

# The Effect of Reading Strategy Training on Students' Reading Comprehension Performance

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## Abstract

*The study was intended to investigate the effect of reading strategy training on students' reading comprehension performance. To attain this objective, a quasi-experimental research design with quantitative approach was used. Participants in this study were 84 Ambo University first-year students. These participants were categorized into the treatment group (TG) and control group (CG). Reading comprehension tests were given to participants in both groups before and after the training to examine whether their reading comprehension performance was significantly different or not. Using the independent samples t-test and SPSS version 25, the reading comprehension test results were quantitatively calculated. The pre-test results showed that there was no statistically significant mean difference in reading comprehension performance between the TG ( $M = 45.52$ ,  $SD = 16.75$ ) and the CG ( $M = 47.31$ ,  $SD = 17.17$ ).  $t(82) = -.482$ ,  $P = .631$  (two-tailed) in which  $p > .05$ . In the post-test results, the independent t-test revealed a statistically significant mean difference in reading comprehension test performance between the TG ( $M = 59.10$ ,  $SD = 16.01$ ) and CG ( $M = 48.86$ ,  $SD = 15.81$ ).  $t(82) = 2.948$ ,  $P = .004$  (two-tailed),  $p < .05$ . In this regard, TG participants outperformed CG participants. According to the study, teaching students reading strategies improved their reading comprehension performance. The improvement achieved by participants in the TG suggests that training in reading strategies had a positive impact on their reading comprehension performance. Hence, the result of this study could be used as a reference by English teachers, students, and other researchers.*

**Keywords:** reading strategies; reading comprehension performance; pre-, while- and post-reading strategies

## Introduction

Reading is one of the four basic language skills that a person can acquire in his or her life. Various scholars define reading differently, keeping the common elements in mind. For example, Grabe (2009) defines reading as the process of receiving and interpreting information encoded in language through the medium of print. According to Grabe and Stoller (2011), reading is a cognitive process that consists of a text, a reader, and a reading

situation in which comprehension is achieved. It is the product of the interaction between written information, readers' previous knowledge, and the strategies they employ to bring them together (Zafarian and Nemati, 2016). From these definitions, reading is an activity that requires the interaction of the reader, the linguistic knowledge, the reader's background knowledge and the written text to arrive at the intended comprehension.

Comprehension is at the heart of every reading process formally exercised in educational institutions, such as schools, colleges, and universities. Since English is used as a medium of instruction in Ethiopian universities, students are exposed to reading all courses designed in English for the success of their academics. Hazzard (2016) states that reading provides significant contributions to the success of learners in completing their studies. Reading also helps learners to develop simultaneously with other language skills such as writing, speaking and listening (Haupt, 2015) and keeps individuals informed, up-to-date, and thinking (Castillo and Bonilla, 2014).

Students are required to construct the meaning of a text using a range of reading strategies in a highly strategic process. Reading strategies are the most significant elements that facilitate reading comprehension (H. Ahmadi et al., 2021). In this context, they are purposeful, conscious actions and procedures taken by readers for meaning construction. Good readers have proper knowledge about the strategies they use and apply them appropriately and effectively (Par, 2020). To do this, students have to be aware of and use reading strategies based on their reading purpose.

The study of reading, specifically, reading comprehension and its instruction has been an active and ongoing area of research. However, reading comprehension problems have not been solved yet. The researcher's many years of English language teaching experience, information obtained from their colleagues and students' exam results indicated that secondary school and university students have problems in reading texts written in English. Among those problems, factors related to the knowledge and usage of reading strategies are taken into consideration in this study. Knowledge and application of reading strategies change learners' reading behaviour and help them repair their insufficiencies in text comprehension (Raju and Dasai, 2020).

Without effective reading strategies, students mostly face reading comprehension difficulties (Al-Jarrah and Ismail, 2018). For this reason, reading strategies training is required to make

them aware of and use reading strategies to become successful readers. Strategy training is the explicit teaching of how, when, and why students should employ language learning strategies to enhance their efforts at reading language program goals (Karbalaei, 2011). Reading strategy training results in adequate self-monitoring and regulation (Raju and Dasai, 2020). According to Al-Jarrah and Ismail (2018), lack of such training significantly adversely affect reading comprehension performance among EFL learners in higher institutions. In light of this, Cekiso (2012) suggests that English teachers should give students training in reading strategies to help them become strategic readers. Al-Jamal et al. (2013) recommend following and using proper strategies to attain the desired goal rather than focusing on assessment as a tool to enhance comprehension skills.

This study focuses on dealing with the factors contributing to poor reading comprehension performance that are related to reading strategies, specifically, the knowledge and application of different reading strategies. In relation to this, the researcher observed that English teachers have not developed practice of planning to teach and train their students on how to use reading strategies to perform reading comprehension activities and exam items. The teaching materials prepared for students seem not encourage language teachers to provide reading strategy training for students. Some reading activities given in the reading sections are not supported by strategies that help do those activities. These may not make students to give due attention to the use of reading strategies.

Some local studies in the area of reading were conducted and a few of them were selected for the purpose of this study. A survey study conducted by Yohannes (2013) revealed that cognitive and meta-cognitive reading strategies were used in English classes at a moderate

level; however, the proportion of students who are successfully using cognitive as well as meta-cognitive strategies is lower than anticipated. Mebratu (2014) examined the effects of cognitive reading strategy training on the comprehension skills of Goro Secondary School EFL students and found that students' reading comprehension skills are improved through cognitive reading strategy training. Tesfu (2015) studied the impact of strategy training on grade 11 students' reading comprehension performance, and concluded that most students struggle with reading comprehension due to their limitations of using reading strategies. Benti et al. (2017), investigated the effect of reading strategy training on grade nine students' academic reading achievement and found that students in the experimental group who received reading strategy training performed better than those in the control group.

The local studies discussed here are conducted in the area of reading. However, students' reading comprehension problems have not been solved yet. Moreover, those studies did not focus on the effect of reading strategy training

## **Materials and methods**

### **Setting of the Study**

This study was conducted at Ambo University. It is one of the Ethiopian government universities located in the western part of Addis Ababa, the capital city of the country, at a distance of 120 km. Ambo University was selected for the current study because the researcher has closely worked in this university and observed students' problems related to reading in his ten years teaching experience in this university.

### **Design of the Study**

Quasi-experimental research design was employed to achieve the purpose of the study. This research design, like experimental design,

on university students' reading comprehension performance. For example, studies by Yohannes (2013), Mebratu (2014), Tesfu (2015), and Benti et al. (2017) focused on secondary school students. Moreover, none of these local studies described the dependent variable under discussion in the way that was carried out in this study. The current study, however, is planned to investigate the effects of reading strategy training on Ambo University first-year students' reading comprehension performance. The training mainly focused on the selected reading strategies used in the pre-, while-, and post-reading phases. The study is also different in the research objectives, research setting, research participants, and the design and methodology used to undertake the study. The study also attempted to investigate the issues that were not addressed by those reviewed empirical studies, and thereby it filled the felt gap. On this fact, the specific objective of this study was to examine whether reading strategies training brings any significant difference between participants in the treatment and the control groups in the pre-test and post-test on their reading comprehension performance.

tests causal hypotheses. In this research design, the treatment and the control groups were used. The researcher formed the two groups based on the number of students' sections he was assigned to teach. From the two sections, one section was the control group and the other one was the experimental group. A quantitative research approach was used in this study. The data which were gathered through the pre-test and posttest were all in all quantitative. These data were organized for quantitative analysis.

### **Sample and Sampling Techniques**

The participants for this study were eighty-four first-year/freshman social science stream students at Ambo University taking the course 'Communicative English Skills I' in the 2013 E.C (2021 G.C) academic year. They were obtained from the 20 sections of first-year social science stream students. In Ethiopia, first

year students are those who completed their grade 12 education and received passing grades, allowing them to be enrolled in various Ethiopian universities. The selection of these participants was purposive because the researcher has observed and recognized reading comprehension problems of first year students have faced in this university. In quasi-experimental research design, the samples were not chosen randomly (Creswell, 2009), rather the samples can be taken purposively based on the need of the research. However, random assignment in this design is possible, including full classes of students to the treatment and comparison groups (Creswell, 2012). Accordingly, the researcher was assigned to teach the course for two sections of the students, i.e., sections 13 and 14. Each of the sections consists of 42 students. Since the quasi-experimental design was employed in this study, section 13 was assigned as the control group and section 14 was assigned as the treatment group based on Creswell's (2012) view that says random intact group assignment into the treatment and control groups in the quasi-experimental design is possible.

### **Data Collection Instrument**

Data collection is one of the most important stages in conducting research. It is the process of gathering and measuring information on variables of interest, in an established systematic fashion that enables the researcher to answer the stated research questions, test hypotheses, and evaluate outcomes (Kabir, 2016). Reading comprehension tests were used to attain this objective. A fifty-items multiple choice reading comprehension tests (pre-test and post-tests) prepared from two reading passages were given for both the control and experiment groups before and after the intervention to examine their reading comprehension performance. The objective of providing these tests in the study was to find out if there was any significant difference between participants in the treatment group and the control group in the reading comprehension performance before and after the provision of reading strategy training. The rationale of providing pre-test on reading comprehension is to assess the students' prior knowledge and

skills in reading and understanding texts before the intervention. The rationale of providing post-test on reading comprehension is to evaluate the students' reading comprehension performance after the intervention.

### **The Provision of the Training and the Materials**

Reading strategies training was offered to the treatment group of first-year social science stream students at Ambo University in order to achieve this objective. The training was required to create students' awareness of reading strategies and make them use a variety of them in the reading process. The training was also planned to help students know what to do when they face challenges in the reading process and become effective in their reading. Therefore, reading strategy training was intended to investigate its impact on students' reading comprehension performance.

Regarding the provision of the training, the researcher prepared the training manual for the students and training guidance for the teacher. The training manual was designed in connection with the review of related literature. The material contains the highlights of reading, reading comprehension, the reading strategies in general, and the strategies that are used in the three-phase-approach of teaching reading in particular. Moreover, the material contained three reading practice passages accompanied by activities. The main emphasis of the training manual was on the reading strategies used in the three-phase-approach to teaching reading, which may be mentioned in one way or another in the cognitive and metacognitive strategies. Some of the strategies selected from the pre-reading phase are prediction, establishing a purpose for reading, previewing vocabulary, building up background knowledge, and brainstorming. These strategies are basic for actual reading. Strategies such as identifying main and specific ideas, inferring from the text, recognizing the writer's purposes, rereading, and note-taking are chosen from the while reading phase. Strategies such as summarization, retelling, and evaluation were selected from the post-reading phase. The

training took 10 weeks or 30 hours (three hours per week).

In this training, the Cognitive Academic Language Learning Approach (CALLA) instructional model was used. It is an instructional model aimed at accelerating the academic achievement of foreign/second language learners. CALLA was selected for this training because it is an instructional model designed to increase the achievement of English-language-learning (ELL) students and other students who are learning through the medium of a foreign/second language (Chamot and O'Malley, 1996). CALLA is important for students learning English to experience how academic language is used in a variety of disciplines by engaging them in language activities. In this context, the CALLA provides explicit and direct instructional techniques and strategies that foreign/second language learners can obtain as lifelong skills to compete as competent readers, and advocates student-centred instruction. According to Chamot and O'Malley (1996), CALLA focuses on providing students the opportunity to learn a new language independently and become self-directed learners. This instructional model has a five-stage cycle of instruction: preparation, presentation, practice, evaluation, and expansion. The current researcher followed this procedure in providing the training though these five stages do not have to be used in sequence every time in the instructional process. Each of these stages is discussed contextually in the upcoming five paragraphs.

In the preparation, the trainer-researcher identified the objectives of the lesson, elicited students' background knowledge by asking them brainstorming questions to get them ready for the next presentation stage, developed key words, and provided motivation for the students. He taught a few key words for the students' better understanding of the upcoming lesson and encouraged them to participate actively. In relation to the reading passages, the researcher asked the pre-reading activities, which were used to prepare students for the actual reading. In the presentation stage, the researcher presented new information related to the topic of the lesson in different ways. At this

stage, the researchers first helped students identify what they knew about the daily lesson contents and what gaps in prior knowledge should be addressed. Then, the day's lesson contents were presented and explained with relevant examples. The researcher modelled the processes in the teaching and allowed students to practice the contents of the daily lesson after he modelled it for them. In the third stage, the researcher used practical questions based on the contents of the lesson topic. At this stage, students were offered the opportunity to practice new strategies with authentic reading activities. In carrying out these activities, the researcher provided different learning structures that encouraged students to work cooperatively. These included pair work, group discussion (3-5 students), and reporting the discussions. In the evaluation stage, students evaluate their progress and develop metacognitive awareness of their new learning strategies and the new material they have learned. This stage of instruction is used to develop students' ability to evaluate strategies. The expansion stage provides the students with opportunities to exercise higher-order thinking skills. It is used to develop students' ability to transfer the reading strategies to the new task. In this final stage of the CALLA model, the researcher created a conducive situation for students to apply the information they obtained during the training to their own lives. In the expansion stage, students were inspired to apply the strategies that they thought to be the most effective; to transfer new strategies to different contexts; and to devise their own individual combinations and interpretations of metacognitive strategies.

### **Methods of Data Analysis**

After the administration of the tests, data were collected and subjected to statistical analysis. As mentioned earlier in this study, quantitative data was obtained from the pre- and post-tests. A computation of means of the pre-test and post-test of participants of the two groups (control and treatment /experimental groups) were made using the Statistical Package for the Social Sciences (SPSS version 25). These data were analysed and interpreted quantitatively

using the independent samples t-test. In this analysis, the means and standard deviations of the treatment and control groups were compared. To check the differences, mean of the control group was subtracted from mean of the treatment group and divided by standard deviation of one of the groups to get the effect size based on the suggestion given by Cohen (1988). Cohen argued that the standard deviation of either group could be used when the variances of the two groups are homogeneous. In this case, effect size (ES) is a name given to a family of indices that measure the magnitude of a treatment effect. A commonly used interpretation is to refer to effect sizes as small ( $d = 0.2$ ), medium ( $d = 0.5$ ), and large ( $d = 0.8$ ) based on benchmarks suggested by Cohen (1988).

### **Procedures Data Collection**

The objective of this study was to examine how reading strategy training affects students' reading comprehension performance. Reading comprehension tests were used to attain this objective. A fifty-item multiple-choice reading comprehension test was prepared from two reading passages and checked by English language professionals for its validity and reliability. Then, a pre-test was given for both the TG and CG. The rationale for providing a pre-test on reading comprehension is to assess the students' prior knowledge and skills in reading and understanding texts before the intervention. Reading strategy training was given to the TG for ten weeks to examine its effect on students' reading comprehension performance. After completing the training, a post-test was given for both groups. The rationale for providing a post-test on reading comprehension is to evaluate the students' reading comprehension performance after the intervention. Finally, the data obtained through the pre- and post-tests were filled out in SPSS

version 25, analysed, and interpreted quantitatively using the independent samples t-test.

## **Results**

### **The Effects of Reading Strategy Training on Improving Students' Reading Comprehension Performance**

The researcher used the reading comprehension tests (pre- and post-test) in this study to investigate if there is any significant mean difference between the treatment and the control groups in the pre- and the post-tests on their reading comprehension performance. This was intended to answer the research question, "What is the effect of reading strategy training in improving students' performance of reading comprehension?" The results of the pre-test and post-test on reading comprehension performance were analysed and interpreted using the independent sample t-test computed using Statistical Package for Social Sciences (SPSS) version 25. The independent samples t-test (or independent t-test, for short) compares the means between two unrelated groups (the treatment group and the control group, in this study) on the same continuous, dependent variable, reading comprehension performance in this specific case.

### **Analysis of the Pre- and Post-tests Results of the Treatment and Control group on Reading Comprehension Performance**

Table 1 shows the analysis of the independent samples t-test results of the pre- and post-tests of students of the treatment and control groups. Thus, Table 1 reveals that the summary of the pre-test and post-test results on reading comprehension performance.

Table 1. Pre-test and Post- test Results of the TG and CG Students on RCP

Tests	Group	N	Mean	SD	t-value	Df	Sig (2-tailed)	Result
<b>Pre-test</b>	Treatment	42	45.52	16.75	-0.482	82	0.631	Not significant
	Control	42	47.31	17.17	-0.482			
<b>Post-test</b>	Treatment	42	59.10	16.01	2.948	82	0.004	Significant
	Control	42	48.86	15.81	2.948			

The result of the independent t-test in Table 1 indicates that there is no statistically significant mean difference between the treatment group ( $M = 45.52$ ,  $SD = 16.75$ ) and the control group ( $M = 47.31$ ,  $SD = 17.17$ ).  $t(82) = -.482$ ,  $P = .631$  (two-tailed) on reading comprehension performance in the pre-test. The null hypothesis is accepted and the alternative hypothesis is rejected in the pre-test since  $p > .05$  and the effect size (ES) is  $-0.1$ , which is too small. The treatment group's reading comprehension performance scores are ( $M = 59.10$ ,  $SD = 16.01$ ) and the participants of the CG are ( $M = 48.86$ ,  $SD = 15.81$ ).  $t(82) = 2.948$ ,  $P = .004$  (two-tailed) in the post-test. In the post-test, the alternative hypothesis is accepted and the null hypothesis is rejected. Thus, this post-test result reveals that there is a statistically significant difference between the treatment and the control groups on the reading comprehension test ( $P < .05$ ) and the effect size (ES) is  $0.65$ , which is the moderate size. The treatment group's mean scores increased significantly, from  $M = 45.52$ ,  $SD = 16.75$  (pre-test) to  $M =$

$59.10$ ,  $SD = 16.01$  (post-test). In this case, the treatment group did better than that of the control group after the provision of the intervention. This implies the positive impact of reading strategies training on the improvement of students' reading comprehension performance. From this analysis, one can see that there is a positive relationship between students' reading strategies use and their reading comprehension performance. In other words, this shows that the reading strategy training has a positive impact on developing the students' reading comprehension performance. This result is supported by some previous studies.

### Comparison of the TG and CG Students on the Pre- and Post-Test RCP

In this subsection, a comparison of the pre-test and post-test results of participants of the TG and CG on reading comprehension performance (RCP) was made. The comparison between the TG and CG in the pre- and post-tests is given in Table 2.

Table 2. Comparison of TG and CG Students Scores on Pre- and Post-Tests

Groups	Number	Pre-test			Post test		
		M	SD	P-value	M	SD	P-value
<b>Treatment group</b>	42	45.52	16.75	.631	59.10	16.01	.004
<b>Control group</b>	42	47.31	17.17		48.86	15.81	
<b>Differences</b>		-1.79	-0.42		10.24	0.2	

As indicated in Table 2, the pre-test and post-test mean scores and standard deviations of the treatment group and the control group were compared. The mean scores of the treatment and control groups in the pre-test were 45.75 and 47.31 respectively. The difference between the two groups is only 1.79, in which the control group is slightly greater than the treatment group ( $P > .05$ ). Hence, the difference is not significant because the effect size is  $-0.1$ . On the other hand, the mean scores of the treatment and control groups in the post-test respectively are 59.10 and 48.86. The mean difference between the two groups is only 10.24, in which the treatment group is greater than that of the control group ( $P < .05$ ). Hence, the difference is significant with the effect size (ES) of 0.65, and this reveals the role of reading strategies training in improving reading comprehension performance.

## Discussion

The main purpose of this study was to investigate the effects of reading strategies training on Ambo University first-year students' reading comprehension performance. This part, therefore, deals with the explanation of the results of the study in response to the research question designed on this purpose. Accordingly, the result of the pre-test indicated that statistically there is no significant mean difference between the treatment and the control groups on the reading comprehension test performance whereas the post-test results, reveals that there is a statistically significant mean difference in reading comprehension test performance between the treatment and control groups with the treatment group outperforming the control group. The current study found that teaching students reading strategies improves their reading comprehension performance. The improvement achieved by participants of the treatment group suggests that reading strategies training had a positive impact on their reading comprehension performance.

As suggested by Akkakoson (2012), reading strategies training has played a significant role in improving students' reading comprehension performance. In this sense, there is a need for teachers to improve students' reading

comprehension performance since effective reading strategies can be taught to readers to improve reading achievement. Some other experimental studies were conducted to see the effectiveness of training strategies. For example, studies using the increase in the students' strategy use awareness as the dependent variable, and they indicate the significance of the training (Bentahar, 2012; Henter, 2012). The study conducted by Doha (2013) looked at the impact of explicit instruction of reading strategies on the process of reading comprehension among EFL university students. These findings suggest that training in reading strategies is fundamental to the development of reading comprehension performance in an academic context (Grabe, 2009).

As suggested by Ahmadi and Gilakjani (2012), the diverse reading strategies students use in the reading process have a significant impact on their reading comprehension skills. This has been facilitated by the provision of reading strategies for students. As it is indicated in Table 2, the change in students' reading comprehension performance occurred due to the provision of reading strategies training to the treatment group. This implies that the provision of reading strategy training brings an improvement in students' reading comprehension performance.

The discussion was supported by the results of the research conducted so far on the same issue. In this analysis, one can see that training in reading strategies helped the students to use the required reading strategies and improve their reading comprehension tests. Regarding this idea, Medina (2012) conducted a case study on the effects of strategy instruction in English as a Foreign Language (EFL) reading comprehension course and found that the effects of the reading strategy instruction were quite useful for these foreign language readers because they improved in reading comprehension. Some other studies, for example, a study conducted on a sample of Chinese foreign language learner university students by Zhang and Seepho (2013) indicated that there was a significant positive correlation



between the use of meta-cognitive strategies and English reading comprehension.

A study by Lai, et al. (2008) indicated that instructional strategies could increase the students' comprehension. This is also supported by the experimental research conducted by Yenus (2018). Yenus examined the effects of explicit reading strategy instruction on the comprehension of Ethiopian EFL students. The results of this study showed that the students who received reading strategy instruction made greater gains in reading comprehension than those who were taught with conventional skill-based teaching. Belachew (2019) studied the effect of reading strategy training on Lalistu Wayu grade eight learners' reading ability in terms of reading speed and comprehension in Ethiopia. Then, he found that there was an improvement or progress in learners' reading abilities in both reading speed and reading comprehension because of the training given by the practitioner.

Other studies have also found that the explicit teaching of reading strategies in the language classroom has a positive impact on the reading comprehension skills of the students (Tavakoli and KooshA, 2016; Zarrati et al., 2014). Jafari and Ketabi (2012) in their study investigated the effects of reading strategy instruction on enhancing reading comprehension in Iranian English-major university students and found that the participants in the experimental group significantly did better than those who participated in the control group. However, the training should be attended carefully following the required procedures that are suggested by the required scholars. Thus, providing explicit reading strategy training to students in a well-organized and careful manner allows students to improve their reading comprehension ability. This implies the significant role of the provision of careful and well-organized reading strategies training in increasing learners' reading performance.

## Conclusion and Recommendation

Reading is one of the most basic language skills. It is meaningful when it achieves its ultimate goal, i.e., comprehension. To achieve this, factors such as awareness and usage of reading strategies are required. In the academic context, this can be facilitated by providing reading strategy training for students. The current study focused on the effect of reading strategy training on Ambo University first-year students reading performance. In this study, the pre- and post-reading comprehension tests were used to investigate the impact of reading strategy training on students' reading comprehension performance. As a result, participants in both the treatment and control groups obtained similar reading comprehension scores in the pre-test. However, they scored differently in the post-test. According to this finding, participants in the treatment group who received the reading strategy training scored better in the post-test than those in the control group. This implies the impact of reading strategy training on developing readers' reading comprehension performance. Therefore, English teachers should consider the role of reading strategy training and train students to improve their performance on reading tasks. In relation to this fact, students should attend such training to be aware of various reading strategies and attempt to apply them in their reading process. Designers of reading materials should pay particular attention to reading strategies and incorporate reading activities that encourage students to use a variety of reading strategies.

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