



# Tension between keyword method and root analysis in teaching vocabulary recall: Addis Kidam General Secondary and Preparatory School in Focus, Awi Zone, Amhara Region, Ethiopia

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## Abstract

The present study aims at investigating the tension between Keyword methods of teaching to root analysis in teaching EFL students' vocabulary recalling. Since the design of the study is quasi-experimental, pre-test and post-test, two intact groups that comprised a total of 80 students participated in the study. Grade 11 section 'C' Students (n=40) were assigned as the experimental group and grade 11 section 'D' students (n=40) were assigned as a control group by a lottery technique. The researchers used teacher-made tests as a main data gathering tool. A quasi-experimental research design is held via administering pre-test for both the control and experimental groups to see the students' background similarity. Students' score in the pretest witnessed that the two groups were similar. Then, treatment was given for 48 hours for each group by arranging an extra class. The experimental group was taught through keyword teaching method whereas the control group was taught through the traditional teaching method that is root analysis in a context in the textbook. In the end, post-test was administered to gauge the effect of the keyword method on improving the vocabulary proficiency of the learners. The data were analyzed quantitatively through the independent samples t-test and paired samples t-test. The result of the research work revealed that participants in the experimental group who were taught through keyword method outperformed participants who were taught through the traditional vocabulary teaching method. From this, the researchers conclude that keyword method had a significant effect on promoting the vocabulary recalling proficiency of the students than the traditional method. Therefore, teachers and concerned bodies should play their role so that the keyword method could be used as a better alternative vocabulary teaching method in the future in our country.

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**Keywords:** Vocabulary recalling; keyword method; English as a foreign language; teaching in context; traditional teaching method

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## 1. Introduction

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### *1.1. Background of the study*

Nowadays, vocabulary learning is a base for learning foreign languages. To achieve a high level of proficiency in learning a foreign language, learning vocabulary is key. Insights gained from the vocabulary learning process have now highlighted the fact that the second and foreign language learners should concentrate their efforts on developing vocabulary learning strategies. Due to this reason and regardless of the importance, little attention or no emphasis was given for teaching vocabulary.

Researchers (e.g., Allen, 1983) tried to use new strategies and techniques to aid teachers to be proficient enough in the learning of a skill as well as learning foreign languages. Research findings (e.g., Atay & Orbulgan, 2007) also suggest that lexical problems frequently interface with communication. Communication breaks down when people do not use the right words in expressing intended meaning.

Now, the vocabulary specialists (e.g., Celik & Toptas, 2001) research assumes that lexical competence is the core place of communicative competence. There is a need for investigating about the effectiveness of different strategies and techniques of foreign language vocabulary instruction on learning and retention. Considering the significance of vocabulary in language learning domain and address the students' vocabulary recall problems, the present study is designed to determine the effect of keyword method, root analysis, and vocabulary in context methods in enhancing learning and retention of vocabulary items.

Vocabulary learning methods and instructional techniques have been recognized as an important element in language pedagogy. It is claimed that learners need to be given an explicit instruction of vocabulary strategy in order to facilitate awareness of vocabulary learning strategies (Atay & Orbulgan, 2007).

Teaching language especially English as a foreign language is a means of learning that we gain skills and elements like vocabulary. Teachers have a great responsibility to use various strategies for teaching vocabulary. One of the methods that are not commonly used in the Ethiopian education system, as to the researchers' practical experience, is the keyword method.

Vocabulary learning does not seem feasible without being instructed how to specify different kinds of word knowledge strategies for learning how to learn. If students learn how to use keywords, they will have a better understanding of the words to make more meaningful and be able to create a memorable conversation without fear of forgetting words. Two strategies are involved in the implementations of the keyword technique. First, a connection based on phonetic similarities is made between a new word and a familiar word (Keyword), and secondly, forming a link that associates the target word and the keyword together. Strategies offer particular advantages and the use of

appropriate learning strategy can surely enhance success with any learning task (Sabuncoglu, 2013).

These days, the keyword method has been one of the most popular and comprehensive, researched foreign languages vocabulary teaching method that lies in the strengthening of verbal linkage and visual imaginary in the memory process (Liven & Delaney, 1982). Djigovic (2000) illustrates that the keyword method represents an attempt to optimize learning foreign languages vocabulary. The idea emerged in an experimental psychologist's laboratory and divides vocabulary into two learning strategies, i.e., mnemonic and non-mnemonic. Thus, the keyword method consists in forming a chain of links connecting a foreign word to its translation to the mother tongue.

### *1.2. Conceptual Framework*

After a long period of relative neglect, language teachers and researchers have recently been cognizant of the fact that vocabulary is an important aspect of language, which is worth investigating. However, learners usually admit that they experience considerable difficulty with the learning of the vocabulary and many of them identify the acquisition of vocabulary as their greatest source of problems. The problem is to discover which ways or skills will best help learners better learn, retain and retrieve vocabulary. Consequently, it is essential for language teachers to be aware of the effectiveness of different methods of vocabulary teaching to choose the ones that are the most effective to their students; this is what we follow in this experimental study. A number of researchers (e.g., Rott, Williams & Cameron, 2002; Singleton, 2008; Min, 2008; Mizumoto, & Kansai, 2009; File & Adams, 2010) have recently examined the fruitfulness of different techniques of vocabulary instruction.

Formal second language vocabulary instruction, indeed, should be based on a variety of teaching techniques and activities in order to cater to individual learning styles and to break the classroom routines. It is of extreme importance to encourage learners' active participation in vocabulary learning and cooperation with their peers and the teacher (Singleton, 2008). Following this line of research, Rott, et al, (2002) investigated the effectiveness of 'multiple-choice L1 glosses and input-output cycles on lexical acquisition and retention'. Using immediate assessment of word knowledge after the treatment found that the multiple-choice gloss treatment resulted in significantly deeper receptive and productive word gains, but retention of receptive word gain was significantly achieved only via the combined treatment condition. In a quasi-experimental study, Min (2008) compared the effectiveness of reading accompanied by vocabulary enhancement activities and narrow reading. The analysis revealed that students in the reading plus vocabulary group significantly outperformed those students in the narrow reading group in vocabulary learning and retention tests. Hence, the researcher concludes that reading plus writing- focused-vocabulary exercises are more effective and appropriate than

narrow reading in vocabulary acquisition and retention among EFL secondary school students. Similarly, Mizumoto and Kansai (2009) investigated the effect of explicit instruction of vocabulary learning strategies of Japanese learners' vocabulary knowledge and motivation, their results showed that students in an experimental group outperformed those in the control group. Their findings, they claim, make contributions to better understanding of strategies, in general, and vocabulary learning strategies, in particular. File and Adams (2010) compared the isolated and integrated vocabulary teaching with reading; they disclosed that both instructional techniques came to more learning and retention of vocabulary knowledge than incidental exposure alone. Meanwhile, over the past two decades, research has revealed a great deal about vocabulary learning strategies which learners exploit in order to improve their vocabulary.

### *1.3. Statement of the problem*

English language teachers in Ethiopia complain that many students had an inadequate vocabulary to improve the English language achievement. Lack of learners' vocabulary may result from the strategy of learning vocabulary. Fan (2003), for example, disclosed that the inadequacy in lexical knowledge may hinder students' language proficiency development. Students may lack adequate vocabulary due to their inability to employ appropriate vocabulary strategy use, which in turn might make them lose interest in learning a foreign language. In addition, students have a low perception of the importance of vocabulary learning to enhance their English language achievement.

Moreover, vocabulary instructions in the textbook repeatedly present the traditional way of learning vocabulary, like, definitions of words in matching form, using context, word mapping, word formation: prefixes and suffixes, etc. Therefore, the present study investigates which strategy effectively enhances students to recall and develop their vocabulary knowledge.

A keyword method is a form of mnemonics. In this technique, students are taught to associate the new word to familiar keyword so they can easily recall the new word and remember meaning whenever they come across it in their study of vocabulary. To help students develop their word power, this study inform us the vocabulary knowledge plays an important process in transforming the productive and receptive skills.

With the sense of the importance of vocabulary, the study will offer great insights into the field of foreign language acquisition. It facilitates the learner's ability to retain and acquire vocabulary longer; furthermore, it eases teacher's responsibility and causes them to handle the class in a way that could help to share more responsibilities with the learner (Fetemeh & Naser, 2015). This study aimed to compare different strategies in a classroom context in order to facilitate vocabulary learning process for the EFL learners. It is believed that some strategies help individuals retain and acquire new words more

easily in the target language. In this case, vocabulary is believed to be a fundamental communication instrument and needs to be taken into account more seriously by EFL learners and teachers.

However, the researchers teaching experience confirmed that many teachers use traditional vocabulary teaching strategies and this leads our students to face a great problem of lack of vocabulary in their speaking, reading, listening as well as in their writing skills. This is a very crucial problem for not only our students but also English as a foreign language teacher in Ethiopian schools. Experienced teachers of English as a second language know very well regarding how important vocabulary is. Laufer (1997), for example, argued that vocabulary teaching is at the heart of language learning and language use metaphorically. Zhan-xiang (2004) further asserted that words of languages are just like bricks of the high building, despite quite small pieces, they are vital to the great structure. If we spend most of our time studying grammar, our English will not improve enormously, much important is attained if we learn more words and expression; little can be said with grammar but almost anything with words (Thronbury, 2002). Research now views vocabulary as an important language component upon which effective communication relies (Oxford, 1994).

To this end, the keyword strategy is more benefiting to our students. In the classroom, teachers struggle to balance vocabulary and grammar instruction. Moreover, how to help learners to recall a large number of second language vocabularies is still a pedagogical question and main concern needing a practical solution. The other important point needs to be addressed is when to introduce vocabulary learning strategies and how to instruct learners to use them in the classroom. So that, they can use the techniques to deal with vocabulary learning more effectively while learning vocabulary independently.

Teachers still struggle with the demanding and time-consuming job of teaching the subject matter in each course and the enormous task of checking the learners' homework. Teachers need to use the keyword method and memorize the vocabulary in isolation. Hence, the question examines as to when we could see a change in a balance between teaching English grammar and vocabulary and the development in vocabulary teaching and learning in EFL contexts (Akbartaheri, 2016). Therefore, the present study investigated the use of the keyword method strategy and comparing the traditional method (root analysis technique) to enhance or develop a learner's vocabulary retention.

Vocabulary can be learned with different strategies. It can be quite tricky and tiresome to memorize new words along with their spelling and definitions. Some people just have naturally strong memory. Most depend on mnemonics, which are mechanisms such as images and rhymes, used to help memorized words. The keyword method is a mnemonic. The keyword method is a valuable technique used to memorize the meaning behind vocabulary words when a person uses what a word sounds like to visualize something memorable that will help them later recall the definition. The keyword method is ideal

for investigating the recalling of memory. First, as the keyword method has proven itself an effective technique for learning and remembering new vocabulary it is worth understanding the mechanisms that underlie its effectiveness. Second, most explanation of the keyword methods effectiveness assume that the keyword and interactive image are an important mediating vertical process, but little and detailed evidence supports the use of these structures in the retrieval process (Patterson, 1981).

In order to teach vocabulary, memory technique is often called mnemonics. Mnemonics are taken as cognitive strategies (Brown, 2007). But, they fail into disuse in the West and are not often taught in schools today. The traditional method or root analysis technique that had been believed to enhance or develop the learner's vocabulary retention was also investigated. And, the intention of this study is to contribute some strategies to the solution of the above-mentioned problems.

Higbee (2007) tried to give a reason that mnemonics work as they do: meaningfulness, organization, association, visualization, and attention. Mnemonic techniques include simple techniques such as acronyms, as well as more complex methods such as the loci, the keyword, and the peg method. The keyword method is the most widely studied method, especially in relation to language learning. In order to remember a new piece of information, suitable substitution word (the keyword) is chosen and then associated with the meaning of the original word in a mental image (mental images are not limited to the keyword method, most visually oriented mnemonic system use them) by recalling the keyword, the original word and its meaning. Therefore, the current study was intended to provide evidence-informed solutions to the following research questions.

#### *1.4. Objectives of the study*

The general objective of this study is to investigate the effect of the keyword method on students' vocabulary retention. Specifically, the research focused on the following specific objectives:

- Investigating the effect of one of the vocabulary learning strategies (the Keyword Method) on students learning recall.
- Comparing the traditional method of teaching vocabulary with the keyword method of teaching students in EFL classroom.
- Checking students' perceptions regarding the keyword method of vocabulary recalling vocabulary.

#### *1.5. The significance of the study*

Knowledge of different strategies for vocabulary learning, using the findings of this research provides clear clue and initiation to use the keyword method in the teaching-learning process. Therefore, this research finding plays an important role in:

- Helping the students to be confident enough in speaking, writing, listening and reading.
- Helping the teachers to teach by using effective strategies for unfamiliar words in an easy way.
- Increasing the development of word knowledge for the learner.
- Helping curriculum developers and designers to include effective strategies for learning new words into the curriculum.

### *1.6. Delimitation of the study*

Due to the nature of the research design and, the number of sections and period allotments in the school, the study was confined to grade eleven students who enrolled in Amhara Regional State, Awi Administrative Zone, Fagita Lekoma Woreda, Addis Kidam General Secondary and Preparatory School. Conceptually, the study was delimited to checking the effect of Keyword Method and the traditional-root analysis in learning vocabulary in EFL class.

### *1.7. Limitation of the study*

The researchers did not get locally done research articles and research papers, especially in Amharic on the title keyword method. This is because researches mainly focus on skills and grammar even the Ethiopian schools' curriculum did not include this type of strategy of learning vocabulary. The study mainly focused on nouns and verbs; little attention was given to other parts of speech like adjectives, adverbs, and phrasal verbs, etc.

## **2. Method**

### *2.1. Design of the Study*

Of the different quasi-experimental designs, the researchers used a pre-test and post-test research design. This design was chosen because of three reasons; firstly, suitability to measure the change in the dependent variable. Secondly, the use of pre-test allowed the research to measure groups' difference before exposure to the treatment, which could considerably reduce the threat of biases. Thirdly, seeks to determine if a specific treatment influences an outcome. This impact is assessed by providing a specific treatment to one group and withholding it from another and then how both groups scored on an outcome in the actual classroom situation..

## 2.2. Participants

In Addis Kidam General Secondary and Preparatory School, there were 1118 (female-568; male-550) grade nine, 961(female-511; male-450) grade ten, 491(female-273; male-218) grade eleven and 481 (female-241; male-240) grade twelve students. Among these grades, the researchers conducted the study on grade eleven students. This is because grade ten and grade twelve students take the Ethiopian national examination. As a result, they left the school before the course of the study was completed. In addition to this, the school was the working place of one of the researchers. This makes the researchers attend the participants of the study easily during the whole course of the study especially, during the treatment phase. Doing this was useful to get valuable data which is helpful to achieve the objectives of the study.

## 2.3. Sampling procedures

Describe the procedures for selecting participants, including (a) the sampling method, if a systematic sampling plan was used; (b) the percentage of the sample approached that participated; and (c) the number of participants who selected themselves into the sample. Describe the settings and locations in which the data were collected as well as any agreements and payments made to participants, agreements with the institutional review board, ethical standards met, and safety monitoring procedures.

### 2.3.1. Sample size, power, and precision

In the school, as it is disclosed above, there were 273 female and 218 male and totally 491 grade eleven students who were attending their schooling. There were eleven sections. Since the design of the study is quasi-experimental, the researchers took the intact groups which were in their natural setting as a sample size. One of the researchers was teaching grade eleven sections C, D and I. Sections C and D comprises natural science students whereas section I comprises social science students. Among these sections, the researchers chose grade 11C and grade 11D students as target groups with the assumption that these students are similar in interest and background knowledge. That is, the researchers used a convenient sampling method. From these sections, section D was assigned as a control group and section C as an experimental group by a simple lottery technique in order to avoid bias. The sample size was summarized as follows:

**Table 1. Sample Size of the Study**

<i>Groups</i>	<i>Section</i>	<i>Number of the students</i>		
		<i>Male</i>	<i>Female</i>	<i>Total</i>
Control	11D	17	23	40
Experimental	11C	18	22	40
Total		35	45	80



## 2.4. Data collection instruments

### 2.4.1. Teacher Made Tests

A teacher made tests (pretest and post-test) were the main instruments to gather the required data. It is believed that teacher made tests give us valuable information about the progress or the failure of the students in an instructional process.

### 2.4.2. Pre-test

Prior to the experiment, teacher-made tests of vocabulary was used in order to make sure that the participants were with a similar background with the target words. It was a test with twenty items. 10 questions were multiple-choice items and the remaining 10 questions were word formation in blank space form. The words were chosen from grade 11 English textbook. The items focus on verbs, nouns and rarely adjectives. To suit the purpose of the study, the words had to meet two criteria: first appropriate for students level; second, the words that had strong phonological similarity with the Amharic language were selected

### 2.4.3. Post-test

. The researchers gave a twenty item vocabulary to measure the learners' lexical acquisition and recall. The post-test administered three weeks after the treatment to test the retention power of learners regarding the learned words.

### 2.4.4. Interview

A semi-structured interview was used to gather more data for cross-checking. Interviews were conducted with students and, the interview was held with the mother tongue-Amharic. The content of the interview represents the basic questions of the study. Four students were selected purposively. From these students, two were male and two of them were female. The interview was held in the school and in one of the teaching classes in the opposite shift of the interviewees' regular class by arranging a suitable time for the interviewees and interviewed one by one. To facilitate a clear understanding between the researchers and the participants, the interview questions were given on a piece of paper before a few minutes that the interview was held. The questions were three items related to the effect of keyword method to vocabulary recalling and the interviewees respond their feeling about what they gained from the strategy after the treatment and progress of their result. It contains the strategies to discover and consolidate meanings of words.

## 2.5. Data collection procedures

After the experimental and the control groups were identified, the two tests were administered in their respective time. Two tests were given, that is, pre-test and post-

test. The pre-test was administered before the treatment was given. The purpose of this test was to know whether or not the two groups had a similar background in their vocabulary learning. The post-test was administered after three weeks from the end of the treatment period. This test measures the students' vocabulary proficiency after they were taught in the two teaching methods. It was useful to see the change after the treatment. The pre-test consists of objective test items constructed by referring grade eleven English textbook. The post-test was designed from grade 11 English textbook focusing on increasing word power. It contains multiple choice and matching items using the table of specification focusing on new vocabulary words.

To assure the validity of the test a teacher who teaches grade 11 the nearby school in Dangila woreda, Mengesha Jemberie General and Preparatory School who had M.A in TEFL, evaluated it. In addition to this, the test was pilot tested on other sections that were found in the same grade level to the target groups. After ambiguous instructions and questions were modified, the pre-test was administered to both the control and experimental groups in a hall by the same invigilator and on 10 December 2018. This was the right schedule to get enough time to mark the test papers. To make the pre-test reliable, the researcher used the test-retest method. After the test was conducted for the second time, it was scored by three of the researchers. The average score was taken as raw data. Doing this is important so as to make the test reliable and valid. And then, the treatment was begun on December 20, 2018.

The treatment was given for four months based on the designed teaching materials for the experimental and the control groups. There were two periods each week for each group. The length of the period was one hour. Then a post-test was constructed based on the principles of language testing (Davies, 1990). The test comprises objective items that measure the learners' vocabulary proficiency. It contains eight items. Each has its own function. Below are some points about the items and their purpose:

#### *Preparation of the Teaching material for the experimental group*

During the teaching material preparation, an attempt was made to follow the underlying principles of Keyword Method that grounds on the assumption of Atkinson (1975) learning theory and Willis (1996) framework. Accordingly, the material was designed to teach vocabulary and presented in a way that learners of the experimental group would develop their vocabulary proficiency. So, the vocabulary words were collected from grade 11 English textbook which has phonetic or acoustic similarity with their L1 (Amharic) and the experimental group learned to like this:

Students are expected to pass three stages: first, the target word is given to the learners (keyword), the second associate the keyword and the Amharic word, finally, a mental image of the combination of the keyword and the Amharic word were formed. For example, let's take one of the English keyword "mist" [mist] which means clouds so long

in the ground and difficult to see far and in Amharic, there is a word with the same pronunciation ማሳሳት/mist/meaning in English wife. Then the learners link the keyword and their Amharic word and make an image between the two.

**Table 2. Teaching Materials for the Experimental Group**

Keyword	Meaning in L2(English)	Amharic L1 Word	Meaning in L2(English)
Launch	Start	ላወገጅ Lawnji	Students café & restaurant in the university
Cry	Shout	ኪረይ Kiray	Rent

### *The Treatment Phase*

#### *Teaching vocabulary through Keyword Method*

The treatment was given in the extra class (a class different from the regular class) based on the framework of Atinkson. This framework reflects the assumptions and principles of Keyword Method. Below are some of the assumptions and principles that were taken into account during the treatment phase:

- The teacher helped the students to understand the objectives of the task, for example, the teacher made them brainstorm ideas using inputs like pictures, magazines, photographs, flashcards, images, etc.
- The teacher highlights useful words and phrases but did not pre-teach new structures during the pre-task cycle.
- The task was done by students in pairs, in groups or individually as the students are active participants in the Keyword Method. The teacher acted as an organizer, advisor, and facilitator.
- The teacher was intervening to correct errors of form when they use words with different usages.
- Learners planned and reported briefly to the whole class how they did the task and what the outcomes were.
- The teacher set some language focus tasks from the input during the post-test cycle.
- The teacher gave practice activities for the students to practice the forms of the linguistic item.

#### **Teaching vocabulary through the Traditional Method-Root Analysis**

The control group was taught in a traditional method of vocabulary teaching. Like that of the experimental group teaching material, the control group teaching material was the students English textbook which was actually designed for learning. In each unit, there is the vocabulary part that says increase your word power that contains, for example, root analysis: prefixes, affixes, context, definitions, etc. The linguistic or grammatical items were presented without supporting in context by the teacher as follows:

- The students were expected to master each vocabulary topic step by step in the textbook,
- The teacher, as well as the students, focuses on the vocabulary in the normal classroom,
- The learners were active participants in grammar rather than in vocabulary lessons,
- The increase word power items presented in the textbook were not participatory,
- Most of the instructional time was dominated by teacher talk, i.e., students were made usually passive, and
- The students were involved only when the exercises were done.

## *2.6. Data Analysis Method*

The raw data that the researchers received from the vocabulary recall proficiency teacher made tests were coded and tabulated. It was analyzed using both descriptive and inferential statistics like an independent samples t-test and paired sample t-test. Descriptive statistics include mean and standard deviation. They are useful to summarize bulky data and forward information about the participants that were generalized to the whole population later. But t-tests are included under inferential statistics. As the name indicates, they are very important to infer or draw valuable information from the analysis. The researchers used an independent samples t-test and paired samples t-test. The former types of test compare and contrast two independent non-equivalent intact groups whereas the latter compares a dependent sample with different test results received before and after the intervention. The analysis was done using SPSS version 22. The change between the pre-test and the post-test was analyzed. Based on the analysis, the research questions that the researchers set at the onset of the study were analyzed and interpreted. The study also includes a qualitative data gathering instrument, that is, a semi-structured interview and the data solicited using this instrument was interpreted by putting their feelings, believes, and opinions about the effect of keyword method into data-driven categories. Narration as per the categories was made to analyze the semi-structured interview data.

### 3. Results

#### 3.1. Pre-test Results

Students of the keyword method (the experimental) group and the control group were given a pre-test in order to measure whether the two groups were at a similar background in recalling of vocabulary or not. Accordingly, the result of the pre-test showed that the two groups were found at a similar vocabulary proficiency level. The descriptive statistics in Table 3 presents the data obtained from the pre-test results.

**Table 3: Descriptive statistics of the Pre-test**

Group	N	Mean	Std. Deviation	t	df	Sig.(2-tailed).
Control	40	42.18	11.437	0.062	78	.951
Experimental	40	42.03	10.073			

$p > 0.05$

As it can be seen from Table 3, the mean score of the control and the experimental groups were found to be similar, i.e., 42.18 and 42.03, respectively. That is, one cannot say that there was a significant difference between the vocabulary proficiency of the two groups by simply looking at their mean scores for slight differences. In order to know whether this difference is significant or not, running an independent samples t-test is necessary. To this end, the researchers run an independent samples t-test analysis. The analysis showed that the mean scores of the two groups' had an insignificant difference.

That is, as shown in table 3, the p-value (level of significance) of the Levine's test for equality of variances is greater than 0.05  $p > 0.05$ . The t-calculated of the pre-test was found less than the value of t-table with 78 degree of freedom (t-calculated = 0.062, t-table = 2.000, df = 78). Accordingly, the researchers can conclude that there was no significant difference between the experimental and the control groups before the intervention,  $p > 0.05$ .

#### 3.2. Post-test Results

In order to find out the effect of the treatment on students vocabulary recalling post-test was given for both the experimental and control groups. And then, an independent sample t-test was chosen for the statistical calculation to show the change. Table 4 showed the descriptive statistics of the post-test results of the groups.

**Table 4: Descriptive Statistics of the post-test results of the study groups**

Groups	N	Mean	Std. Deviation	t	df	Sig.(2-tailed)
Experimental	40	70.18	9.787	4.300	78	.000
Control	40	60.25	10.831			

$P < 0.05$

As indicated in Table 4, the mean scores of the post-test results of the keyword method (experimental) group and the control group are 70.18 and 60.25, respectively. This shows that the experimental group performed higher than the control group. However, as stated earlier, by taking the mean score, one cannot say there is a significant difference or no significant difference in vocabulary recalling performance between the subjects of the study. We have to further refer to the result of the independent sample t-test.

To this end, therefore, it is clearly indicated in Table 4 that the value of t-calculated was found 4.300, which is greater than the value of t-table, 2.000 with 78 degrees of freedom. The mean difference between the post-test results of the two groups was found 9.925. Here the mean score of the experimental group exceeds the control group by the stated average. And the P-value is 0.000 which is below 0.05 (the level of significance), ( $p < 0.05$ ).

The statistical data of the post-test results confirmed that there is a statistically significant difference between the control and the experimental groups. Accordingly, the experimental group, which was taught vocabulary through keyword method, performed significantly higher than the control group which was taught through traditional vocabulary teaching method.

### 3.3. Results of Paired Samples t-test

A paired samples-t-test was run between the pre-test and post-test scores of the control and experimental groups. Moreover, an independent samples-t-test was applied to see if the mean differences were statistically significant. The significance of the difference between the mean scores of both the control and experimental groups was tested at a probability value of  $p < 0.05$ . The results are presented in tables 5 and 6.

**Table 5: Paired Samples Correlation Statistics of the Control Group**

Control Group Tests	Mean	N	Std. Deviation	correlation	Sig.
pre-test	42.18	40	11.437		
post test	60.25	40	10.831	.841	.000

Table 6 shows the paired samples t-test of control group pre-test and the control group post-test and the mean difference is -18.075, the standard deviation of 6.310, and 95% confidence interval. From this one can conclude that the traditional methods were effective in teaching vocabulary recalling as the t-calculated (5.421) is greater than t-tabled (2.00). And, the difference was significant at  $p < 0.05$ .

**Table 6: Paired Samples t-test of the control group**

t-test of the control group	Mean	N	Std. Deviation	t	df	Sig.(2-tailed)
control group pre-test-Control group post test	-18.075	40	6.310	-18.117	39	.000

Table 6 illustrates the pretest of the control group and the post-test of the control group. The mean of the pre-test was 42.18, post-test 60.25 and the standard deviation of the pretest was 11.437 post-test 10.831 and the mean difference was -18.11 and the p-value .000 which is smaller than .05.

**Table 7: Paired Samples Correlation Statistics of the Experimental Group**

Correlation Statistics of the Experimental Group	Mean	N	Std. Deviation	correlation	Sig.
experimental group pretest	42.03	40	10.073	.816	.000
experimental group posttest	70.93	40	8.294		

Table 7 illustrates a paired samples statistics of the experimental group pre-test and post-test result. The mean in the pre-test was 42.03 and the post-test was 70.93 and the standard deviation in the experimental group pre-test 10.073 and in the post-test 8.294. This shows the increment of the student's results after the intervention. As indicated in the same table, correlations between the experimental group pre-test and post-test were .816 and the p-value .000, that is,  $p < 0.05$ . This shows that the two tests had a strong correlation.

**Table 8: Paired Samples t-test analysis of the experimental group pretest-post test result**

Paired Samples t-test of the experimental group	N	Mean	Std. Deviation	t	df	Sig.(2-tailed)
experimental group pretest-post test	40	-28.900	5.826	-31.375	39	.000

$P < 0.05$

Table 8 shows a paired samples t-test analysis. The mean difference between the experimental group pre-test and post-test was -28.900 and standard deviation 5.826, the value of  $t = -31.375$ . and Sig. (2-tailed) .000 and this indicates the p-value was less than .05 ( $p < 0.05$ ). This shows that the experimental group had shown a significant stride after the intervention.

#### 4. Discussion

The analysis of the current study was made using descriptive statistics, paired samples t-test, and independent samples t-test. First, there was a comparison between the control and the experimental groups to check the similarity and the difference in vocabulary recalling background before the intervention. Table 3 shows the mean score of the control ( $M=42.18$ ,  $SD=11.437$ ) and the experimental groups ( $M=42.03$ ,  $SD=10.073$ ). The level of significance was found to be .951 which is greater than the conventional alpha level ( $p=0.05$ ). The t-calculated was 0.062 which is less than the t-table (2.00) value at 78 degrees of freedom. Therefore, it could be declared as there was no statistically significant difference in background between the control and the experimental groups on their vocabulary recall before the treatment was begun. This result also implies the fact

that the students had possessed similar vocabulary retention capacity that they accumulated in the previous grade levels before the inception of the intervention. That is, learners came to class with the same background information about the language. Of course, it also implies that they are not empty vessels or *tabula rasa* at the onset. What they need during the instructional process is somebody like a teacher or a more knowledgeable peer who lights their prior knowledge and experience as a candle.

After the treatment, the mean scores of the control and the experimental groups were 60.25 and 70.18, respectively. The calculated t-value was 4.300 at 78 degrees of freedom. The level of significance was calculated to be 0.000 which is less than the p-value ( $p < 0.05$ ). This result shows that there is a significant difference between the control and the keyword (experimental) groups on their vocabulary recalling level. Due to this, the research questions which states “Is there any difference in the vocabulary knowledge between the keyword method and root analysis?” was affirmed and the hypothesis that says “There is no a significant difference between the effectiveness of traditional method, that is, the root analysis and the context teaching method and the keyword vocabulary teaching method on developing the vocabulary proficiency” was refuted. On the other hand, one of the research question that states “Is there a significant difference between the effectiveness of the traditional method of vocabulary teaching and keyword teaching method on developing the vocabulary proficiency of students?” was found very effective. From this, one can deduce that the keyword vocabulary teaching method is more effective than the traditional or root analysis and context teaching method.

The finding of this study is in line with the findings of the previous abroad research works. Atkinson (1975) and AshooriTookaoni (2012), for example, conducted studies on the effectiveness of the Keyword Method on developing students’ speaking skill. The results of the studies revealed that the experimental group that was taught through Keyword Method outperformed the control group that was taught through the traditional method and the students showed a positive attitude towards Keyword Method of teaching vocabulary recall.

The current researchers implemented the rules of language learning pedagogy as well as Atkinson (1975) framework in a sound way. That was why the experimental group showed more progress than the control group. The tasks were selected and sequenced by considering the participants’ interest and grade level. Owing to this, the students in the experimental group were active participants and main agents during the treatment phase.

From this standpoint, the Keyword Method of teaching vocabulary recall is practicable in our country even in a large class size on condition that the teacher prepares his/her lesson in advance. In addition to this, students should get awareness about the new teaching method. AliAkbar’s (2016) research work strengthens this idea. Ali Akbar conducted a study on the effect of the keyword method on vocabulary learning and long-



term retention. He stated that students who were given awareness raising training on how to do Keyword Method showed a positive attitude towards recalling vocabulary in their long-term retention and became more willing to practice writing and speaking tasks. Moreover, they valued their contributions in improving their own writing and speaking abilities. This eventually led to some improvement in their writing as well as speaking skill. On the other hand, the untrained students who had no experience with the Keyword Method could not tell whether or not the Keyword Method helped them to improve their vocabulary abilities. The students wrongly perceived the Keyword Method as exercising writing through discrete language elements. As a result, they were focusing on grammatical competence. Unlike the views held by many linguists that grammar or structure can be easily learned if students focus on the communicative language skills first. Some students seem to believe that if they are good at using the grammar of the language first, communication will be easy. But, this tendency of focusing more on grammatical competence did not help the students to improve their vocabulary ability.

Tasks for real communication are of most prominence in traditional teaching and learning. Keyword method is a powerful and advanced learning method. It promotes vocabulary proficiency in the process of performing activities. One of the researchers was a facilitator and learners were both receivers and main agents during the research process. It is via the Keyword Method that learners mastered how to make full use of their linguistic resource. Moreover, the teacher used authentic materials during the treatment phase that exposed the students to the real-life use. The materials like pictures, posters, leaflets, photographs, cartoon pictures, etc. served as an input.

As Table 4 displays, the mean difference is 9.925 (MD=9.925). That is, the experimental group exceeded the control group by 9.925 in the post-test. The reason for this result was that the instructional processes were supported by contexts during the treatment phase. Supporting this point, Ellis (2006) argues the creation of real exposure and use of the target structure in a context where the learner is engaged to achieve some outcome and a periodic focus on the target vocabulary form are the conditions that facilitate to increase word power instruction. The principal means for achieving this is Keyword Method vocabulary teaching. In Keyword Method learners are asked to perform various types of tasks which create contexts for the authentic use of vocabulary relating to their mother tongue grammar.

The experimental group students were taught vocabulary items in integration with other skills. But, in a traditional way of vocabulary teaching, the focus is only on a specific linguistic item. This way of teaching is contrary to the natural way of linguistic item acquisition and use in the real world outside the classroom. Because of this, the control group was less proficient than the experimental group.

To supplement the quantitative findings, four students participated in the interview. They gave an almost similar idea, i.e., they reported that they learned vocabulary from lower class to preparatory in a similar fashion. For example, they write meanings of words at the back of their exercise book and rote memorize when the mid-exam and final exam approaches. The retention of vocabulary using this approach would be for a short period of time and the words soon disappeared after the exam. For a better understanding of vocabulary knowledge, therefore, the keyword method had a powerful strategy to recall words.

From the interview result, it was confirmed that students showed a positive attitude towards Keyword method of teaching. One can understand that the positive attitude toward the keyword method in the present study echoes the findings of Chen's (2006) assertions that such method is an interesting tool for acquiring English vocabulary and most of the students believed that such skill can help them acquiring English words in a faster and easier way, and thus increase their level of retention. The result which was obtained from the paired samples test showed us the result of the control group in the pre-test and post-test, that is, the mean 42.18, 60.25, respectively. So, there was an improvement in the students' results even though they did not get treatment. On the other hand, the paired samples statistics of the experimental group pre-test mean 42.03, the experimental group post-test 70.93 also showed improvements. This indicates that intervention brings the students' result change in both the Keyword method as well as the traditional approach. Therefore, both the traditional and the keyword method are found effective strategies to teach vocabulary though the current finding proved that the Keyword Method is more effective than the traditional approach.

## **5. Conclusions**

Based on the finding of the study, the following conclusions were forwarded:

The findings showed that the Keyword teaching method is an effective teaching method for improving students' vocabulary recalling proficiency. From the current finding, one can further infer that it is possible to innovate a relatively effective vocabulary teaching method by conducting researches and by analyzing the weak and strong sides of previous vocabulary teaching methods. We can also learn that the teaching method that we use plays a great role in developing the student's vocabulary proficiency. Keyword Method integrates language skills. That is, it adds variety to make students not being bored. In Keyword Method, the teacher is a facilitator, advisor and an organizer and he talks little whereas in the traditional way of vocabulary teaching the teacher is an authority figure. In spite of the current findings, one can learn that there is no single best teaching method. Every teaching method has its own advantages and disadvantages, so using methods iteratively is advisable in order to alleviate the weak sides of one or the other method. From this point of view, the researchers suggest that

the Keyword Method will be a preferable alternative teaching method than the traditional one in the Ethiopia secondary schools language teaching.

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