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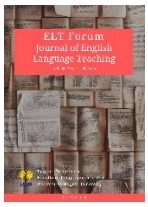

Web-based elaborative feedback provision and the development of reading skills

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Abstract

The purpose of this study was to find out whether web-based feedback can improve students' reading comprehension. Fifty first-year students participated in the study: 25 in the experimental group and 25 in the control group. The study used a quasi-experimental design. Data was collected via a web-based reading comprehension test and a paper-based test. Moodle Cloud server was used to organize the training tasks and to administer the post-test for the experimental group. Data were analysed using mean, frequency, independent samples t-test, and paired samples t-test. The pre-test score indicated that students were at elementary comprehension level with a percentage of 34%, and 37% for the treatment and the comparison group, respectively. There was also a statistically significant mean difference in the post-test scores between the experimental and the control groups (t= 6.174, df= 48, and p= 0.000) with mean scores of 17.84 and 13.16, respectively. This shows that web-based feedback has significantly improved students' reading comprehension.

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INTRODUCTION

The term "assessment" refers to the variety of instruments used by specialists to assess, gauge, and record a learner's academic preparedness, knowledge growth, skill mastery, or learning needs. In order to gauge their performance and gather data for use as feedback to familiarise themselves with the teaching and learning activities they are engaged in, teachers and students engage in assessment (Black & Wiliam, 1998). The type of assessment we utilise can be used as a tool to identify the positive and negative aspects of our teaching-learning achievements. In light of this, it was pointed out by (Huba & Freed, 2000) that assessment in the learner-centered technique is used to diagnose learning challenges and to promote further learning in addition to evaluating learning outcomes. To identify communication gaps among pupils, assessment is important. Moreover, it is essential to familiarise yourself

It is feasible to evaluate both macro- and micro-skills in language teaching and learning. Reading comprehension will be covered in this study. For members of contemporary communities to obtain information and interact with others, reading is viewed as a necessary ability (Grabe, 2009; Grabe & Stoller, 2002). Although information is disseminated through a variety of media, including electronic and written mass media, according to Teshale and Yemanebirhan, there is no substitute for reading to access any information, despite the fact that technological advancement has reached its pinnacle in the twenty-first century (Teshale & Yemanebirhan, 2015). Effective reading skills are thus unquestionably beneficial and have a broad impact on how assessments can tell researchers, teachers, administrators, and policymakers about a learner's communication abilities. Knowing the functions as well as the ideologies

In contrast to the traditional paper and pen test, which discourages independent study on the part of the students, the web-based assessment, which might be conducted via computer, can place the learners at the centre of the assessment process. When face-to-face contacts are not possible, it is becoming more and more common to deliver exams online. Online tests are used to assess pupils' proficiency in particular abilities.

In order to make and administer the testing process more efficient, technology was introduced to language testing in the 1960s, just like it was to language teaching. International evaluation promotes youth and adult competitiveness on a global scale. Additionally, it will expand the chances for knowledge exchange and the adoption of best practises from nations that continuously outperform average or those who make quick progress over a short period of time (Ministry of Education, 2015).

Exams administered on paper prevent pupils from receiving fast feedback. The feedback provided during a paper-based assessment (PBA) may not be timely or informative, and it is more frequently supplied during writing skills exams than during reading comprehension tests. PBA uses pre-set criteria to tell students if they will receive an A, B, C, D, or F; nevertheless, this type of scoring may not be as reliable as one might want in assessing a student's work. Additionally, the grading format doesn't properly demonstrate the performance distinctions between an A student and a B student. In PBA, it is less likely to be known who performed well and who didn't and who received a particular grade. Bachman contends that interpreting scores presents challenges in this regard.

Students' level of comprehension in the Common European Framework Reference (CEFR) is clearly indicated in the web-based test, indicating what they can and cannot achieve in any skill. According to Goldhammer et al. (2014), computer-based assessment (CBA) allows for novel item designs as well as the incorporation of multimedia elements such as video or audio sequences or interactive tools. These possibilities imply that complicated jobs can be more authentically portrayed with CBA (Huff & Sireci, 2005; Katz, 2007; Quellmalz & Kozma, 2003). CBA also provides several chances and benefits for measuring skill.

CBA provides learners with feedback that is not available in other types of examinations. According to the Council of Europe, the DIALANG online system assists individuals in determining their language competency levels and receiving feedback on their strengths and deficiencies (Council of Europe, 2001). Quellmalz and Kozma (2003) said that quick feedback enhances the retention of taught knowledge; while, delayed input, which is retained for a certain period of time, is less beneficial to learning. Learners may not gain the expected self-confidence and may be unable to enhance their learning and performance if they are not encouraged to recognise their faults and strengths right once.

Communicative English Language Skills I and II are two frequent courses provided to first-year undergraduate students at Addis Abeba University. Freshman students are required to take the two-semester courses at all Ethiopian higher learning institutions. Reading skills are emphasised in both Communicative English Language Skills I and II, and students are expected to have the required abilities to read, understand, and interpret texts in a variety of contexts. This is especially true because the country need educators, health professionals, politicians, diplomats, military officers, policymakers, business leaders, entrepreneurs, and other professions who must frequently obtain a wide range of information and abilities by reading a wide range of English-language texts.

Higher learning institutions bear the lion's part of the obligation for becoming and so attaining this type of employees. According to Cheng and Fox (2017), institutions are becoming increasingly concerned with enhancing their students' performance by providing the appropriate support. The most important thing that higher education institutions can do to provide students with the necessary reading abilities is to assess them effectively. Tests should be prepared in a standardized format to make reading evaluations appropriate. The researchers are convinced that the current students' reading skills challenge is caused by inappropriate reading assessments, such as administering tests below or above the students' competence or failing to consider the learners' capability when tests are prepared by teachers, endangering the validity and reliability of the tests.

Bown used 113 samples in an experiment on the role of "Elaborative Feedback to Enhance Online Second Language Reading Comprehension" (Bown, 2017). The results of a quasi-experiment with low-proficiency readers who received elaborative feedback revealed that those who received elaborative feedback outperformed those who did not. Similarly, Murphy investigated the effects of feedback, proficiency, and interaction on reading comprehension activities. The findings revealed a statistically significant relationship between the type of feedback and the method of the study (Murphy, 2017). Adams and Strickland, on the other hand, took 70 students and investigated the use of knowledge of response feedback, knowledge of correct answer feedback, and no feedback at all. They were unable, however, to demonstrate any substantial difference in effectiveness.

As a result, the purpose of this study was to a) determine the students' reading comprehension levels based on the Common European Framework of Reference (CEFR), and b) determine whether providing elaborative feedback in an online reading test improves L2 reading comprehension more effectively than students who did not receive elaborative feedback.

METHODS

This study used a quasi-experimental design. The data was collected via a reading comprehension test and analyzed using mean and independent samples test quantitatively**.** The study's participants were first-year students. If students could identify their deficiencies at the outset, their university experience would be tremendously motivating and successful. The research is being conducted at the university level because technical resources are more readily available there than in primary and secondary schools.

Initially, pupils were divided into two parts and randomly allocated to the experimental and control groups. Both groups were required to take the DIALANG reading comprehension test on paper. The experimental and comparison groups' pre-test outcomes were 7.16 (34% accurate response) and 7.84 (37% right response), respectively. The t-test result for independent samples revealed no significant difference between the two groups (t-test =.945, sig. 2-tailed = 0.349). That is because the difference between the comparison and experimental groups was insignificant, which was more than the cut score of 0.05. The number of students assigned to each section determines the sample size of the participants. For the course Communicative English Language Skills,

Data Gathering Tools

The instruments that were used in this study include web-based reading skills exercises adapted from CELSI; the DIALANG Web-based Reading Skills Diagnostic Test adapted from (https://www.lancaster.ac.uk/researchenterprise/dialang/) and a paper-based test. The instruments were piloted to get a first-hand impression of the difficulty level of the tasks and items, to estimate the time load involved, to see the content and face validity of items, and to determine the expected challenges during the administration of the tasks and to set solutions for the challenges.

Web-Based Reading Skills Diagnostic Test

The DIALANG online diagnostic test, which can be found at https://www.lancaster.ac.uk/researchenterprise/dialang/, was used to create the online reading skills diagnostic test. and the TOEFL Reading Skills Test because the items are standardized and are thought to better diagnose the students' performance in relation to the objectives. The treatment group received a reading comprehension test with online elaborative feedback, while the control group received no additional treatment other than the typical method of instruction, which is face-to-face interaction with the teacher. Learners used skimming reading strategies to practise reading tasks and answer questions that required them to grasp the central idea of texts at the paragraph level. Meanwhile, students were supposed to compute items, which likely required them to read the text in full or inferentially, depending on the task.

Paper-Based Assessment

Both the experimental and control groups were given a paper-based evaluation, adapted from the DIALANG online test, prior to the commencement of the training to determine their reading comprehension level. Following the intervention, the comparison group was given the paper-based test, whereas the experimental group took the test online with no feedback; nonetheless, the test questions taken by the two groups were the same.

Data Analysis Method

The experimental and comparison groups' pre-test scores were computed to determine the students' reading comprehension level at the start of the study and to see if there was any difference in performance between the two groups. An independent samples t-test was used to determine whether there was a statistically significant difference between the experimental and comparison groups. The two groups' post-test scores were also compared using an independent samples t-test to check if there was a significant mean difference in their performance.

Validity and Reliability

Validity is all about ensuring what we are measuring is what we exactly want to measure. In this study, the primary focus of the reading comprehension questions was on three types of reading skills: reading for the main idea, detail reading, and inference. In the pre-test, 21 standardized items from DIALANG were used. For the post-test, the same number of test items were prepared based on the Communicative English Skills I course material. The validation process was started by formulating a detailed definition of the types of reading skills we wanted to focus on. We made sure that there are an equal number of questions under each session and category of reading skills. After we prepared the questions based on the content covered in the training material and wrote simple and clear instructions, we asked three instructors with PhD in TEFL to independently review the items. Comments given by the instructors were used to further improve the items. The pre-test and post-test items were taken from DIALANG which is a pool of standardized online reading comprehension tests. We did not go into establishing the reliability of the test items. All we did was select 21 questions (7 items from each skill area: reading for the main idea, detail reading, and inference).

In experimental design, researchers should always try to minimize the influence of any confounding or extraneous variables. This means that the control and experimental groups should have as little difference as possible at the start of the study. In order to minimize the effect of confounding factors, we tried to make the control and experimental groups as similar as possible. The only difference is the treatment. Because the students in the two groups (control and experimental) were on the same campus, we thought there could be chances that they share learning materials. Students in the experimental group, who were expected to do online reading comprehension exercises and were given elaborative feedback on their answers, were provided with passwords that they could use only for about two hours during class time. There was no way they could share materials with friends, as they were working in a computer lab for a set time during class time. The post-test was also administered in a parallel session.

FINDINGS AND DISCUSSION

Descriptive statistics of the pre-test score

Both the comparison and the experimental group (N=50) took a reading comprehension test. The number of reading comprehension test items was 21, with three sub-skills categories: main idea, detail reading, and inference questions. The test aimed to check the participants' current reading skills performance. The findings are presented in the next table.

Table 1: Comparison and Experimental Group Mean score before intervention

	Group	N	Mean	Std. Deviation	Std. Error Mean
Pre-test Reading Score	Experimental	25	7.16	3.171	.634
	Control	25	7.84	1.700	.340

To identify the students' reading comprehension levels, the pre-test scores of both the experimental and comparison groups were computed. The pre-test mean score of the experimental and the comparison group was 7.16 and 7.84 out of 21 items, with a percentage of 34% and 37% of correctly answered items for both groups, respectively. As the percentages implied, the students' reading comprehension level was below the standard required for a "Pass" on the CEFR scale. The percentages show that the two groups would be categorized under the A2 level. On the CEFR scale of performance measurement, A2 means the students are elementary-level language users.

Independent samples t-test of the experimental and the comparison groups

An independent samples t-test was computed to find out whether the mean score difference was significant or not. A summary of the independent samples t-test result is presented in Table 2 below.

Table 2: Independent samples t-test of the experimental and the comparison group

		Group	T-test	Sig. (2-tailed)
Pre-test score	reading	Experimental	-.945	.349
		Control		

As shown in the above table, the experimental and the comparison group had some slight differences in the pre-test mean score. However, the mean score by itself does not tell us whether the difference was significant or not. In order to know whether that difference was significant or not, an independent samples t-test was run. Accordingly, the result of the t-test (t=.945, df=48, and sig. = 0.349 showed that there was no statistically significant difference between the mean scores of the experimental and the comparison groups before the intervention was made. That means equal variance was assumed as the difference between the experimental and comparison group was insignificant. This implied the comparison and the experimental group had almost equal reading comprehension levels, and their level of reading comprehension was low, as it was categorized under A2 on the CEFR scale.

Comparison of the post-test scores of comparison and experimental groups

It was assumed that there could be a change, after the intervention, in the reading comprehension score between the treatment and the comparison groups. To ensure this, a post-test was administered to both groups, and the summary of the post-test mean score is presented in Table 3.

Table 3: Comparison of the post-test results of the comparison and experimental groups

		Group	N	Mean	Std. Deviation
Post-test Score	Reading	Experimental	25	17.84	3.158
		Control	25	13.16	2.095

Table 3 shows the descriptive statistics of the comparison between the experimental and comparison groups. As the mean scores confirm, there was a difference between the post-test scores of the control group and the experimental group, which had mean scores of 13.16 and 17.84, respectively. However, the statistics do not indicate whether the difference between the experimental and the comparison groups is statistically significant or not.

Independent samples test of the experimental and control groups

To check if the difference between the mean scores of the two groups is statistically significant or not an independent sample test was held. The results are presented in Table 4.

Table 4: Independent Samples t-test of the experimental and control groups

	Group	T-test	Sig. (2-tailed)
Post-test reading score	Experimental and control	6.174	0.000

After the mean scores of the experimental and control groups were computed, it was necessary to check whether the differences in the mean scores between the two groups were noteworthy or not. To confirm whether the statistical mean score difference was significant or not, inferential statistics of an independent samples t-test were calculated. The result of the t-test (t= 6.174, df= 48, and p= 0.001) indicated that the difference between the control and experimental groups was statistically significant. To put it another way, the mean score was higher in the experimental group compared to the comparison group because the elaborative feedback intervention had brought a change to the experimental group's performance.

Discussion

Students' level of reading comprehension

This section aims to show the levels of online reading comprehension of freshman students. The research question was attempted to be answered by using a mean score and independent samples t-test. The mean score informed us what the students' level of reading comprehension was and the independent samples t-test has the objective to compare and contrast the comparison and experimental group students' reading comprehension levels. The level of students categorized based on the CEFR scale was also investigated.

A descriptive statistic of the experimental and control groups was computed with the mean score values of 7.16 (34%) and 7.84 (37%) of the total 21 items, respectively. In the Common European Framework Reference Scale, there are three general levels of measurement that are again divided into two sublevels: Basic Users (A1, A2), Independent Users (B1, B2), and Proficient Users (C1, C2). In this perspective, students who scored between 20% and 39% were assigned under level A2, indicating that they are elementary users (Council of Europe, 2001, 2020).

Thus, from the above descriptions of the CEFR level, the mean scores on the pre-test of participants of both the experimental and the comparison groups indicated that they were at A2, which means they were at an elementary level. At this level, learners are able to do the following activities. They can understand phrases and the highest frequency of vocabulary related to areas of immediate personal relevance, such as basic personal and family information, shopping, local area, and employment. The learners can catch the main point in short, clear, simple messages and announcements. They were also able to read and understand very short, simple texts such as personal letters. The respondents were able to find specific, predictable information in simple everyday material such as advertisements, prospectuses, menus, and timetables (Council of Europe, 2001).

An independent samples t-test was used to examine whether the experimental and comparison groups had similar reading comprehension skills. Even if the mean score differed slightly, the difference was insignificant. The independent samples t-test revealed no significant differences between the experimental and comparison groups. The independent samples t-test assumed that variables were homogeneous enough to carry out a specific type of treatment. As the sig. value was more than 0.05, the significant level value indicated that there were no significant differences in reading comprehension between the experimental and comparison groups at the first level. As a result, we may say that the two groups had nearly identical reading comprehension.

The post-test scores of the experimental and comparison groups

This section discusses whether there was a statistically significant difference between the experimental and comparison groups' post-test scores. The mean scores of the two groups were computed to examine if there was a significant difference between the experimental and comparison groups. The descriptive statistics of the mean scores revealed that there was a difference in the experimental and comparison groups' reading comprehension scores. An independent samples t-test was used to determine whether or not the difference was statistically significant. The t-test result showed that there was a statistically significant difference in the mean scores of the two groups. Because the difference between the comparison and experimental groups was large, equal variance was not assumed.

Bown (2017) investigated "Elaborative Feedback to Enhance Online Second Language Reading Comprehension" in this regard. A quasi-experimental study was undertaken on 113 male Emirati L2 English students aged 20 to 26. According to the findings, elaborative feedback improves online L2 reading comprehension, but it must be customized specifically to the needs of the L2 readers it is intended to help. Abanomey also looked into whether EFL Saudi students performed differently in online reading. An exploratory study was carried out on 348 EFL students from Riyadh College of Technology who took part in this study. Students that were required to take the inherent-based reading test did better than the other group (Abanomey, 2013).

To summarise, the experimental and control groups' post-test scores differed, and the difference was statistically significant. Furthermore, the students' reading skills have improved as a result of this online elaborative feedback. The students' reading skills improve as a result of the elaborative comments. Because of the intervention of elaborative feedback supplied to the experimental group, the post-test scores of the comparison and experimental groups differ significantly.

CONCLUSION

The reading comprehension of freshmen students is found to be below the predicted level. The provision of online elaborative feedback has been proven to be quite beneficial in improving student performance. The web-based elaborative feedback has greatly improved the students' performance by providing advice on how to approach upcoming issues. Students were also taught why a particular alternative may not be the correct response for that item. As a result, we must capitalize on the significance that online elaborative feedback plays in improving students' reading ability.

Whether we like it or not, this is the era when technology is best employed and required to exchange global knowledge. It is recommended that students be exposed to online assessments with elaborative feedback in order to improve their knowledge and skills. Higher learning institutions should give their students diagnostic online assessments to clearly identify students' deficiencies for further assistance in order to make the required improvement. Furthermore, educators, politicians, and the Ministry of Education should think about how to implement this technology.

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