a child's future academic and overall success. Opportunities for job success and personal fulfillment will inevitably be missed without the ability to read well (1985). Reading is undoubtedly one of the fundamental life skills. Good reading abilities will increase a child's likelihood of success. In early elementary school, when the building blocks for academic achievement are laid, learning to read is a fundamental academic skill (Aunola, et al., as cited in Novarita, 2016, p. 791). The two elements of reading ability are often described as word recognition and understanding (Bast, et al.) as mentioned in Novarita (2016, p. 791). As a result, since elementary school, we have been taught how to read, from recognizing a word to comprehending it. A student's ability to learn to read is assessed as a measure of their success or failure. Furthermore, Reading proficiency, which is one of the literacy skills, is essential for achieving academic and professional success. Since it is essential for students to learn language, literature, and other disciplines, these form the foundation of almost all learning and are a fundamental need for advancement in life (Geske & Ozola, as cited in Dian, et al., 2016, p. 221). The primary goal of reading is to grasp the concepts presented in the text. Reading would be futile and meaningless without comprehension (Gunning, as cited in Dian, et al., 2016, p. 221).

Because reading is necessary in a variety of disciplines, not just one, reading ability is essential for a more sophisticated existence. Reading is the foundation of the majority of learning that seeks to comprehend the content of what we read. Students' poor reading skills are caused by a number of factors, including a supportive family and community environment, the advancement of complex

technology, in schools; students are less designed to read in search of information, lack of motivation, and little guidance. As a result, the study intends to increase students' desire to read short reading materials by utilizing a reflective reading approach, as well as by answering questions about the text during the learning process. Additionally, this research seeks to ascertain how reflective reading affects the reading comprehension and participation of EFL learners. Additionally, the researcher collected data from all of the English teachers at Melka Jabdu primary and secondary school, which revealed that the majority of students can read English texts fairly well but struggle to comprehend them, making it challenging for them to respond to questions that are occasionally perplexing and deceptive. Particularly with texts that contain in-depth explanations or informative reading that require critical thinking in order to read the material well and respond to the questions accurately.

Reflective reading involves actively engaging with a text on a deeper level, considering its themes, meanings, and links to one's own life. It requires considering the author's purpose, asking questions about the text, and reflecting on one's own reactions and interpretations. By fostering critical thought, this strategy helps students comprehend the subject in a more meaningful way. Reflective reading is an examination and evaluation of the validity of the claims presented in reading selections (Walz, as cited in Malcolm Larking, 2012, p. 1). In his book, Dewey (1933, pp. 1-2) claims that the human mind has four different ways of functioning: stream of consciousness, belief, reflection, and imagination. Of these modes, reflection is more important and aids students' learning processes, particularly for their long-term learning journey and study

experience. In the context of the arguments that back it, reflection is defined by him (1933, p. 6) as a deliberate, ongoing, and comprehensive process of any view or claimed form of knowledge. Thompson (2022, p. 12) supports this by stating that reflection is a process of reviewing past occurrences in order to better comprehend them. According to Al-Rawahi and Al-Balushi (2015, pp. 367-369), students would be given the chance to consider their past learning experiences, share their thoughts, suggest alternative approaches to the activities, and make notes of any questions they may have for later. Reflective reading is one element of the reflective technique used in the classroom. In a reflective approach, students usually think about their past experiences, decisions, and behaviors while also rethinking their ideas and conclusions (Hussein, 2018). Students are encouraged to question their initial reactions and their reading materials throughout reflective reading exercises. Using the reflective reading method, the researcher discovered that the majority of the pupils' scores were still below the norm prior to applying the method. Following reading, the majority of them found it hard to express their thoughts. It has been established that in order to read a text, one must first grasp the core of the text itself. Based on the aforementioned explanation, the researcher chooses to carry out the study at Melka Jabdu Primary and Secondary School, under the name of The Effect of Reflective Reading Approach on EFL Students' Reading Comprehension Achievements and Engagements.

Statement of the problem

In this study, the author makes use of a few pertinent articles for comparison and reference. Some of the research has been expanded upon in order to analyze the similarities and differences between the findings. Unlike the

other researchers' studies, the researcher used the effect of the reflective reading approach on EFL Students' Reading Comprehension achievements and Engagements. Nava Nourdad's (2017) research, "The Effect of Reflective Reading on Reading Comprehension of Iranian EFL Learners," was the first of these. The purpose of the book, as its title indicates, was to investigate how reflective reading techniques impacted adult Iranian EFL students who were taking intermediate-level courses in two different subjects. The learners were divided into two experimental groups and two control groups according to their age group. The study instrument was subjected to a pre- and post-test, and the results were analyzed using a T-test. The findings show that the two groups had nearly identical pre-test results prior to therapy, but the experimental group outperformed the control class in the post-test results.

According to the study's findings, reflective reading has led to an increase in pupils' reading comprehension. The second study, "The Effect of Reflective Journal Writing on Students' Self-Regulated Learning Strategies," was conducted by Sulaiman M. Al-Balushi and Nawar M. Al-Rawahi (2021). The study focuses on the effectiveness of reflective journal writing for tenth-grade pupils in the Oman area's AdDakhiliyah School. The pupils are divided into two groups: the control group and the experimental group. The authors utilize the Motivated Strategies for Learning Questionnaire (MSLQ) as an instrument, and they use Analysis of Covariate (ANCOVA) to assess the outcomes of the questions before and after they are administered. The findings revealed that the experimental group significantly outperformed the control group, suggesting that the reflective journal writing practice was effective. The title of Hinda

Hussein's third study is "A Case Study at the Tertiary Level of EFL Students in the United Arab Emirates." The author's study examines the impact of reflective journals on students' cognitive abilities. The study included 15 female students between the ages of 19 and 23 who were enrolled in UAE higher education institutions. The researcher used reflective journals as a data gathering technique, and data analysis was used for evaluation. Therefore, all of these researches have shared descriptions of their conclusions. First off, the majority of participants are English language learners of English, and the age range of the participant group is between 13 and 14 years old, which is the age range for junior high school students. Furthermore, all of the aforementioned studies are conducted on Iranian students in the Middle East of Asia. However, the methodology utilized in this study is distinct from the aforementioned ones. Researchers in the aforementioned trials just utilized pure quantitative designs and used a T-test to analyze the outcomes of a pre- and post-test for the study instrument. The current study, however, employed a quasi-experimental research approach and used a 4-point Likert scale: Very often (V = 4), Often (O = 3), Sometimes (S = 2), and Never (N= 1). Furthermore, the Mann-Witney U test was used to determine the statistical significance of variations in students' responses interactions between reflective and non-reflective reading. Furthermore, the aforementioned research did not account for the impact of reflective reading on students' reading comprehension engagement in the treatment and control groups.

However, in the present study, the researcher was able to gain a deeper insight into how reflective reading influences students' reading comprehension participation in the

control and experimental groups. This study was carried out in Ethiopia, on one of the primary and secondary schools under the Dire Dawa educational administration in Melka Jabdu primary and secondary school. As a result, this research differs from earlier studies in terms of its theory, methodology, application, setting and context.

Objectives of the study

This research aims to investigate the impact of a reflective reading approach on grade nine EFL students' reading comprehension achievements and engagements in reading comprehension exercises in EFL classrooms in one of the Dire Dawa educational administrative council, Melka Jabdu primary and secondary school, Ethiopia in the academic year of 2024-2025. Thus, this quasi-experimental design study is to see how reflective reading affects students' achievement and participation in reading comprehension.

Research Questions

1. To what extent did reflective reading affect students' reading comprehension achievement in EFL class?

H0: There is no significant difference in terms of students' scores between the reflective reading approach and the non-reflective reading approach.

H1: There is a significant difference in terms of students' scores between the reflective reading approach and the non-reflective reading approach.

2. In EFL class, how much do reflective readings impact students' reading comprehension involvement?

H0: There is no statistically significant difference between the Reflective and non-Reflective reading approaches in terms of how engaged students are in reading comprehension.

H1: There is statistically significant difference between the Reflective and non-Reflective reading approaches in terms of how engaged students are in reading comprehension.

Significance of the study

In the context of EFL, reading is a complicated and multifaceted ability that involves cognitive processes, making it difficult to enhance reading proficiency (Çakıcı, 2017). In addition, a good reading experience necessitates reasoning and inferential abilities in order to establish the link between the textual material and the readers' prior knowledge (Aloqaili, 2012). As a result, the study's findings may offer more insight into how the reflective reading method impacts pupils' reading comprehension skills. Students may improve their information comparison and practice their reflection abilities with this approach before and after the learning process. The Reflective Reading approach may be a useful alternative learning skill for teachers in EFL classes. Using this approach, teachers must create a large number of informational texts and, in the process, assist students in learning about the various sorts of informational texts and their linguistic characteristics. Other researchers can assess students' reading comprehension skills using different techniques. The reason for choosing reflective reading actively involves students in the process of comparing and contrasting information. The study's results shed more light on the strategy employed and how it impacts students' involvement in reading comprehension.

REVIEW OF RELATED LITERATURE

Conceptual frame work of the study

A conceptual framework for an introspective reading approach could be organized around the 5R framework: Reporting, Responding, Relating, Reasoning, and Reconstructing to

promote deeper engagement with the text and individual learning.

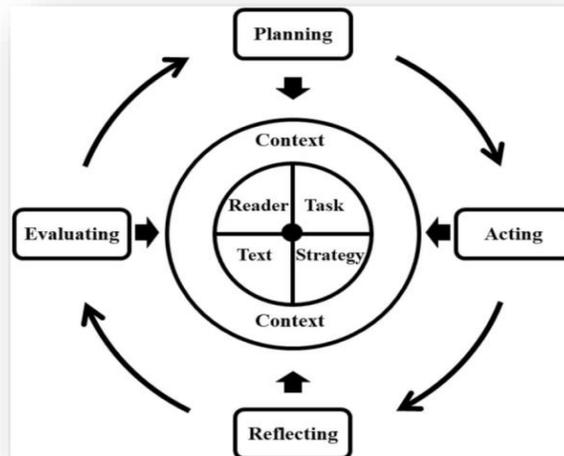


Figure 1: Conceptual framework

Here's a more detailed breakdown:

1. Reporting:

- What: Depict the text, topic, and initial reactions to the reading.
- How: Note significant ideas, central arguments, and personal emotions or thoughts evoked by the text.

2. Responding:

- What: Examine the text, recognizing the author's purpose, tone, and style.
- How: Reflect on the author's viewpoint, assumptions, and possible biases, and how these components shaped the writing.

3. Relating:

- What: Relate the text to previous knowledge, personal experiences, and other readings.
- How: Investigate connections between the text and your own comprehension of the subject, and how the text broadens or challenges your current knowledge.

4. Reasoning:

- What: Assess the text's arguments, evidence, and conclusions.
- How: Evaluate the strengths and weaknesses of the text, and ponder alternative viewpoints or interpretations.

5. Reconstructing:

- What: Contemplate the learning journey and how the reading experience has transformed your understanding.
- How: Recap key insights, pinpoint areas for further investigation, and consider how the reading will shape future learning or actions.

Definitions of reading

Many experts have given their definitions of what reading means. Reading is a very important skill that students must be mastered because reading cannot be separated in the process of teaching and learning. Wallace (1996) adds that reading is interpreting which means reacting to a written text as a piece of communication. It means that when someone sees written symbols in a text, there will be something visualized on the reader's mind. Davies defines that reading is a private activity. It is a mental or cognitive process, which involves a reader in trying to follow and respond to a message from a writer, who is in distance space and time. Anderson (1999) defined that reading is an active fluent process that involves the reader and reading material in building meaning. He suggests that meaning does not reside on the printed page, nor is it in the head of the reader. A synergy occurs in reading that combines the words on the printed page with a reader's background knowledge and experience. Grabe and Stoller (2002) explained that reading is "the ability to draw meaning from the printed page and interpret this information appropriately". According to Nunan (2003), reading is a fluent process of readers combining information from a text and their own background knowledge to build meaning. Mikulecky (2011) states that reading is a complex conscious and unconscious mental process in which the reader uses a variety of strategies to reconstruct the meaning that the author is assumed to have intended, based on

data from the text and from the reader's prior knowledge. According to Grellet (1981), reading is an active skill. It constantly involves guessing, predicting, checking, and asking oneself questions. Since he believes that the readers use more than one strategy to get the meaning of the text. The readers start surveying the text then make hypothesis about the content then make predictions and confirm the predictions by skimming and re-reading the text for more details. Widdowson (1984) defines the reading that it is not a reaction to a text, but an interaction between writer and reader mediated through the text. Goodman (1995) states reading as a long-distance discussion between a reader and an author. There is an essential interaction between language and thought in reading. The writer encodes thought as language and the reader decodes language to thought. Reading is the construction of meaning from a printed or written message (Richard, 1998). Reading begins with the accurate, swift, and automatic visual recognition of vocabulary, independent of the context in which it occurs.

Reading Comprehension

Reading is defined in numerous ways by linguists. They claim that reading is the process of acquiring comprehension and retaining the content of the text. They also state that reading is a process of comprehending a written material by getting as much information as possible from it. According to Smith, reading is a productive and constructive activity with four distinct and fundamental characteristics: it is purposeful, selective, anticipatory, and depending on comprehension, all of which require the reader to practice reading. In addition, reading can be defined as a process of making acceptable explanations in apprehending a text that has four characteristics: purpose, selection, anticipation,

and comprehension. One of the advantages of reading is the ability to discuss comprehension.

According to Richards and Schmidt, comprehending is recognition of the intended meaning of either spoken or written communication. They also add that modern theories of comprehension emphasize that it is an active process that draws on both information contained in the message (bottom-up processing) and background knowledge, information from the context, and the purposes or intentions of the listener and speaker (top-down processing). In conclusion, reading comprehension is a sense of words related to vocabulary mastery that provides foundation of information for determining the likely meaning. Moreover, reading comprehension is a process of relating the readers' background knowledge with the information in the text to get the message of the text. It is not only a matter of knowing and remembering the meaning of all words in the text, but also about how the readers build and construct the meaning of the text.

Reading comprehension assessment

In order to assess students' comprehension of texts, various types of questions should be used. In fact, approaches to the evaluation of reading comprehension have tried to introduce interactive activities and tasks. The use of questions is an integral part of these activities and well-designed questions would help learners better interact with the text to build up meaning. Indeed, a combination of comprehension activities helps learners respond to various types of comprehension. There are numerous methods and forms of reading comprehension tasks that can be used in assessing students' comprehension and stimulating their understanding of a text. These techniques may take formal or informal forms.

Sally and Katie (2008) state some of these tasks as follows:

1. Yes/no questions: these are the questions that should be answered either yes or no. However, teachers are suggested to follow up these questions with other types of questions to make sure that students have understood the text as yes/no questions can be answered correctly by chance.
2. True or false questions: this test consists of a text accompanied by a series of statements. Students need to decide and mention whether the given statements are true or false according to the text.
3. Matching: this type is likely to be less familiar to learners, but increasingly common. Some of reading constructors may include more than one matching task in their tests. In this test, learners need to choose from a list of prompts. These prompts may be statements, headings, or question completion. For instance, learners can be asked to match a description to the appropriate paragraph, or to match words and phrases to their meanings.
4. WH questions: Wh questions are questions that begin with Wh such as who, what, where, when, why, and how. These questions are useful in providing learners with literal understanding of a text and help them recognize information in the text and make evaluations and personal predictions.
5. Open-Ended Questions: these questions are used in standardized assessments. They are useful in assessing the component skills of comprehension such as the ability of learners to make inferences from the text. In fact, learners are asked different questions for the reason of testing their memory and their comprehension of the text. However, it is important to mention that this form of assessment may have some weaknesses because learners must formulate verbal or written responses which may

underestimate their comprehension because of their language deficits.

6. **Multiple-Choice Questions:** this type of reading task is the most familiar to learners. It is composed of a text which can be of any type accompanied by one or more multiple-choice items. These choices may be in the form of statements, a question with answers, or incomplete statements with a choice of phrases or words. Generally, there are three or four options and only one of them is the right one. It is important to have statements corresponding to specific paragraphs or sections of the text, but there may be statements that assess comprehension of the whole text.

7. **Gapped Texts:** this kind of reading comprehension test includes texts or diagrams from which single words, phrases, sentences, or paragraphs are deleted. These filling the gaps tasks can also be used in testing grammar and vocabulary.

Benefits of Reflective Learning for Students

Students can also benefit from using reflective practices in their studies. In this context, reflection includes, analyzing, and improving learning acquisition to improve knowledge assimilation, while developing an improved level of understanding of the lessons and topics. Including reflective learning strategies in your lesson plans will benefit students in the following ways:

A. Improve Student Performance

Student performance can be improved by using reflective learning practices. Since individual students can reflect on class sessions, they will identify, and improve on their weaknesses to ameliorate their overall performance in a topic. According to research such as *The Effects of Student Reflection on Academic Performance and Motivation* by Derek Cavilla (source) students who use reflective practices develop Meta cognitive skills, which are very important

transversal life skills. Reflection can help you to obtain a deeper understanding of a concept or a topic, while reflective practices stimulate your ability to remember difficult topics and formulate solutions, in moments of crisis. Students can use reflective practices to improve their performance in different subjects by using a reflective learning diary to note down key theories, formulas, and lessons. It is also very important to note down areas of difficulty. For teachers, these reflective learning diaries provide valuable insights into what works well and what does not work in your teaching techniques and lessons.

B. Boost Engagement in Class

Student engagement in reflective reading involves an active, ongoing, and critical examination of a text that goes beyond simply reading words, requiring students to connect with the content, analyze it, and consider its implications for their own learning and understanding. This engagement can be fostered through creating a supportive classroom environment, providing opportunities for active participation like questioning and discussion, and assigning reflective tasks such as reading autobiographies or keeping journals to encourage deep thought and connection to the text. Students detest dull classes, as much as their teachers do. In the case of a less than inspiring lesson, students can provide productive feedback for teachers, by using their reflective learning diary to express their ideas or suggestions. Students are much more likely to understand difficult topics if they are active in their learning process. By providing such important feedback, they feel that they have a say in how they are learning. For example, it is important to vary the rhythm of the class from week to week. Why not consider using brainstorming sessions or mind maps to recall

what was done in a previous lesson. While working in small groups, the students are free to be innovative and creative in their presentation styles. Each student or group can share their ideas, raise queries, and contribute. In this reflective reading classroom setting, the roles are reversed and the students become the teachers since they are given the floor to explain what was taught to them. This unexpected turn of events can surprise the students and make the lesson much more interactive and engaging. Active learning is not only about assimilating knowledge and practical theory; it is also about actively assuming one's responsibility in the learning process. Knowledge is power; however sharing your knowledge with others is even more powerful.

C. Develop Critical Thinking and Coping Skills

For students, reflective learning can help improve their skills in solving problems and challenges. Most students face many different challenges in their attempts to learn new concepts, lessons, subjects, etc. Using reflection will improve their problem-solving abilities and stimulate their cognitive thinking and analytical skills. For instance, when faced with problems or questions related to coursework, students can formulate and note down the issue and then search for creative solutions, such as asking a classmate or friend for assistance or advice. Developing critical thinking and coping skills will greatly benefit their ability to focus and understand their studies. By noting down troublesome areas, they will be free to learn and concentrate on finding the appropriate solutions. This will definitely have an effect on their performance and confidence levels (Critical thinking and reflective practice). The role of information literacy, Monica Vezzosi, source). Students

who wish to improve their critical thinking and problem-solving skills, as well as their creativity levels should strive to adopt reflective practices as part of their study routines.

D. Enhance Student Motivation

Students' motivation is crucial for reflective learning in reading comprehension because intrinsic and extrinsic motivation enhance focus, leading to deeper understanding and stronger comprehension skills. Reflective practices like self-assessment and journaling can increase students' motivation by fostering self-awareness and a sense of ownership over their learning, enabling them to identify and solve comprehension challenges independently. To improve motivation, teachers can incorporate student-choice in reading materials, ensure texts are accessible, and connect reading to students' lives.

Intrinsic Motivation: Driven by internal factors like personal interest and enjoyment, intrinsic motivation helps students to connect with texts, ask questions, and make deep connections, leading to more meaningful learning and better retention.

Extrinsic Motivation: Rewards or external factors, while less impactful for deep learning, can also play a role in encouraging reading.

RESEARCH METHOD

To address the research question the researcher applied a quasi-experimental design to find out the effect of reflective reading approach on students' reading comprehension achievement and engagement in EFL class.

Research Instruments

The current research aimed to investigate the effect of applying reflective reading approach on achievements and engagement of high school students in EFL class. Due to this, the researcher employed pre- and post – test and questionnaire instrument.

Pre- and Post-Test

The researcher applied the pre-and post-test design approach to a quasi-experimental design. In this instrument, the researcher assigns intact groups the experimental and control treatments, administers a pre-test to both groups, conducts experimental activities with the experimental group only, and then administers a post-test to assess the differences between the two groups (Creswell, 2012). One of the aims of this study was to examine the effect of reflective reading on students' achievements and engagements in EFL class. The first research question "To what extent did reflective reading affect students' achievement and performance in EFL class. According to (Cohen, 2018), a researcher can use certain tests to measure student achievement. Thus, the researcher used the pre-and post-test instrument with an experimental group and a control group to identify any differences in student achievement in both groups. In terms of designing the test, the teacher and the researcher attempted to design a comprehensive test that covers the various units of the topic during the experiment. The researcher followed one of the phase's processes that have been suggested by Buffum et al. (2015) to create a valid and reliable test instrument. This phase is identifying the purpose of the test. According to this phase, the purpose of using pre-and post-test was to determine whether reflective reading could have an effect on students' reading comprehension achievement and performance in EFL class by observing any perceived differences on the dependent variable, which is the student score in both the experimental and control groups.

Questionnaire

The researcher used a questionnaire that was primarily made up of closed questions, which

was beneficial for the study's goal of assessing students' reading comprehension engagement between the two groups to see whether there was any variation. According to Cohen (2019), this type of questionnaire enables the researcher to make comparisons across the sampled groups. Additionally, it allows participants to answer at their convenience (ibid). In fact, such a helpful choice could help participants, such as students, who might have trouble answering open-ended questions. The questionnaires' items were given a numerical value and evaluated using a 4-point Likert scale: Very often (V = 4), Often (O = 3), Sometimes (S = 2), Never (N= 1). As such, the higher the median is, the more engaged the participants are and vice versa. That is, the median scores of the domain close to four would indicate a higher level of students' engagement in reading comprehension.

Reliability of the instruments

To guarantee the internal reliability of the questionnaire, Cronbach's Alpha was used to perform a consistency check to determine its internal reliability. The majority of researchers have employed Cronbach's alpha coefficient to assess internal reliability in recent years (Bryman, 2016, p.169). As a result, the Cronbach's alpha coefficient test was used in the study with a total of 100 pupils. The Alpha coefficient value is considered to be at a high level (range 0-1) if a scale has a high level of internal reliability (Bryman, 2016, p. 170). To assess students' accomplishment and performance, the initial 40 questions were created using a four-point Likert scale (SD, A, D, SD). The National Survey of Student Engagement, however, used the five-point Likert scale (very frequently, frequently, occasionally, never) to measure the engagement component. As a result, the Cronbach's Alpha score for the questionnaires

is between $\alpha = 0.719$ and $\alpha = 0.92$, indicating high reliability.

Validity of the instruments

Quantitative methods' validity must be confirmed in a study if the results are to be applied. The first form utilized in the current experiment was a survey, which needed to demonstrate a high degree of validity and reliability in order to be useful (Cohen et al., 2018; Johnson & Christensen, 2020). Face validity and content validity were both employed in order to establish validity. The questionnaire was given to students after being reviewed by the supervisor to ensure its face and content validity. In a similar way, the questionnaire's content was reviewed by professionals, which improved the degree of external validity (Bryman, 2016). In order to assess students' performance levels, the current research employed other quantitative approaches. This comprised test instructions that followed the principles established by Buffum et al. (2015), who emphasized enhancing the validity and reliability of reading comprehension assessment tools. In addition, the current study has sought to establish face and content validity for the test (Cohen, 2018; Mills & Gay, 2019). Therefore, the test's face validity should be assessed in light of its primary objective (Bryman, 2016, p.171; Cohen, 2018, p.572). Two English teachers at a chosen school evaluated it in order to accomplish this.

Participants

The group of people from whom data is gathered is known as participants. Bernard (2011) argues that researchers should consider these groups as important sources of data, rather than only picking individuals to include in the study. Time and money constraints make it unfeasible to include everyone in the study, according to Maree (2016). 100 participants

were selected from both groups that are from control and experimental groups using convenience sampling. Arikunto (2002: 183) asserts that the sample is representative of a subset of the population under investigation. Convenience sampling was used by the researcher in this investigation. Convenience sampling requires that the two class groups have almost identical capabilities (Sudjana, 2005: 26).

RESULTS AND DISCUSSION

Students' Reading comprehension skills achievement

The first question to be addressed in the current study is concerned with any potential significant contrasts between the reflective reading and none reflective reading in relation to reading comprehension skills students' achievement and performance before and after the experiment. This section presents the data from the students' tests scores that are based on reading comprehension questions and these data addressed the following question:

To what extent did Reflective reading affect the students' achievement in EFL class?

H0: There is no significant difference in terms of students' scores between the reflective reading and the Non-Reflective reading in EFL classroom.

H1: There is a significant difference in terms of students' scores between the reflective reading and the Non-reflective reading in EFL classroom.

Students' Test Score

The quasi-experiment was conducted to determine whether an independent factor created a significant effect upon a dependent variable. The independent factor was the learning approach, namely reflective reading and none reflective reading, whereas the dependent variable was learners' score in the

EFL class. The researcher conducted a test with 40 questions, with each question weighting 1, and with a total of 40. A paired t-test was conducted in order to evaluate the two different reading approaches and how they led to varying levels of students' reading

comprehension skills achievement and performance.

From table 1-3: The results of pre-posttests data analyses

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Posttest Control	24.14	50	1.818	.257
	Pretest Control	22.38	50	2.320	.328
Pair 2	Posttest Experimental	30.24	50	2.552	.361
	Pretest Experimental	23.52	50	1.474	.208

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	Posttest Control & Pretest Control	50	.369	.008
Pair 2	Posttest Experimental & Pretest Experimental	50	-.153	.288

Paired Samples Test									
		Paired Differences					t	Df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Posttest Control - pretest Control	1.760	2.361	.334	1.089	2.431	5.271	49	.000
Pair 2	Posttest Experimental - Pretest Experimental	6.720	3.137	.444	5.829	7.611	15.149	49	.000

Results of the paired sample t-test for control group shows that pre-test score before (M=22.38, SD=2.32) and after taking intervention/training (M=24.14, SD=1.818) at the 0.05 level of significant $t(49)=5.271$, $n=50$, $p<0.05$, 95% confidence interval for mean difference: 1.089 to 2.431. On average, the post test score of students was about 1.76 points greater than pretest score before intervention in the control group. The estimated improvement is approximately 1.76 marks. The 'Lower' and 'Upper' limits of the 95% confidence interval

tell us that we can be 95% confident that the population mean difference between the Pre and Post test score in the control group is between 1.089 and 2.431 marks.

Results of the paired sample t-test for experimental group shows that pre-test score before intervention (M=23.52, SD=1.474) and after taking intervention/training (M=30.24, SD=2.552) at the 0.05 level of significant $t(49)=15.149$, $n=50$, $p<0.05$, 95% confidence interval for mean difference: 5.829 to 7.611. On average, the post test score of students was

about 6.720 marks greater than pretest score before intervention. There is strong evidence ($t = 15.149$, $p < 0.05$) that the teaching intervention improves marks. The estimated improvement is approximately 6.72 marks. Hence the p-values are less than 0.05; there is a statistically significant difference between the pre-test and post-test score means for the control and experimental group. Since the mean difference for experimental group is larger than control we conclude that the intervention is effective in experimental groups compared with control group. Therefore, the result rejected H_0 and confirmed H_1 , which indicates that there is a significant difference in the scores for reflective reading approach.

Students' Reading comprehension skills engagement

This part of the survey sought to assess students' involvement in reading comprehension skills in the EFL classes of the two groups to see if there was any difference.

Every item in this section was given a numerical value and evaluated using a four-point likert scale: Very Often (V = 4), Often (O = 3), Sometimes (S = 2), Never (N = 1). Therefore, the greater the median, the more participants are engaged, and vice versa. In other words, a higher level of student engagement in reading comprehension would be indicated by the median scores of the domain that is close to four. Therefore, this research addressed the following question:

How significantly did reflective reading improve students' engagement in reading comprehension skills in an EFL class?

H0: The reflective reading group and the non-reflective reading group do not differ significantly in terms of student engagement in reading comprehension.

H1: The reflective reading group and the non-reflective reading group differ significantly in student engagement in reading comprehension skills.

Table 1
Student Response Frequency

<i>Items</i>	<i>Code</i>	<i>Control</i>	<i>Experim ental</i>
I engage with the instruction of reading comprehension skills activities in EFL class.	Very often	10	22
	Often	14	19
	Sometimes	10	7
	Never	16	2
I participate with other students in EFL class during reading lesson	Very often	12	14
	Often	11	15
	Sometimes	17	25
	Never	4	2
I contributed to class room discussion during reading activities.	Very often	8	27
	Often	7	16
	Sometimes	9	7
	Never	26	0
I feel I engaged with reading comprehension skills	Very often	19	29
	Often	17	17
	Sometimes	9	2
	Never	5	2
I work at home to prepare for reading activities in EFL class	Very often	13	25
	Often	9	11
	Sometimes	9	10
	Never	19	4
I explained the materials/texts to my classmate	Very often	5	22
	Often	7	20
	Sometimes	17	2
	Never	21	6
I am willing to participate in this reading activities because the content is exciting and changeable	Very often	14	19
	Often	10	16
	Sometimes	11	10
	Never	15	5

The students were questioned about how frequently they participated in activities that promoted reading comprehension in English as a foreign language classes. The frequency table indicated that the majority of students in reflective reading were more engaged than those in non-reflective reading. In a reflective reading approach, the students often participated in activities aimed at developing their reading comprehension skills during EFL

classes. Conversely, however, the students in non-reflective reading method, which stated that it only, happened now and then.

Furthermore, nearly half of the students (N=26) who used a non-reflective reading technique said they were never able to participate in classroom discussions. During reading activities in an EFL class, no one stated that they were unable to participate in classroom discussions during reading

comprehension. Additionally, compared to pupils in a non-reflective reading approach (N=34), the majority of students in a reflective reading approach (N=48) stated that they were more involved in the reading of comprehension skills activities. In addition, it is evident that the

majority of students in reflective reading (N=46) frequently participated in activities designed to help them prepare for reading comprehension activities in an EFL class as opposed to non-reflective reading.

Table 2
Overall Student Engagement in Reading Comprehension Skills

	Reflective reading		Non-Reflective reading	
	N	Median	N	Median
Total of Students Engagement	50	3	50	2

Table 3
Mann-Whitney Test for Students' Reading Comprehension skills and Engagement

Group	N	Mean Rank	U	Z	P	R
Reflective Reading	50	38.56	168	-3.12	.00	.59
Non-reflective	50	23.14				
Total	100					

The median of students' reading comprehension engagement scores in Reflective reading (Med=3) was greater than that in Non-reflective reading, according to table 2 above (Med=2). It can be inferred that students' reading comprehension skills were engaged differently during reflective reading than during non-reflective reading. The Mann-Whitney U test was used to evaluate the significance of the difference in student engagement between reflective and non-reflective reading. There was a notable difference in students' reading comprehension engagement, as shown in Table 3, with U = 168, Z = -3.12, p < 0.05. As a result, the null hypothesis was rejected and the H1 was accepted, suggesting that there was a considerable difference in reading

comprehension engagement between students between reflective reading and non-reflective reading.

CONCLUSION

This study provided an analysis of the pre-post test data collected that examined the effect of reflective reading on students' reading comprehension skills achievements. A comparison of the medians of the experimental and control group, through paired sample test was conducted in order to address the research question that required statistical analysis. The result of the pre-and post-test showed that there was an overall increase in the students' scores in reflective reading compared to non-reflective reading, in the post-test stage. Hence the p-values are less than 0.05; there is a statistically significant difference between the

pre-test and post-test scores means for the control and experimental group. Therefore, reflective reading approach was the appropriate method to enhance students' reading comprehension achievement. It was also determined that reflective reading positively impacted students' engagement with reading comprehension skills, although there were the data gathered from the reflective reading group students showed more favorable responses than that from their non-reflective reading group equivalents. A Mann-Whitney U test was used to assess the significance of the difference in student engagement between reflective and non-reflective learning. As a result, the outcome was rejected the null hypothesis and accepted the alternative hypothesis (H1), because there was a substantial difference in students' reading comprehension engagement, with $U = 168$, $Z = -3.12$, $p < 0.05$ suggesting that there was a noteworthy disparity in students' reading comprehension engagement between reflective and non-reflective reading.

CRedit authorship contribution statement

Teshome Okubay: Teshame Okubay wrote the first manuscript draft based on the primary research. Dr. Dereje Tadesse, Dr. Abera Admassu, and Dr. Alemmayehu Getachew made contributions. Supervision throughout the study contributed to clear, accurate writing and hence improved the manuscript. Writers examined the last edition and gave their agreement before turning in their papers.

Dereje Tadesse, Abera Admassu &

Alemayehu Getachew: Validation.

Supervision, review and editing

Declaration of competing interest

The authors declare that they have no competing interests that could influence the research, authorship, or publication of this manuscript.

Ethical Approval Statement

The Department Graduate Council of Postgraduate Programs (CPGP), Haramaya University, gave this study ethical approval on October 23, 2024 (Ref. No. PGPD 16/434/24). As Haramaya University's official ethics body was the CPGP; there was no independent IRB. Following written informed consent from every participant, with assurances of voluntary participation, secrecy, and anonymity, they were taught about the aim and methods of the research.

Informed Consent

All participants gave written informed consent on November 6, 2024, after being thoroughly briefed about the goals and methods of the intervention, which used the impact of reflective reading method on EFL pupils' performance in comprehension questions and achievement. They were told their involvement was strictly optional, leaving wouldn't impact their grades, and confidentiality and anonymity would be rigorously preserved.

Artificial Intelligence Tools

In preparing this manuscript, the AI such as ChatGPT, Quillbot, and Grammarly were used only to assist with language enhancement and grammar checking. Therefore, all AI-assisted content was thoroughly reviewed and edited by the authors to ensure accuracy, coherence, and alignment with the study's objectives. The author takes full responsibility for the final content of the manuscript.

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