

ORIGINAL ARTICLE

Effects of Text Rhetorical Organization Strategy Instruction on Students' Reading Comprehension Performance: First Year Undergraduate Students at University of Gondar in Focus

Alene Ketema Mekonnen¹

Abstract

The study investigated the effects of text rhetorical organization strategy instruction on students' reading comprehension performance through quasi-experimental research design. The participants (n=54 for the experimental group and n=52 for the control group) were taken from two undergraduate classes where the researcher was assigned to teach the course 'Communicative English Language Skills' in 2020 academic year. The instruction lasted for six weeks, two sessions each week and three hours each session. The experimental group was taught to read in English through the application of text rhetorical organization strategy instruction and the control group received the lessons through the conventional method of teaching reading where the lessons were taught as prescribed in the syllabus. Data were collected through reading comprehension tests and written recall tasks. MANOVA was used to analyze the data. The results showed a statistically significant difference between the experimental and the control groups at ($P < .05$, i.e., $p = .001$). That is, the experimental group students outperformed their counterparts in reading comprehension and written recall tasks. Thus, the findings of this study suggested that text rhetorical organization strategy instruction can be used as one of the effective strategies in assisting students to get mastery over reading comprehension performance.

Keywords: text rhetorical organization; reading comprehension; strategy; instruction

1. Introduction

The ability to read in English is one of the most important skills required in EFL settings-- academic learning in all subject areas, to professional success, and lifelong learning (Pritchard, Romeo, & Muller, 1999). Reading comprehension is the essence and active process of constructing meaning from a text (Durkin, 1993; Pardo, 2004). In the same way, Davies (1995) defines reading comprehension as a mental process in which the read-

¹ Department of English Language and Literature, University of Gondar
Email address: alenektm@gmail.com



This journal is licensed under a creative common Attribution-Noncommercial 4.0. It is accredited to the University of Gondar, College of Social Sciences and Humanities.
DOI: <https://doi.org/10.20372/erjssh.2022.0802.04>

er interacts with the writer who is distant in space and time. It is the process of simultaneously extracting and constructing meaning through interaction and involvement with written language (Grabe, 2009). Thus, reading comprehension is a multicomponent and highly complex process that involves interactions between readers and what the readers bring to the text and variables related to the text itself.

In order to understand the text, readers need to apply a reading comprehension strategy appropriate to the text that readers read (Smith, 2004). Reading in a foreign language demands more reading comprehension strategies where the content and the language are unfamiliar. One of the efficient techniques to improve students' reading comprehension performance might be text rhetorical organization strategy instruction. Looking at how text parts function to create a whole is a key concept when analyzing texts. It is particularly useful when thinking about how a piece of writing works or why a writer organized material in a particular way. Text rhetorical organization refers to how ideas are arranged in a text, how written text functions, and how a written text involves words, phrases, grammatical structure, or other linguistic entities (Armbruster, 2004; Gordon, 1990). In other words, text rhetorical organization is about how ideas in a text are interrelated to convey a message to a reader. Moreover, it helps the reader to identify the interrelationship among ideas in the text (Meyer, 1985).

Making students aware of text rhetorical organization contributes to reading fluency and efficiency (Villanueva de Debat, 2012). Text structure improves students' abilities to construct accurate meaning, acquire new content knowledge, ask relevant questions, predict forthcoming information, summarize the text, monitor comprehension and retain learned information (Meyer, 2011; Mayer & Poon, 2001; Raymond, 1993). It helps learners deduce that a text might show main ideas and details with causes and effects and/or different views of topics (Simonsen, 1996). Meyer and Ray (2011) argued that teaching students the structure strategy might enable them to follow the logical structure of texts to understand how an author organized and emphasized ideas, to process parallel to these structures, to increase their own learning, thinking and to organize their own writing and recalls.

Texts are understood through readers' interpretation of the larger organization structures signaled by the writer. Authors use transitions and patterns of organization to show connections, or relationships, between ideas (Grabe, 2000). These text features can help readers locate and organize information in the text, and how some of these ideas have central importance while others are subordinate. According to Meyer (2003, Pp. 204–224) and Williams (2007) readers of all ages must be aware of text structures if they are to be successful. Readers who are unaware of text structures are at a disadvantage because they do not approach reading with any type of reading plan (Meyer, Brandt, & Bluth, 1980).

Most second language reading curricula are dominated by expository prose (Silberstein, 1994). These texts contain technical vocabulary, high density of facts, unfamiliar content, cognitively demanding concepts, variety of unfamiliar structures, and an explicit or implicit topic sentence with the main idea and the supporting ideas that communicate abstract information that are difficult to process by reader unless the reader possesses the knowledge of text structure (Meyer & Poon, 2001). These texts contain structural elements that help guide students through their reading. Authors of expository texts use these structures to arrange and connect ideas.

There are several types of expository text structure. Five major structures of expository texts outlined by Tompkins (2007) are description, sequence, comparison and contrast, cause/effect, problem and solution. Each text pattern has its own internal logic with

special strategies that impose order on readers' mind. Meyer and Rice (1982) argued that text structure involves the ideas of a text that are interrelated to transfer a message to the reader. For example, a text which organizes in a descriptive text rhetorical organization, sensory and descriptive details help readers visualize information. Descriptive text rhetorical organization is a type of text structure which uses associations between the main and subordinate ideas of a topic (Meyer & Freedle, 1984). As to Herber (1978), texts which are organized in sequence text rhetorical organization are used to group ideas on the basis of order. It presents events in a sequence from the beginning to end. That is, each sentence in a text represented one step in the sequence. Some other informational texts describe cause and effect relationships. The text describes events and identifies causes for why the events happened. In the cause-and-effect texts, the entire structure appeared in individual sentences contained both cause and effect. In the same vein, expository texts can be organized in problem and solution text structure. Such text introduces and describes a problem and an attempted solution to the problem. Expository texts can also be structured in a comparison and contrast text rhetorical organization sharing similarities and differences of ideas. Students who understand the idea of text structure and how to analyze it are likely to learn more than students who lack this understanding (RAND Reading Study Group, 2002).

Worldwide, there are controversial debates among researchers regarding the reading instructions: explicit and implicit. On one side of the argument, there are those who believe that the ability to comprehend cannot be directly taught (Dickson, Simmons & Kameenui, 2001). On the other side of the argument, there are other researchers who believe that explicit strategy instruction improves comprehension (Allington, 2006; Carrier, 2003; Chomot, 2005; Shen, 2003). This controversy created different lines of research on reading strategies.

A number of researchers investigated the effects of text rhetorical organization on students' reading comprehension performance and found varied findings about its effect on students' reading comprehension performance. Armbruster, Anderson, and Ostertag (1987) conducted research on the effects of problem and solution text structure and summarization on fifth-grade students' reading and writing. These researchers found out that the students who were trained in text structures scored higher on the reading test and wrote better summaries than the students who were not trained in text structures. On the same talk, Carrell (1984) examined the effects of web-based four discourse types of expository prose-comparison, causation, problem-solution, and description on the recalls of advanced English as a second language reader from different language backgrounds. The study results revealed that if ESL readers used web-based text structures to process the text and to organize their recalls, more information was retrieved. It was also found out that the recall of the tightly organized discourse types was significantly better than that of the loosely organized type. Carrel recommended further research should include all the five structures of expository text structures. In a similar vein, Meyer, Brandt, & Bluth (1980) found out that students who were aware of text structure tended to organize the information as they read it. Furthermore, the result indicates that students who use text structure as a reading strategy ask themselves relevant questions about the material being read. Sharp (2002) studied the effect of four rhetorically different passages with identical content on 490 Chinese school children. The results of the study indicated a clear difference in comprehension between the text types and suggested that pedagogical support to increase awareness of rhetorical patterns. The results of cloze test showed that description text was found to be significantly easier for all participants. Similarly, Troyer (1992) studied the effects of attribution, comparison, and descriptive text structures on fifth graders' reading comprehension. The result of the study indicated that the descrip-

tive group significantly outscored the comparison group on the posttest. However, there were no significant differences among the groups at the delayed posttest. Furthermore, Zhang (2008) attempted to examine the effects of text patterns on EFL students' reading at university level. The analysis of the recall protocol and cloze test showed that participants performed better with problem and solution and comparison and contrast structure than with description structure. By contrast, Hayashi (2004) examined the relationship between recall and text structures for collection of description, causation, problem and solution, and comparison text structure. The participants were Japanese, Chinese, and Korean ESL students with intermediate English proficiency attending an intensive English language programme at a university. The findings of the recall tasks using multiple choice questions showed that rhetorical differences in text did not have significant effect on written recall tasks. In other words, the findings of the written recall task scores showed a non-significant difference in different expository text rhetorical organizations.

In Ethiopia, English as a medium of instruction plays a pivotal role determining students' success in the academic arena (MoE, 1994). According to Solomon (1999), particular importance is attached to reading at the tertiary level of education where the ability to read for academic purposes in the content areas is considered crucial. An overview of the nationally harmonized curriculum for undergraduate program reveals that the course Communicative English Language Skills is designed and offered for all first-year university students. The course is intended to help students master the fundamentals of communication with English language. Looking into the contents, every unit contained reading lessons that focus on developing students' reading skills in academic and non-academic contexts. It is inevitable that the learners at the university level encounter academic materials written in English and they are expected to read at a proficient level of comprehension to perform well in their studies. It is important for readers to integrate a variety of cognitive, linguistic, and nonlinguistic skills and processes for efficient and successful text comprehension. However, many learners might not be aware of how to use them for better comprehension of texts. In this regard, Gebremedhin (1993), Gessesse (1999), and Taye (1999) stated that the reading ability of Ethiopian secondary and tertiary level students is deteriorating over time. The researchers' experiences and the informal discussions with colleagues reiterate students' poor ability of reading comprehension. It might be because in reading classes more attention is paid only to teaching reading conventionally by focusing on lecturing the theoretical aspects of reading, telling students to read the text on their own and then assess their reading comprehension performance, giving great emphasis on teaching the knowledge of vocabulary and grammatical structures, memorizing and reciting texts, sometimes translating the texts into students' native language, giving reading assignments and expecting correct responses, and giving a brief description of the topic. In this regard, Yenus (2017) pointed out that participant teachers seemed to exhibit similar practices of teaching reading comprehension, such as, giving assignments and expecting correct responses and giving a brief description of the topic. In addition to these, I made a preliminary observation of reading classrooms at University of Gondar. From the observations I have learned that the reading comprehension lessons were focused on assessment, which was carried on through teacher questions. Emphasis has been placed on giving reading assignments and expecting correct responses, giving a brief description of the topic, instructing the knowledge of vocabulary, memorizing and reciting texts, and sometimes translating the texts into students' native language. The instructors just assign the reading materials, have the students read and then assess their reading comprehension performance. It has been noticed that the students face difficulties to extract the meaning out of expository texts. Therefore, many students struggle because they do not receive guidance from instructors on how to navigate expository text; instead, they are expected to read independently and understand the content.

In the Ethiopian context, to the knowledge of the researcher, no study addressed text rhetorical organization instruction as a reading comprehension strategy to improve students' reading comprehension performance. Cognizant of the dearth of research and empirical evidences to what extent awareness about textual structure scaffold students' reading efforts, this study investigated the effects of text rhetorical organization strategy instruction on students' reading comprehension performance at University of Gondar. More specifically, the following research objectives were set.

1. To examine the effects of text rhetorical organization strategy instruction on students' reading comprehension performance.
2. To find out which expository text rhetorical organization strategy instruction has more effect on the students' reading comprehension outcomes.

Research Hypotheses

H₀: There is no statistically significant difference between the groups who are instructed with text rhetorical organization strategies (descriptive, sequence, problem and solution, cause and effect, and comparison and contrast) and those who are instructed through the conventional method of teaching reading.

H_a: A statistically significant differences between the groups are instructed with text rhetorical organization strategies (descriptive, sequence, problem and solution, cause/effect, comparison/contrast) and those that are instructed via the conventional method of teaching.

Methods and Techniques

The study underpinned pragmatism paradigm and quasi experimental design that has employed quantitative approach to measure the effects of text structure strategy instruction on students' reading comprehension performance.

Participants

This study took place at University of Gondar. The university was purposefully selected, for it is the workplace of the researcher which makes it convenient to do the experimentation. The initial sample consisted of 160 undergraduate students enrolled to take the course Communicative English Language Skills I (EnLa 1011) in 2020 academic year. Due to student absenteeism during one of the pre-and post-intervention assessment days, the participants (n= 54 for experimental group and n= 52 for the control group) were taken from two undergraduate classes where the researcher was assigned to teach the course. Data were collected by the researcher during the students' Communicative English Skills (I) course, particularly in reading skills lessons from 106 students.

Instruments of Data Collection

The instruments employed in this study were reading comprehension tests and written recall tasks. Pre-intervention tests were administrated before the treatment and the post-tests were administrated to the groups after the intervention. The data collection was completed by the end of the first semester of the academic year 2020.

Reading Comprehension Tests

In order to assess the performance of the participants on reading comprehension, before and after the intervention, the participants were given the pre-tests and the post-tests each containing five reading passages with eight multiple choice items adapted from different reading passages which met the objective of the research. The readability of texts and the clarity of the text structures were considered. For the reliability checks of the reading comprehension tests, Kudar-Richardson 20 (KR-20) was run. The result of KR-20 statistical processes reliability coefficient showed: descriptive =.413, sequence=.497, problem and solution=.327, cause and effect= .584 and comparison and contrast text=.763. Tuckman (1978) and Henning (1987) propose that items with a proportion of correct answers that is less than 0.33 or that is greater than 0.67 be rejected. Since the items were correlated at above .30, all tests were considered as ready to for application. In terms of the clarity of text structure, the selected texts contain clear text structures; hence they are being selected for the text structure strategy practice exercises and tests. The pre-tests were given one week before the beginning of the first session to see the homogeneity of the groups. The Levene's Test for Equality of Variances shows the homogeneity of the population variances of the two groups before the intervention. This allows the researcher to precede the experimentation. In the Ethiopian context, standardized tests that could measure reading comprehension of university level students are not currently available. The comprehension tests were main idea, detail, reference, inference and vocabulary questions based on reading passages. For the pre-and post-reading comprehension tests, the researcher selected objective types of questions that have one possible answer utmost. The use of exactly the same items for pre-test and post-test seems to work well in testing reading skills. To reduce the memory effect, there was longer time interval between the pre-and post-intervention reading comprehension tests. This might not affect the validity of the tools. The time allotted for each reading comprehension tests was 50 minutes.

Written Recall Tasks

A total of five texts were used to pre-and post-intervention tests for the written recall tasks. Students were asked to read the given texts and write down everything they can remember about what they just read without looking back at the text. Written recall is regarded the most suitable methods to measure reading comprehension (Sharp, 2002). Participants were given recall texts in description, sequence, problem and solution, comparison and contrast, and cause and effect. These passages were parsed into idea units. Two raters, experts in the field of TEFL, were trained to score before the actual scoring and they parsed the passages into idea units independently. For each main idea two points were given, and for each supportive detail one point was given. The total scores for the written recall protocol were based on the sum of main ideas and supporting ideas correctly recalled. The final scores were averaged from the scores given by the two raters. A summary or paraphrase of the content was accepted if they were accurate in meaning. Their inter-rater reliabilities for the written recall tasks before the intervention were: description, $r=.942$; sequence, $r=.918$; problem and solution, $r=.950$; cause and effect, $r=.942$; comparison and contrast, $r=.930$. Similarly, the inter-rater reliability of the students' written recall task by the two raters after the intervention were: description, $r=.935$; sequence, $r=.964$; problem and solution, $r=.949$; cause and effect, $r=.951$; comparison and contrast, $r=.947$. Therefore, the inter-rater reliability between these two raters on the five written recall tasks on both the pre-and post-tests were very high.

Data Collection and Intervention Procedures

The following procedures were followed to conduct this study. First, the participants of the study were identified and assigned as experimental and control groups. Secondly, pre-intervention tests were administered to check if the two groups were homogenous. After checking the homogeneity of the participants, the intervention followed. The intervention sessions were conducted for six weeks, two sessions each week and three hours each session. In the experimental group, the students were taught various types of expository texts rhetorical organizations (i.e., description, sequence, problem and solution, cause and effect and compare and contrast). In the following sessions, each type of expository text was instructed and practised with different reading passages. During their practise, the instructor gave them a predetermined text and asked them to highlight the signal words and phrases that identified that text. Then, they practised to sketch the graphic organizer of that text. At this time, the students were expected to underline the topic sentence, main idea, and supporting sentences in the text. In this way, the instructor provided the students with opportunities to take into account different texts with different organizational patterns and analyzed the text structures. In contrast, in the control group, the same texts were instructed as it is prescribed in the curriculum through the three stages of pre-reading, while-reading, and post-reading. In the pre-reading stage, the teacher activated their background knowledge by some elicitation questions about the topic of the text; in the reading stage, the students were asked to read the text and then in the post-reading stage they were asked to find answers for the comprehension questions. After six weeks, the post-intervention reading comprehension tests and written recall tasks were conducted.

Data Analysis and Interpretation Methods

To identify the changes (if any) that have taken place as an outcome of the intervention, the data collected in reading comprehension tests and written recall tasks were analyzed quantitatively using SPSS, version 20. One way multivariate analysis of variance (MANOVA) was conducted to test the hypothesis. The level of statistically significant difference alpha was set at $p < .05$.

The participants' immediate written recall tasks were measured by the number of idea units recalled. The scoring of the written recalls requires first divide the reading texts into a unit of analysis and then calculate the total number of units recalled correctly. The division and marking of idea unit of the written recall tasks were done by two English language instructors, and the average was taken as an idea unit. Two marks for main idea unit and one mark for supportive details were given to each idea unit which participants recalled. The number of idea units recalled was transformed into a percentage of the number of idea units in the original text by using Zhang's (2008) formula: the idea unit scores: the idea units recalled by participants/the total idea units in the recalled passage $\times 100$. Then, the descriptive and inferential statistics of the two groups' responses were computed through MANOVA.

Ethical Considerations

The researcher asked for permission to conduct the study from University of Gondar Common Course Coordinating Office and obtained consent from the office. The researcher made clear to participants that their participation in this research was helpful. They were informed that the instruction is essential to comprehend texts and it is helpful for their

major courses too. Also, they were informed that there were no known or anticipated risks to them by participating in this research. An informed consent was sought from participants before data collection process began. They were also informed that participation in the research is voluntary, and they can withdraw from the research at any time. The confidentiality of all identifiable information and data were assured by using study codes on data documents. Hard copies of the study data were stored and locked up. Only the researcher has access to this data. The researcher was honest about details such as the necessary time needed to complete each task. Lastly, the respondents agreed to participate and signed on the consent form.

Results and Discussion

The Effects of Text Rhetorical Organization Strategy Instruction on Students' Reading Comprehension Performance

This study aimed at whether or not text rhetorical organization strategy instruction impacts students' reading comprehension performance. This required an analysis of the reading comprehension tests and written recall tasks scores.

The Data from the Pre-and Post-Intervention Reading Comprehension Tests

The pre-and post-intervention reading comprehension tests were used to check the homogeneity of the groups before the intervention and to investigate the improvements made after the intervention. The table below depicts the mean and standard deviation of the mean of the reading comprehension test scores of the two groups.

Table 1: Descriptive statistics of the groups on the pre-and post-reading comprehension scores

Reading comprehension test scores	Groups	Mean	SD	N
<i>Pre-tests</i>	<i>Control</i>	20.90	5.654	52
	<i>Experimental</i>	22.28	5.041	54
<i>Post-tests</i>	<i>Control</i>	25.23	5.826	52
	<i>Experimental</i>	28.50	3.835	54

The table depicts that in terms of the reading comprehension performance, mean and standard deviation scores for the control and experimental groups were $M=20.90$ ($SD=5.654$) for the control, and $M=22.28$ ($SD=5.041$) for the experimental group before the intervention, respectively. The mean difference of the reading comprehension of the two groups was 1.38. The test for the between-subjects effects indicated that there was homogeneity of variance between the two groups in terms of reading comprehension of different text structures: descriptive ($p=0.220$), sequence ($P=0.238$), problem and solution ($p=0.47$), cause and effect ($p=0.265$), and comparison and contrast ($p=0.432$). After the intervention, the reading comprehension test of the experimental group had an average score of 28.50 ($SD=3.835$), and for the control group $M=25.23$ ($SD=5.826$). The comparison of the mean scores of the post- intervention reading comprehension tests shows a gain of 3.27 for the experimental group. This implies that the participants in

the experimental group took advantage of the instruction and gained reasonable increase in their reading comprehension scores. One-way MANOVA was conducted to test if this mean difference between groups were significant or not at $\alpha = .05$.

Table 2: One-way MANOVA between Groups on reading comprehension test scores

Effect		Value	F	df	Sig.	Partial Eta Squared (η^2)
Groups	Wilks' Lambda	.872	7.550	2, 103	.001	.128

The analysis showed that a statistically significant difference between the two groups on the combined dependent variables (descriptive, sequence, problem and solution, cause and effect and comparison and contrast), Wilks' Lambda=.872, $F(2, 103) = 7.55$, $p = .001$, $\eta^2 = .128$, explaining that 12.8% of the difference was attributed to the intervention. That is, the result suggested that students who read texts with text rhetorical organization strategy outperformed the students who read texts with the conventional instruction. Hence, the null hypothesis was rejected at 95% confidence. The result of the study supports the findings of the previous works (Carrell 1985; Meyer & Wijekumar, 2007; Armbruster, Anderson, & Meyer, 1991) which pointed out instructing students to identify text rhetorical organization helped them to improve their reading comprehension. In this regard, Meyer (2011) asserts that text rhetorical organization can definitely increase understanding and raising the student's test scores. Findings can also find empirical support to Akhondi et al. (2011), who verified the effectiveness of instructing expository text rhetorical organization strategy in order to get mastery over the reading tasks.

The Data from the Pre- and Post-Intervention Written Recall Tasks

The mean and standard deviation of the written recall tasks for the students' performance on the written recall tests were calculated as follows.

Table 3: Descriptive statistics of the groups on the pre- and post-written recall task scores

Written Recall Task Scores	Students' Group	Mean	SD	N
Pre-tests	Control	50.12	17.683	52
	Experimental	43.20	15.718	54
Post-tests	Control	64.08	29.231	52
	Experimental	85.44	27.242	54

As the table above displays the written recall task performance of groups, mean and standard deviation scores for the control and experimental groups were $M = 50.12$ ($SD = 17.683$) and $M = 43.20$ ($SD = 15.718$) before the intervention, respectively. After the intervention, the written recall task scores of the experimental and the control groups had an average scores of 85.44 ($SD = 27.242$) and $M = 64.08$ ($SD = 29.231$), respectively. The comparison of the mean scores of the post-intervention written recall task scores of the two groups shows a gain of 21.36 for the experimental group. This implies that the participants in the experimental group took advantage of the instruction and gained reasonable increase in their written recall task scores. One way MANOVA was conducted to check whether this mean difference is statistically different or not.

Table 4: One-way MANOVA between Groups on written recall task scores

Effect		Value	F	df	Sig.	η^2
Groups	Wilks' Lambda	.606	33.433	2, 103	.000	.394

The analysis showed that a statistically significant difference between the two groups on the combined dependent variables (descriptive, sequence, problem and solution, cause and effect and comparison and contrast), Wilks' Lambda = .606, $F(2, 103) = 33.433$, $p = .000$, $\eta^2 = .394$, explaining that 39.4 % the difference was attributed to the text rhetorical organization strategy instruction. The result suggested that the students who have instructed text rhetorical organization strategy recall information much better than the students who read texts without text rhetorical organization strategy. The result aligns with previous studies (Carrell, 1985; Raymond, 1993) in which readers who use text structures generally provided text recalls whose structure resembles that of the studied text. Moreover, explicit instruction in recognizing and analyzing structures of texts can facilitate EFL readers' comprehension, as measured by quantity and quality of information recalled. Previous studies also revealed that the text structure interventions exerted positive effect on comprehension and recall (Meyer and Poon, 2001).

The Type (s) of Text Structure Which Has More Effect on Students' Reading Comprehension Performance

The second objective of this study was directed to an investigation of whether or not some of the expository text rhetorical organization had more effect on students' reading comprehension performance after the intervention. For this purpose, comparing the mean score of the students' responses to the five rhetorically different texts and written recall tasks was necessary. MANOVA was used to compare the test scores of the dependent variables.

The Data from the Pre- and Post-Intervention Reading Comprehension Tests

The descriptive statistics below shows the mean and standard deviation of each reading comprehension scores before and after the intervention.

Table 5: Descriptive statistics of the groups Pre-and Post-Reading Comprehension Test Scores

Tests	Text Patterns	Students' Group	Mean	SD	N	
Pre-tests	Descriptive	Control	2.85	1.613	52	
		Experimental	3.22	1.525	54	
	Sequence	Control	4.58	1.730	52	
		Experimental	4.98	1.775	54	
	Problem & solution	Control	3.44	1.487	52	
		Experimental	4.04	1.554	54	
	Cause & effect	Control	5.02	1.407	52	
		Experimental	4.72	1.323	54	
	Comparison & contrast	Control	5.02	1.955	52	
		Experimental	5.31	1.902	54	
	Post-tests	Descriptive	Control	4.35	1.748	52
			Experimental	4.72	1.352	54
Sequence		Control	5.52	1.721	52	
		Experimental	6.37	1.248	54	
Problem & solution		Control	4.08	1.545	52	
		Experimental	5.30	1.253	54	
Cause & effect		Control	5.37	1.456	52	
		Experimental	5.63	.996	54	
Comparison & contrast		Control	5.98	1.754	52	
		Experimental	6.46	1.284	54	

The above table depicts the pre- and post-intervention reading comprehension test mean and standard deviation scores of descriptive, sequence, problem and solution, cause and effect and comparison and contrast text rhetorical organization of the two groups. It shows that mean and standard deviation scores were for descriptive text with the experimental group $M=3.22$ ($SD=1.525$) and the control group $M=2.85$ ($SD=1.613$), sequence text with the experimental group $M=4.98$ ($SD=1.775$) and the control group $M=4.58$ ($SD=1.730$), problem and solution text the experimental group $M=4.04$ ($SD=1.554$) and the control group $M=3.44$ ($SD=1.487$), cause and effect text with the experimental group $M=4.72$ ($SD=1.323$) and the control group $M=5.02$ ($SD=1.407$), and comparison and contrast text the experimental group $M=5.31$ ($SD=1.902$) and the control group $M=5.02$ ($SD=1.955$) before the intervention. After the intervention, the mean and standard deviation scores were for descriptive text with the experimental group $M=4.72$ ($SD=1.352$) and the control group $M=4.35$ ($SD=1.748$), sequence with the experimental group $M=6.37$ ($SD=1.248$) and the control group $M=5.52$ ($SD=1.721$), problem and solution the experimental group $M=5.30$ ($SD=1.253$) and the control group $M=4.08$ ($SD=1.545$), cause and effect with the experimental group $M=5.63$ ($SD=0.996$) and the control group $M=5.37$ ($SD=1.456$) and comparison and contrast the experimental group $M=6.46$ ($SD=1.284$) and the control group $M=5.98$ ($SD=1.754$). The mean difference scores of the two groups showed: problem and solution (1.22), sequence (0.85), comparison and contrast (0.48), descriptive (0.37), and cause and effect (0.26). One-way MANOVA was conducted to see if these mean differences between groups were significant or not at $\alpha = .05$.

Table 6: The results of the Multivariate tests for the post intervention reading comprehension test scores

Effect	Value	F	Hypothesis df	Error df	Sig.	η^2
Groups Wilks' Lambda	.799	5.018b	5.000	100.000	.000	.201

As the MANOVA result showed, there was a statistically significant difference between the comparison and the experimental groups on the combined dependent variables (descriptive, sequence, problem and solution, cause and effect and comparison and contrast), $F(5,100) = 5.018$; $P < .001$; Wilk's Lambda = .80, $\eta^2 = .201$, explaining that 20% of the difference was attributed to the text rhetorical organization strategy instruction. A separate ANOVA was conducted, each ANOVA being evaluated at Bonferroni adjusted alpha level ($\alpha = .01$), to examine if groups could also differ significantly on each text rhetorical organization strategy instruction measure separately.

Table 7: ANOVA between Groups on each reading comprehension test scores (post-tests)

Test	Text pattern	Group	N	Mean	SD	F	df	Sig.	η^2
RC Post-test	Descriptive	Control	52	4.35	1.748	1.542	1,104	.217	.015
		Experimental	54	4.72	1.352				
	Sequence	Control	52	5.52	1.721	8.545	1,104	.004	.076
		Experimental	54	6.37	1.248				
	Problem and solution	Control	52	4.08	1.545	19.987	1,104	.000	.161
		Experimental	54	5.30	1.253				
	Cause and effect	Control	52	5.37	1.456	1.197	1,104	.276	.011
		Experimental	54	5.63	0.996				
	Comparison and Contrast	Control	52	5.98	1.754	2.621	1,104	.108	.025
		Experimental	54	6.46	1.284				

The ANOVA tests of between subjects' effects showed the effect size of each text structure: descriptive= $F(1,104) = 1.54$, $p = .217$, $\eta^2 = .015$; sequence= $F(1,104) = 8.54$, $p = .004$, $\eta^2 = .076$; problem and solution= $F(1,104) = 19.98$, $p = .000$, $\eta^2 = .161$; cause and effect= $F(1, 104) = 1.197$, $p = .276$, $\eta^2 = .011$; and comparison and contrast= $F(1,104) = 2.621$, $p = .108$, $\eta^2 = .025$. Therefore, problem and solution text pattern had more effect for the development of students reading comprehension performance. Sequence text pattern was the second helpful text that students showed improvement in their reading comprehension. Comparison and contrast and descriptive text patterns were the third and fourth useful patterns for the development of students reading comprehension. Cause and effect text pattern had the least effect on students' comprehension improvement. There was no a statistical significant difference between the two groups in reading comprehension of descriptive, cause and effect and comparison and contrast text rhetorical organizations. The findings of the present study support the findings of the previous works (Zhang, 2008) which pointed out that participants performed better with problem and solution text rhetorical organization. In contrast to this, Meyer and Freedle (1984) pointed out that participants scored higher in causation and comparison texts when tests were conducted on four text types (causation, comparison and contrast, sequence and description).

The Data from the Pre-and Post-intervention Written Recall Tasks

The scores for the written recall tasks were based on the sum of main ideas and supporting details correctly recalled, and converted into a percentage of the number of idea units in the original text because the passages had different numbers of total main and detail units. The mean score of the students' responses for each recall of idea units were computed.

Table 8: Descriptive statistics of the groups of each Written recall task scores

Tests	Text pattern	Students' group	Mean	SD	N	
Pre-tests	Descriptive	Control	9.90	5.274	52	
		Experimental	8.52	5.379	54	
	Sequence	Control	7.98	3.551	52	
		Experimental	6.80	3.749	54	
	Problem and solution	Control	8.71	5.085	52	
		Experimental	7.80	4.603	54	
	Cause and effect	Control	12.15	4.913	52	
		Experimental	11.06	4.760	54	
	Comparison and contrast	Control	11.37	4.459	52	
		Experimental	9.04	4.202	54	
	Post-tests	Descriptive	Control	11.71	6.619	52
			Experimental	17.87	6.810	54
Sequence		Control	8.96	5.145	52	
		Experimental	11.43	5.357	54	
Problem and solution		Control	12.63	6.544	52	
		Experimental	17.44	4.808	54	
Cause and effect		Control	17.58	8.168	52	
		Experimental	20.87	8.499	54	
Comparison and contrast		Control	13.19	6.785	52	
		Experimental	17.83	8.028	54	

The table displays the pre- and post-intervention written recall tasks mean scores of descriptive, sequence, problem and solution, cause and effect and comparison and contrast text organization of the two groups. It shows that mean and standard deviation scores of descriptive text for the experimental group were $M=8.52$ ($SD=5.379$) and for the control group $M=9.90$ ($SD=5.274$), sequence text for the experimental group were $M=6.804$ ($SD=3.749$) and for the control group $M=7.98$ ($SD=3.551$), problem and solution text for the experimental group were $M=7.80$ ($SD=4.603$) and for the control group $M=8.71$ ($SD=5.085$), cause and effect text for the experimental group $M=11.06$ ($SD=4.760$) and for the control group $M=12.15$ ($SD=4.913$), and comparison and contrast text for the experimental group $M=9.04$ ($SD=4.202$) and for the control group $M=11.37$ ($SD=4.459$) before the intervention. After the intervention, the mean and standard deviation scores of these texts were for descriptive text for the experimental group $M=17.87$ ($SD=6.810$) and the control group $M=11.71$ ($SD=6.619$), sequence for the experimental group $M=11.43$ ($SD=5.357$) and the control group $M=8.96$ ($SD=5.96$), problem and solu

tion for the experimental group $M=17.44$ ($SD=14.808$) and the control group $M=12.63$ ($SD=6.544$), cause and effect for the experimental group $M=20.87$ ($SD=8.499$) and the control group $M=17.58$ ($SD=8.168$), and comparison and contrast for the experimental group $M=17.83$ ($SD=8.028$) and the control group $M=13.19$ ($SD=6.785$). The mean difference scores of the two groups showed: descriptive (6.16), problem and solution (4.81), comparison and contrast (4.64), cause and effect (3.29) and sequence (2.47). One-way MANOVA was conducted to see if these mean differences between groups were significant or not.

Table 9: The results of the MANOVA tests for post-intervention written recall tasks

Effect		Value	F	Hypothesis df	Error df	Sig.	η^2
Groups	Wilks' Lambda	.756	6.441	5.000	100.000	.000	.244

There was a statistically significant difference between the comparison and the experimental groups on the combined dependent variables (descriptive, sequence, problem and solution, cause and effect and comparison and contrast), $F(5, 100) = 6.441$; $P = .001$; Wilks' Lambda = .756; $\eta^2 = .244$ after the intervention. This explains that 24% of the difference was attributed to the text rhetorical organization strategy instruction. Based on the values in Wilks' Lambda, it was found that there was a statistically significant difference in the students' written recall tasks performance as a result of the intervention. To examine if groups could also differ significantly on each text structure strategy instruction, a separate ANOVA was conducted, each ANOVA being evaluated at Bonferroni adjusted alpha level ($\alpha = .01$).

Table 10: ANOVA between Groups on each written recall task scores after the intervention

Test	TROS	Group	N	Mean	SD	F	df	Sig.	η^2
WRT Post-test	Descriptive	Control	52	11.71	6.619	22.269	1,104	.000	.176
		Experimental	54	17.87	6.810				
	Sequence	Control	52	8.96	5.145	5.828	1,104	.018	.053
		Experimental	54	11.43	5.357				
	Problem and solution	Control	52	12.63	6.544	18.694	1,104	.000	.152
		Experimental	54	17.44	4.808				
	Cause and effect	Control	52	17.58	8.168	4.133	1,104	.045	.038
		Experimental	54	20.87	8.499				
	Comparison and Contrast	Control	52	13.19	6.785	10.296	1,104	.002	.090
		Experimental	54	17.83	8.028				

The ANOVA table tests of between subjects' effects showed the effect size of each written recall task scores: descriptive = $F(1, 104) = 22.27$, $p = .000$, $\eta^2 = .176$; sequence = $F(1, 104) = 5.828$, $p = .18$, $\eta^2 = .053$; problem and solution = $F(1, 104) = 18.67$, $p = .000$, $\eta^2 = .152$; cause and effect = $F(1, 104) = 4.133$, $p = .45$, $\eta^2 = .038$; and comparison and contrast = $F(1, 104) = 10.3$, $p = .002$, $\eta^2 = .090$. Therefore, descriptive text pattern had more effect on the development of students written recall tasks performance. Problem and solution text rhetorical organization were the second helpful text pattern that helped students to recall more information after their readings. Comparison and contrast, sequence and cause and effect text rhetorical organization had effect for the

improvements of students reading performance, respectively from the highest to the least.

The written recall data collected from the students showed a significant increase in the post-tests of written recall in all text rhetorical organization. Unlike the cause and effect and sequence texts, there was a statistically significant difference between the two groups in recalling of descriptive, problem and solution, comparison and contrast text patterns. The improvement of the experimental group participants recalled of much information was thought to be due to the intervention. The result of the study is in contrast with the findings of the previous work (Zhang, 2008) which pointed out that readers displayed better recall of the text with highly structured organization (comparison, problem and solution, and causation) than loosely organized text (description). Concerning the cause and effect text rhetorical organization, there was no statistically significant difference across the two groups. The participants seemed to have relatively more trouble comprehending and recalling with cause and effect text structure. This is in line with the research finding of McCrudden et al. (2007) in which the cause and effect text structure is a more difficult text structure, which requires readers to develop causal inferences to better comprehend the texts. One explanation of this findings might have been that due to cause and effect text is a more cognitive demand on the readers because of the understanding of complex causal relationship texts and not only implicit relationship of the text must be identified. Besides, inferences should also be drawn about those relationships.

Conclusion

The present study investigated the effects of text rhetorical organization strategy instruction on students' reading comprehension performance on first year undergraduate students in University of Gondar. Knowing how to read and comprehend expository text is an essential skill in one's academic study. The recognition and use of text rhetorical organization is an essential process underlying comprehension and retention. Text rhetorical organization is the way information is organized in a text. The instruction of text rhetorical organization showed promising results on facilitating the students' reading comprehension. Based on the reading comprehension tests and written recall tasks scores of the students, it was revealed that there was a statistically significant difference between the control and the experimental groups, indicating that the text rhetorical organization strategy instruction is one of the effective strategies to improve students' reading comprehension performance. Among the expository text patterns, the participants of the study were most effective in comprehending texts in problem and solution text structure and in recalling of descriptive texts. The expository text rhetorical organization instruction has contributed to the improvement of students' reading comprehension performance.

Recommendations

Based on the results of the study, the following recommendations were drawn. Text rhetorical organization strategy is an important variable that has to be considered in teaching reading comprehension based on a particular structure through series of pedagogical implications. Therefore, curriculum designers should include text rhetorical organization strategy into the reading lessons. The reading tasks should be more focused on text rhetorical organization strategy analysis and have activities that deal with sentence relationships, main ideas and supporting details. Students should use text rhetorical organization strategy as a text processing strategy to facilitate their reading comprehension and recall of ideas. EFL instructors should incorporate expository text rhetorical organization strategy instruction in order to foster students reading comprehension. As research in the

area is still scant, researchers should investigate more on issues connected to text rhetorical organization reading comprehension strategy. A possible focus of the future research can also be investigating the effects of narrative text rhetorical organization on students' reading comprehension.

Acknowledgements

I would like to thank all those who have supported me along the way. Firstly, I am indebted to Dr. Dawit Amogne from Bahir Dar University, for his guidance and constructive comments during the course of this study. Secondly, I would like to express my heartfelt gratitude to Dr. Nururazik Maru from University of Gondar, whose invaluable perseverance, guidance, encouragement and support throughout the study. Thirdly, I would like to thank my colleagues and friends for reading, commenting on and correcting the preliminary drafts of this study. Finally, very special thanks and my deepest gratitude go to University of Gondar students who have participated in the data collection processes of the study.

References

- Akhondi, M., Malayeri, F. A., & Samad, A. A. (2011). How to teach expository text structure to facilitate reading comprehension. *The Reading Teacher*, 64(5), 368-372.
- Allington, R.L. (2006). *What really matters for struggling readers: Designing research-based programs*. (2nd Ed.). Upper Saddle River, NJ: Pearson Education, Inc.
- Armbruster, B. B. (2004). Considerate texts. In D. Lapp, J. Flood, & N. Farnan (Eds.), *Content area reading and learning: Instructional strategies* (2nd ed., pp. 47-58). Mahwah.
- Armbruster, B. B., Anderson, T. H., & Ostertag, J. (1987). Does text structure/ summarization instruction facilitate learning from expository text? *Reading research quarterly*, 331-346.
- Armbruster, B. B., Anderson, T. H., & Meyer, J. L. (1991). Improving content-area reading using instructional graphics. *Reading Research Quarterly*, 393-416.
- Carrell, P. L. (1984). The effects of rhetorical organization on ESL readers. *TESOL Quarterly*, 18, 441-469.
- Carrell, P. L. (1985). Facilitating ESL reading by teaching text structure. *TESOL quarterly*, 19(4), 727-752.
- Carrier, K. A. (2003). Improving high school English language learners' second language listening through strategy instruction. *Bilingual Research Journal*, 27: 383- 408.
- Chamot, A. U. (2005). The role of learning strategies in second language acquisition. Learner contributions to language learning: *New directions in research*, 25-43.
- Davies, F., (1995). *Introducing reading*. London. Penguin.
- Dickson, S.V., Simmons, D.C., & Kameenui, E.J. (2001). *Text organization and its relation to reading comprehension: A synthesis of the research*. Washington, D.C.: National Center to Improve the Tools of Educators.
- Durkin, D. (1993). *Teaching them to read* (6th Ed.). Boston: Allyn & Bacon.
- Gebremedhin, Simion (1993). *Individualized reading for EAP for social science first year students in Addis Ababa University*. Unpublished PhD Dissertation, AAU.
- Gessesse Taddesse (1999). *The effect of a process approach to teaching reading on first year students at Kotebe college of teacher education*. Addis Ababa University.

- Grabe, B. (2000). *Using discourse patterns to improve reading comprehension*. NorthernArizona University.
- Grabe, W. (2009). *Reading in a second language: Moving from theory to practice*. Ernst Klett Sprachen.
- Gordon, C. J. (1990). Modeling an expository text structure strategy in think a louds. *Reading Horizons: A Journal of Literacy and Language Arts*, 31(2), 6.
- Hayashi, A. (2004). *The Effect of Text Structure on ESL Students' Recall of information: University of Victoria*.
- Herber, H. L. (1978). *Teaching reading in content areas*. Prentice Hall.
- McCrudden, M. T., Schraw, G., Lehman, S., & Poliquin, A. (2007). The effect of causal diagrams on text learning. *Contemporary Educational Psychology*, 32(3), 367-388.
- Meyer, B. J., Brandt, D. M., & Bluth, G. J. (1980). Use of top-level structure in text: Key for reading comprehension of ninth-grade students. *Reading research quarterly*, 72-103.
- Meyer, B. J., & Freedle, R. O. (1984). Effects of discourse type on recall. *American Educational Research Journal*, 21(1), 121-143.
- Meyer, J. B. F. (1985). *Prose analysis: Purposes, procedures, and problems. A theoretical and practical handbook for analyzing explanatory text* (pp. 11-64). Hillsdale, NJ: Erlbaum.
- Meyer, B. J., & Poon, L. W. (2001). Effects of structure strategy training and signaling on recall of text. *Journal of educational psychology*, 93(1), 141-159.
- Meyer, B. J. (2003). Text coherence and readability. *Topics in Language Disorders*, 23(3), 204-224.
- Meyer, B. J., & Wijekumar, K. (2007). *A web-based tutoring system for the structure strategy: Theoretical background, design, and findings. Reading comprehension strategies: Theories, interventions, and technologies*, 347-375.
- Meyer, B. J., & Ray, M. N. (2011). Structure strategy interventions: Increasing reading comprehension of expository text. *International Electronic Journal of Elementary Education*, 4(1), 127-152.
- Meyer, B. J. F., & Ray, M. N. (2011). Individual differences in children's knowledge of expository text structures. *International Electronic Journal of Elementary Education*, 4(1), pp. 67-82.
- MoE (1994). *The new education and training policy*. Addis Ababa. Ethiopia.
- Pardo, L. S. (2004). What every teacher needs to know about comprehension. *The Reading Teacher*, 58(3) 272-280.

- Pritchard R.E., Romeo G. C. & Muller S. A. B. (1999). Integrating reading strategies into the accounting curriculum. *College Student Reading*, 33(1): 77-82.
- RAND Reading Study Group. (2002). *Reading for understanding: Toward an R&D program in reading comprehension*. Santa Monica, CA: RAND.
- Raymond, P. M. (1993). The effects of structure strategy training on the recall of expository prose for university students reading French as a second language. *The Modern Language Journal*, 77(4), 445-458.
- Sharp, A. (2002). *Chinese L1 Schoolchildren Reading in English: The Effects of Rhetorical Patterns*: New Horizons 40, 93-102.
- Shen, H.J. (2003). The Role of Explicit Instruction in ESL/EFL Reading. *Foreign Language Annals*, 36(3): 424-433.
- Silberstein, S. (1994). *Techniques and resources in teaching reading*. New York, NY: Oxford University Press.
- Solomon Hailu (1999). *A study of reading strategies of first year students at Addis Ababa University college in Ethiopia*. Unpublished doctoral dissertation, AAU.
- Simonsen, S. (1996). *Identifying and teaching text structures in content area classrooms. Content area reading and learning: Instructional strategies*. Mahwah, NJ: Erlbaum.
- Smith, F. (2004). *Understanding reading: A psycholinguistic analysis of reading and learning* (6th ed.). Mahwah, NJ: Lawrence Erlbaum.
- Taye Regassa (1999). *The effect of academic background on reading comprehension: The case of first year students at the college of social science*. Addis Ababa University
- Tompkins, G. E. (2007). *Literacy for the 21st century: Teaching reading and writing in Pre-kindergarten through grade 4* (2nd ed.). Pearson: Upper Saddle River.
- Tuckman, B. W. (1978). *Conducting educational research* (2nd ed.). New York: Harcourt Brace Jovanovich.
- Villanueva de Debat, E. (2012). *Applying current approaches to the teaching of reading*
- Williams, E. (2007). Extensive reading in Malawi: Inadequate implementation or inappropriate innovation? *Journal of Research in Reading*, 30(1), 59-79.
- YenusNurie (2017). Pedagogical Practices in Teaching Reading Comprehension: A Case Study of Three EFL Teachers in a Secondary School in Ethiopia: PASAA: *Journal of Language Teaching and Learning in Thailand*, 54, 108-140.
- Zhang, X. (2008). The effects of formal schema on reading comprehension: An experiment with Chinese with Chinese EFL readers. *Computational Linguistics and Chinese Language Processing*, 13(2), 197-214.