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The Impact of Instructor's Screen Captured Audio-Recorded Corrective Feedback on Students' Writing Performance

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The Impact of Instructor's Screen Captured Audio-Recorded Corrective Feedback on Students' Writing Performance

be accepted in partial fulfillment for the requirements of the degree of

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Dedication

to my Mother

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Abstract

The purpose of the current study was to investigate the implementation of screen captured audio- recorded corrective feedback in the classroom and its impact on students' writing performance as well as to find out which type of the feedback was more time efficient.

The instruments used for collecting data were 1) pre and post instruction tests, 2) attitudinal questionnaire for students, 3) time log. The pre and post instruction tests data were analyzed through non-parametric Mann-Whitney and Wilcoxon tests. Data collected through questionnaire was analyzed using descriptive statistics. Finally, time log analysis was carried out again with the help of non-parametric Mann-Whitney test.

The results of the analysis showed that there was a significant difference in students' writing performance and questionnaire analysis revealed that the majority of the students liked instructor's screen captured audio-recorded corrective feedback and considered it effective and useful as they were able to easily understand their own mistakes and self correct. Finally, time log analysis showed that there was a significant difference between the time spent by the instructor on providing traditional corrective feedback (on the margins electronically) and screen captured audio-recorded corrective feedback.

Chapter 1: Introduction

Traditional ways of language teaching and learning in recent years have been challenged by computers and Internet technology. Computers may become a powerful tool in the hands of teachers to support teaching and enhance students' learning experience. They may help teachers facilitate language learning environment.

1.1 Statement of the Problem

As technologies develop so do educational technologies and offer a broad range of ways through which they can be successfully integrated and implemented into the classroom practice. Computers have become more accessible and available in the recent years and they have become a focus of research in providing feedback (Hyland&Hyland, 2006).

Several studies have focused on teacher feedback using written comments on the margins, written codes, face-to-face verbal and tape-recorded comments. However, very few studies have focused on audio-visual recorded corrective feedback on students' writing performance.

Teaching writing is a complex task in any language and providing feedback is one of the foreign language writing teacher's most important tasks and is of crucial importance in EFL writing (Ferris, 2007). There are various types of providing corrective feedback on students writing. Some of them proved to be ineffective and some of them turned out to be quite beneficial. Therefore, the problem of providing feedback still persists and it is appealing to examine whether the students will benefit more from traditional corrective feedback or from screen captured audio- recorded one. In this potential study, we tried to find out which one of

them was more beneficial and could help make the corrective feedback on students' writing performance more effective in an Armenian EFL environment.

Keeping all this in mind, the purpose of this paper was to find out whether there was any significant difference between the writing abilities of students receiving traditional written feedback (on the margins electronically) and that of those receiving screen captured audio-recorded corrective feedback on their essays in the Armenian EFL setting.

The reason for choosing screen captured audio recorded corrective feedback vs. traditional written feedback (on the margins electronically) is that traditional written feedback, sometimes given by teachers on students' writing, is not clear and elaborate enough while with the help of screen captured audio recorded corrective feedback, students are able to get more elaborate, oral and visual feedback on their papers. Another aim is to find out the essence of screen captured audio recorded corrective feedback, its usage, advantages and disadvantages in order to be able to implement it effectively and efficiently in the classroom.

1.2 Significance of the Study

The present study was significant for several reasons. Providing corrective feedback in a foreign language is vital for a student's writing development. There has been much debate going on around this issue in the recent years whether teachers should correct their students' mistakes and which type of correction is the most effective one. According to Truscott (1996), grammar correction has no place in writing courses, it is harmful, ineffective and it should be abandoned. Additionally, there are also other studies done on error correction and found that it was not beneficial and there was not any significant difference in writing between the focus and comparison groups (Kepner, 1991; Sheppard, 1992; Polio, Fleck, &Leder, 1998). On the other hand, there are studies showing the effectiveness of written error correction (Fathman&Walley,

1990; Ferris, 1997; Chandler, 2003) and audio-taped corrective feedback (Johanson, 1999; Morra&Asis, 2009; Syncox, 2003).

First, there is a wide gap among theory, research and real-world practice and no final decision has been made as to which type of error correction is the most beneficial. Recently, Stannard (2006), looked at an innovative way of providing corrective feedback, namely screen capture software called JING and made a case study on it. Even though it showed positive results, but there has not been done much research on providing this type of feedback further.

Second, this study tried to test and find out whether students would get more motivated while being provided with this kind of feedback which would in a way replace face-to-face teacher-student meetings.

Third, this study also tried to find out whether it would be a great help for EFL instructors to have a support to apply another more beneficial and effective way of providing corrective feedback to students.

This topic was worth researching as there has been very little empirical research on it. Therefore, it needs some further investigation before being implemented in the classrooms. This study also tried to find out and test whether students got more motivated and whether this type of feedback could be more beneficial and effective. So, our study aimed to examine the above mentioned issues and insights with reference to the Armenian EFL setting, as this type of study has never been done before in this setting.

1.3 Research questions

The research questions of the study are as follows:

1. Is there any significant difference in the improvement of writing performance between the students who receive traditional corrective feedback (on the margins electronically) and those who receive screen captured audio-recorded corrective feedback on their essays?

- 2. What is the students' attitudes toward instructor's screen captured audio-recorded corrective feedback?
- 3. Is there any significant difference between the time spent by the instructor on providing traditional corrective feedback (on the margins electronically) and screen captured audio-recorded corrective feedback?

In order to examine the aforementioned research questions, the following null hypothesis were acknowledged:

- 1. There is no significant difference in the improvement of writing performance between the students who receive traditional corrective feedback (on the margins electronically) and those who receive screen captured audio-recorded corrective feedback on their essays.
- 2. There is no significant difference between the time spent by the instructor on providing traditional corrective feedback (on the margins electronically) and screen captured audio-recorded corrective feedback.

1.4 The structure of the thesis

The thesis consists of five main chapters. *Chapter 1* discusses the background of the study, statement of the problem and the significance of the study. It also includes the research questions and the structure of the thesis. *Chapter 2* discusses a relevant literature related to the current study. *Chapter 3* presents the methodology part of the study that was used to conduct the research. It presents the participants, setting of the study, research design, instrumentation and procedure of data collection. *Chapter 4* discusses the analyses of the quantitative and qualitative data collected to answer the research questions. Finally, *Chapter 5* summarizes the findings, discusses the answers of the research questions, points out the

main limitations of the study, implications and finally provides suggestions for further research.

Chapter 2: Literature Review

2.1 Definition of the term feedback

Written corrective feedback, known as error correction or grammar correction, has been a controversial topic in second and foreign language teaching for several years. It is specifically controversial among those who work with L2 learners and teach them writing classes. Additionally, there is a wide gap among research, practice and real-world practice (Ferris, 2010).

Feedback is widely seen in education as a crucial element for both encouraging and consolidating learning (Vygotsky, 1987; Beason, 1993). In the past 20 years, delivering feedback has changed writing pedagogy. Moreover, research has changed feedback practices, with teacher comments often supplemented with peer- feedback, conferences, writing workshops, and computer delivered feedback (Hyland&Hyland, 2006). Many scholars view written corrective feedback as an essential aspect of any English writing course. In general, it is viewed as a technique that aims to develop and enhance students' writing skills.

The term corrective feedback is defined by different scholars in different ways. According to Chaudron (1988) the term corrective feedback incorporates different layers of meaning. As to him, the term "treatment of error" may simply refer to any teacher behavior following an error that minimally attempts to inform the learner of the fact of error (p.150).

Lightbown and Spada (1990) define corrective feedback as any indication to the learners that their use of the target language is incorrect. This includes various responses that the learners receive.

Feedback is also defined as information communicated to the learner that is intended to modify his or her thinking or behavior to improve learning upon receiving the feedback (Cohen, 1987; Beason, 1993; Hyland, 2006). As it can be seen, feedback is viewed by many researchers as an important facilitator of learning and performance, and an essential component in the learning cycle. Though feedback is viewed as one of the most powerful influences on learning and achievements, its impact either can be positive or negative. According to Hattey and Timperlay (2007), feedback is regarded as information provided by an agent, for example, teacher, peer, book, parent, self, experience, concerning aspects of one's performance or perception. Winne and Butler (1994) gave an opinion that "feedback is information with which a learner can confirm, add to, overwrite, tune, or restructure information in memory, whether that information is domain knowledge, meta-cognitive knowledge, beliefs about self and tasks, or cognitive tactics and strategies" (cited in Hattey and Timperlay 2007, p. 82).

Feedback is useless when performed in a vacuum, that is, when it not directed properly and does not serve its purpose. For it to be powerful, it should be applied in an appropriate learning context to which feedback is addressed. Feedback may be threatening when it does not address the familiar material. If the material is not familiar, then providing feedback may have the reverse affect as there is no way to relate the information already known by a student (Hattey and Timperlay, 2007).

2.2 Types of feedback in writing

There are various types of feedback in writing in which teachers may respond to their students' writing. It has recently been differentiated that there is a direct and indirect corrective feedback (Ferris, 2002; Ferris& Roberts, 2003; Chandler, 2003; Ellis, 2007).

When teacher provides direct corrective feedback, he/she does it by providing the students with the correct form. Recently, direct corrective feedback has also included written metalinguistic explanation which provides students with the grammar rules and examples of correct usage.

According to Ellis (2008), the main benefit of direct corrective feedback is that it provides learners with the correct usage of grammar errors and helps them to correct their errors. This type of feedback, according to Ellis (2008), can be effective in those cases where learners fail to correct

their own errors. Moreover, some other scholars also suggest that direct corrective feedback is more effective and better with students having low levels of language proficiency.

As far as indirect corrective feedback is concerned, Chandler found out that students learn more from self-correction which is possible only when teacher provides indirect corrective feedback. Indirect feedback indicates that there is an error in student's writing without implicitly correcting and providing the right answer. In this case, correction is left to be done the student. This type of feedback is preferred by many researchers, teachers. It encourages students for selfcorrection and is more likely to lead to long term learning (Ellis, 2008; Fathman&Whalley, 1990). According to different studies, direct and indirect types of feedback showed positive results. They resulted in significant improvement in both accuracy and fluency in subsequent writing of the same type over the semester.

2.3 Positive and Negative Sides of Feedback

According to Askew (2000) feedback can be positive or negative. He says that positive feedback refers to judgments implying satisfaction with the learner's performance and negative feedback implies criticism and the need for changes. Different students may react and have different attitudes towards the instructor's positive and negative feedback. It may depend on their characteristics, learning styles, strategies as well as their attitudes toward learning. There are many cases where students remain uncertain as what to do with feedback and how to implement it into their writing (Ferris, 1995). According to Semke (1984), corrections have negative impact on students, especially when corrections should be done by the students themselves. When students see the corrections, highlighted with red on their work, they feel frustrated. He claims something that has a negative impact on student's attitude, it is tended to hinder learning.

According to Chandrasergan (1986), form and modality of teacher response affect students' receptivity to most kinds of instructor's input. Thus, researchers and teachers should be attentive

with the effect of feedback on students' perception of the functions and relevance of that feedback. Though most studies which investigated the effect of feedback, found out that in most cases students want to get feedback, negative attitudes to unfavorable teacher response are still common along foreign language learners.

Thus, the purpose of this study is to investigate students' attitudes towards instructor's screen captured audio-recorded corrective feedback.

2.4 The Role of Feedback in Foreign Language Writing

Writing is considered as one of the most difficult skills for learners to develop. Many writing teachers often ask themselves what can be done to increase the ability and desire to write. Many teachers believe that good writing skills do not happen by chance, a great part of student improvement may be attributed to composition teachers (Gee, 1979). According to Gee (1979), teachers may provide models, demonstrate techniques and provide time for supervised writing. During the process of writing, students need feedback and comments to help them to write with minimal errors as well as maximum accuracy and clarity; hence, written feedback is quite essential (Ferris, 2007). However, teachers often feel that their effort in giving feedback to correct learners' work is not effective. Some learners keep on making the same errors and teachers realize that it is a difficult way for learners to achieve accuracy in writing, because this accuracy is grammatically demanding (Littlewood, 1995). Thus, teachers should take seriously the vital role of error correction and treat it carefully.

According to Chandler (2003) and Ferris (2002), L2 learners take into account teacher's corrections and make use of them in their writings. Further, they state that when error correction is combined with instruction and repetition, it improves students' writing both in the short and medium term, However, the effectiveness of error correction is undermined by the fact that many teachers correct errors inconsistently and inaccurately.

From the above discussion, we can make an assumption that errors are an integral part of language learning and instructor's corrective feedback might have a significant role in improving learners' writing accuracy.

2.5 Previous Studies Done on Written Corrective Feedback on Writing

Research in the area of ELT has shown that students make use of only a small number of the corrections that they receive on written work (Cohen, 1987; Ferris, 1997). This may be because of the fact that students often don't get the corrections. The information is too vague or not clearly expressed (Zamel, 1985). A work by Corder (1981) has also shown that teachers often misinterpret the intentions of their students when correcting their students' work and this leads to confusion on the part of the student.

A study by Kepner (1991) has shown that the consistent use of L2 teachers' written feedback was ineffective in L2 writing. Kepner provided two types of feedback: message-related comments and sentence-level correction. On the first day of class, students were given a journal assignment sheet which had the dates, instructions and topics for the journal assignments. Additionally, students were also told that each entry should contain no fewer than 200 words. Journal entries were asked to submit every two week during twelve weeks. Students got feedback after each entry on their journals. To obtain data whether students improved their writing or not, the researcher counted the number of mistakes made per entry. In the end, this study suggested that error correction and rule reminders did not improve students' writing and they were ineffective.

In Sheppard's study (1992), he compared two types of feedback in a writing class. The students received a total of 35 hours of instruction over a ten-week period meeting three times a week. One group involved both the type and location of each error and the other relied on general requests for clarification. He found that there was no significant difference between the

groups in gain on the percentage of correct verb forms or on the ratio of subordinations to the total number of sentences, but group B made significantly more improvement in percentage of correct sentence boundary markers (periods, semicolons, and question marks were considered equivalent; fragments were ignored) than did group A.

In other research, Hyland (1998) investigated student reactions to written feedback. In a case-study approach, Hyland tried to find out links between written feedback and revision, changes in attitude towards writing and context. The data were collected with the help of observation notes, written texts, and interviews. In the written feedback, teachers dealt with both meaning and grammar-related issues at the same time. This study revealed that students used written feedback differently depending on their background, their needs or their individual approach to writing. In both cases, students used the feedback differently and became less positive about their writing during the course.

A study conducted by Fazio (2001) revealed that the correction harmed students' accuracy. In his study, he looked at the effects of correction on accuracy in the journal writing of Grade 5students in a French-language school over a period of almost 4 months. This study included both native and non-native speakers. Students received three types of feedback: one of the three groups received focused correction on two aspects of French grammar. The second group received only comments on content, while the third got a mixture of these treatments. As a result, the three groups declined in accuracy, with having significant difference among them. All in all, it was implicated that the correction harmed students' accuracy, as all groups received correction in the class and all declined in accuracy. Moreover, the group that did not receive it on their journals had clearly the smallest decline on the journals.

Polio et al. (1998) did a one-semester study in an ESL writing course for graduate and undergraduate students. The focus group received correction, grammar reviews, and training in

editing their writing, while comparisons received none of these. Effects were measured by an inclass essay and an in-class revision of that essay, each using two very closely related measures. None produced any significant contrasts. The essays yielded negligible effect sizes.

The most controversial work against grammar correction is presented by John Truscott. According to Truscott (1996), grammar correction is harmful, ineffective and it should be abandoned. Truscott brought three arguments against error correction. Based on the wellestablished SLA claims about the gradual and complex nature of the acquisition process, he brings his first argument against Written Corrective Feedback (WCF). He argues that a simple transfer of information in the form of WCF cannot be expected to work. He further argues that there is no single form of correction to be expected to help learners in acquisition of all linguistic forms/structures.

The second argument that he presents against the practice of WCF refers to the developmental sequence. This means that when students are corrected at a stage when they are not yet ready, the correction is unlikely to have much effect. Thus, a teacher should correct only those grammar mistakes which students are ready to comprehend.

The third argument that Truscott (1996) brings forward against the case of WCF is that any learning that results from the practice is likely to be only *pseudolearning*. Truscott (1996) described it as 'a superficial and possibly transient form of knowledge' (p. 345). The distinction between knowledge *of* language and knowledge *about* language is one that has been made elsewhere in the literature. Krashen (1995) distinguished between *acquisition* and *learning* while Ellis (2008) and other have distinguished *implicit unconscious procedural knowledge and explicit declarative knowledge*. Truscott argues that, at best, WCF may have some limited value for developing *meta-linguistic knowledge and explicit declarative knowledge* and therefore, may be useful for editing purposes. The value of WCF for editing purposes has been empirically demonstrated (Ferris, 2007), and in the case of some error categories shown also has value for language development. However, the durability of these effects over longer periods of time has yet to be investigated.

However, it should be noted that Truscott neither denies the role of grammatical accuracy nor rejects the feedback as a teaching method. He is not against if teachers give feedback on content, organization and clarity of the students' compositions.

Truscott's position against error correction gave rise to debates concerning the effectiveness of grammar correction. Many scholars argued against Truscott's arguments and indicated that written feedback is not only important but also effective for students' improvements and development of writing skills. There is a range of other studies done on error correction which found that error correction was effective and beneficial.

Ferris (1996) wrote an article, a response to Truscott's article, where she argued that Truscott (1996) overlooked or understated some potentially positive research on the effect of grammar correction. Ferris (1996) critically re-examined all of the studies reviewed by Truscott and came to the conclusion that previous studies on error correction were incomparable because of inconsistencies in design. In his point of view, there was lack of longitudinal research which could answer the big question whether or not error correction helped students improve their written accuracy.

Ferris and Roberts (2001) conducted a study on whether different types of teacher responses shape ESL students' self-editing and writing quality. The study consisted of a group of university ESL students across three feedback conditions. The feedback was concentrated on errors marked with written coded feedback, errors were underlined, and no feedback was provided. The study found that when students received feedback there were more changes and overall improvement in writing. The results of their research also suggested that written coded

feedback weighed positively on the second language students' revision choices and quality of text. As the study was a data-based, analytic study, this investigation supports the necessity and the effectiveness of written feedback in improving writing.

Fathman and Whalley (1990) conducted a study which focused on the effects of written feedback on the improvement of student writing performance. Their research was done on the process approach to writing with international students. It had of four groups which received different kind of feedback on compositions. One of the groups (Group 1) received no feedback, the other one (Group 2) received grammar feedback only, Group 3 received content feedback only, and Group 4 received grammar and content feedback. The feedback was provided at the top of the paper and included positive comments and general suggestions for improvement. Fathman and Whalley's findings revealed that students were able to improve content by rewriting and they made significant improvement in grammatical accuracy in revisions only when they were provided with feedback on grammar errors. These findings revealed that teacher feedback is helpful to second language students for improving their English writing accuracy.

Paulus (1999) looked at the effects of written teacher feedback and peer review on multiple-draft writing. Classes were conducted 4 times a week during 10 weeks, and each class lasted 50 minutes. The objectives of the course were to build student confidence in academic writing abilities, develop vocabulary, generate ideas, encourage communication through ongoing writing, encourage self-correction of communication errors, encourage re-writing, and remediate grammatical errors. According to a detailed analysis of students' writing, including first and final drafts, it was found that teacher feedback played a positive role in the types of revisions students wrote. The researcher claimed that students improved their essays primarily on the level of meaning after teacher feedback was given. This study results also support the role of feedback in the classroom.

Chandler (2003) conducted two studies trying to find out whether error correction helped students and which type helped them most. The first study aimed at answering the question whether error correction improves accuracy in students' writing. Students were simply assigned to write about five typed, double-spaced pages about their own life. Thus, each student's goal was to write about 25 pages of autobiographical writing in addition to a book review over the semester. The classes in both groups were taught by the same teacher-researcher in the same way and both received error feedback. The only difference was that the focus group was asked to revise each assignment, correcting all the errors pointed out by the teacher before submitting the next assignment while the comparison group did all the corrections of their underlined errors and were asked to submit them toward the end of the semester after the first drafts of all five homework assignments had been written. According to the study results, students' writing improved significantly over 10 weeks and moreover, the increase in accuracy was not accompanied by a decrease in fluency over the semester.

The second study conducted by Chandler (2003) was aimed to find the effects of different types of error correction. The four treatments used were *correction, underlining with description, description of type only, and underlining.* The outcome measures were: 1) number of errors per 100 words on both the revision and on the subsequent chapter before revision (accuracy), 2) holistic ratings of overall writing quality of the first draft of both the first and last chapters of each student's autobiography, 3) the time students reported spending writing each chapter (fluency), 4) immediate student responses to each feedback type, including the time it took to make corrections, and to a questionnaire comparing the four types at the end of the semester, and 5) a rough comparison of time spent by the teacher in giving each method of feedback, both initially and over two drafts. According to the results, there was an overall improvement in accuracy and fluency in the second study from the first to the last assignment, there was no

significant change in holistic ratings of overall writing quality over 10 weeks. It is not surprising as other studies have shown that writing quality is slow for showing measurable effects. Moreover, autobiographical writing is a genre that these students were already relatively good at. As the study results showed that there was a gain of .3 over the semester on a holistic rating scale of 1–6, it could be concluded that the improvement in correctness and speed did not come at the expense of overall quality or syntactic or lexical complexity.

All in all, it can be seen that there are positive and negative results while giving corrective feedback on students' writing depending on what the researcher is looking for. Moreover, there are studies showing that corrective feedback showed positive results and helped students improve their writing abilities despite the fact that some of them were short term studies. The most important thing that should be considered is the intensity of the course and the focus on what you look for and what you expect to obtain.

2.6 Previous Studies on Audio-Taped and Screen Capture Software Feedback on Writing

Another alternative way of providing feedback instead of ambiguous written comments is audio-taped feedback. There are numerous methods of providing audio-taped feedback on students' writing. Audio-taped feedback is defined as the instructor's tape-recorded comments and suggested changes to written first drafts. According to Boswood and Dwyer (1995),audiotaped feedback employs technology to humanize the marking process, which can often be machinelike when technology is not used" (p. 20). Audio-taped feedback enhances the quality of feedback and students' responses to it. It also helps teachers to provide more comprehensive comments and teachers don't have to explain and re-explain their comments to each student after the class or in office hours (Johanson, 1999). Another advantage of audio-taped feedback is that it allows teachers to talk out their comments and their participation in writing transfers from

being an impersonal grader to a writing coach. Moreover, it complements the process approach to teaching writing (Johanson, 1999).

A great amount of research has been conducted on audio-taped recorded feedback on students' writing performance and according to the research, students benefited in all the cases from audio-taped feedback which was very effective at helping students improve their writing skills through multiple drafts.

According to Stroupe (1998), there were positive reviews for audio-taped feedback or, as he named it, Audio-Corrections Feedback over written feedback. The study was seeking to compare components of written feedback with audio-taped feedback. One of the main goals of the study was to bring together the gap between shortcomings in written feedback and students' preferences by using audio-taped feedback. Stroupe tried to investigate the usefulness of both feedback types based on opinions and past experiences of students. The findings, based on students' responses to a questionnaire, revealed that students preferred audio-taped feedback over written feedback. For example, students pointed out that audio-taped feedback provided them with a comprehensible understanding of errors. In another example, results showed that students felt that audio-taped feedback improved the clarity of teacher feedback. Based on statistics, the mean average of student responses on a Likert scale yielded that students preferred audio-taped feedback over written comments.

In other research, Price and Holman (1996) tried to identify attitudes towards audio-taped feedback of language-minority Hispanics and language-minority English speakers from two sections of an undergraduate English composition class. Students were given the pre- and post-tests. The study included a comparison and a treatment group. The comparison group was provided with "traditional written comments" and the treatment group received minor written feedback and lengthy audio-taped feedback. The findings revealed that the Hispanic students in

the treatment group preferred audio-taped feedback over traditional written comment. This was shown in the analysis of pre- and post attitude surveys which indicated a significant positive difference in the attitude toward writing. Students were also interviewed and the analysis of the interview clearly showed that, overall, students preferred audio-taped feedback. In a final comment, the researcher noted that the minority-language students in the treatment section responded "more enthusiastically" (p. 6) to the audio-taped feedback than the native English speakers did. Thus, findings suggest that audio-taped feedback might be particularly beneficial in second language classrooms.

The research makes it obvious that very little research has been done on the effectiveness of audio-taped feedback when combined with written feedback. In one study, Huang (2000) tried to investigate the effectiveness of audio-taped feedback and written feedback. Her research design was based on a case study done with a participant from her Chinese English as a foreign language composition class. In order to study the effectiveness of both feedback types, a participant was asked to write 7 essays. Essays 3, 4, and 6 were responded by using ATF and 1, 2, 5, and 7 were given WF. She analyzed audio-taped feedback transcripts and written feedback to measure the effectiveness of both. In order to examine the quality of the feedback of these two types, the feedback was quantified according to the problems addressed. The results of the study showed that audio-taped feedback, when combined with written feedback allowed her to provide more elaborate explanations for writing concerns. Additionally, she indicated that she could deal with writing problems more thoroughly using audio-taped feedback.

Hajimohammadi&Mukundan (2011) contrasted audio-taped feedback (ATF) with minimal marking (MM) among 82 EFL female pre-intermediate learners at Kish Air English Language Institute in Tehran-Iran. The study was carried out over 8 sessions in 4 weeks and was

aimed at finding any difference in students' writing. The subjects were randomly divided into two groups. Group 1 was provided with ATF and Group 2 with MM. Each group was assigned to write expository paragraphs of approximately 120 words during 8 sessions. One session was allocated to the pre-test, another one to the post- test, and the rest to the treatment. The study revealed that students who received ATF performed better than those who received MM. It showed that ATF could have significant effect on students' writing ability.

One more study done on audio-taped feedback which proved it to be effective. This study investigated the effects of two types of teacher feedback, namely audio-taped and written, and the absence of teacher feedback on students' error correction. A comparison of the number of macro and micro errors before and after the experiment showed a statistically significant reduction in the number of mistakes in final drafts. The type of response students received (either taped or written) had been helpful in revising their papers and considered the most beneficial aspect of teacher feedback to have been a focus on micro errors.

Thus, from literature review, it became apparent that audio-taped feedback was quite effective and students benefited from it a great deal despite the fact that there were also some caveats.

The idea of using audio commentaries to provide feedback on written essays is not a new one, audio tapes were being used as a means to provide feedback to students as early as 1972(Coleman 1972). Their use does not necessarily benefit the markers in terms of length of time taken to mark an essay but there is an immediate benefit to students in that the amount of feedback produced during the audio comment is more extensive than is produced, in the same time, in a written comment.

However audio feedback has a caveat in that the student doesn't directly see the elements of the essay to which the marker is referring. Written and audio feedback are only good for two

of the four learning styles, namely reading and auditory, without meeting visual and kinesthetic styles (Kerr&McLaughlin, 2008). It would be hard to visualize until recently how we could include visual feedback, due to the lack of computing power, affordable disk space and bandwidth. Russell Stannard (2007) has used screen recording software that allows a simultaneous oral commentary at University of Westminster while correcting grammar and spelling in essays in a course on English as a foreign language. This brings a visual dimension and also immediacy to the feedback because the student hears the marker's comments in context as the work scrolls before their eyes.

Screen capture software is not a new phenomenon. It is mostly used for teaching computer software. As the screen recorder software simply records the screen of a computer, it can be used to do demonstrations very simply. It appeals to a variety of learning styles and is media rich. Whatever you do on the screen is recorded and can be played back as a video and moreover, if you have a microphone connected, it will also record your voice. It is well-known that even though the technology has been around for many years, it is only recently that its possibilities have been investigated and used as a tool for providing feedback to students (Stannard, 2008).

Screen capture software allows you to record the screen of your computer and whatever is happening on it as if you have a camera pointed right at the screen. For example, if a teacher wants to teach you how to create "a table" or something else in Word, he/she can simply turn on the screen capture software and begin actually to make a table in Word and simply record everything going on the screen. A teacher can also comment on what he/she was doing, as all his/her comments will be recorded, too. Further, he/she can save the video and send it to students. Students can play it back as much as they want to, listen and watch as a teacher

explains to them how to make tables in Word. Students can themselves have a Word document open and jump from watching the video to actually making a table (Stannard, 2007).

According to Stannard (2008), a two- minute video feedback recording equals about 400 written words or a whole sheet of A4 feedback. Video feedback offers a feedback mechanism that helps students having a greater variety of learning styles as this type of feedback is both visual and oral. Moreover, a work by Mayer (2001)has demonstrated that a mixture of animation and verbal commentary is the best memorable instructional format. The use of speech, graphics and the written word seems to satisfy the widest variety of learning styles, reaching those who prefers auditory and visual learning and who are less likely to benefit from standard single mode written feedback.(cited in Stannard, 2008).Video feedback replicates this 'input' method. Students can watch and listen as the tutor corrects their work, underling, circling, highlighting errors while at the same time talking expanding on the corrections. Students can also pause, replay and listen to the recording whenever and wherever they want.

The first research paper that Stannard (2008) presented on screen capture software for feedback was named '*Screen capture software for feedback in language education*'. In this paper, he presented two studies carried out on using screen capture software for providing feedback. In the first study, students were explained that they would not be receiving traditional form of feedback but instead they would get a video where they could hear and watch the teacher correcting their mistakes and commenting on them. Students were asked to email their essays to the tutor and to redraft their essays based on the videos. After getting their feedback and redrafting, students were given a questionnaire. Overall, students liked the video feedback more than the traditional one. When they were asked why they liked it more, more than half of them

answered that it was both visual and oral. Additionally, students pointed out that it was more memorable, elaborate, that they played the video several times before redrafting and they liked to have used the play and pause buttons.

In the second study, Stannard (2008) looked at a different way of providing feedback. Instead of providing individual feedback, he made a group feedback. It was a general classroom feedback provided to students after the classroom presentations. This video contained the key points that had come up after the presentations. After the study, students were interviewed and they pointed out several things that they liked most. Firstly, the students think it is great reference material. For example, after giving presentations, a video was produced covering some of the student's errors when presenting. Students commented that next time before presenting they were sure to use the video with highlights. They also liked the idea they could listen and review the videos at their own pace and in their own time, rather than have the teacher rush through overall comments at the start of a lecture.

Secondly, many of the students had listened to the video several times. Students commented that receiving the video before they got back their individual marks had lowered their expectations of their marks. When they were listening to the video, they realized they had missed things out. Students again pointed out the benefits of being able to listen to the feedback. There are no time problems. The advantage is obvious, the teacher only has to produce one video with general comments and compress it but a lot of class time usually used reviewing student's work can be saved. Additionally, the teacher also has very useful reference material. For example, the next time a similar question is set by the teacher, s/he can play the feedback video from previous years and quickly remind himself/herself of some of the problems that had come up.

In another study Kerr & McLaughlin (2008) found that screen recording with simultaneous commentaries were most appropriately delivered as a summary given at the end of a conventional written feedback. In this way the weaknesses and strengths can be delivered in a way that it would be more engaging than the same information written. Mostly, three quarter out of 90 students preferred video feedback over the traditional one.

Thus, the discussion of the literature review reveals that there has been a decent amount of research carried out on written and audio-taped corrective feedback on writing but little has been done on the audio-visual recorded one even though the technology has been around for many years. It is only recently that the possibilities of audio-visual recorded corrective feedback have been investigated and used as a tool for providing students with this type of feedback.

Chapter 3 Methodology

The purpose of this study was to investigate whether screen captured audio- recorded corrective feedback influences the EFL learners' writing skills. Therefore, this section presents an overview of the intended participants, setting, instruments for data collection, procedures employed, and analyses of the collected data.

The research questions of the study were as follows:

- 1. Is there any significant difference in the improvement of writing performance between the students who receive traditional corrective feedback (on the margins electronically) and those who receive screen captured audio-recorded corrective feedback on their essays?
- 2. What is the students' attitudes toward instructor's screen captured audio-recorded corrective feedback?
- 3. Is there any significant difference between the time spent by the instructor on providing traditional corrective feedback (on the margins electronically) and screen captured audio-recorded corrective feedback?

3.1 Setting and Participants

The participants of the current study were 26 students. All 26 students took the pretest and posttest, and only 15 students of the focus group were administered the questionnaire. All the participants were Armenian students studying English as a foreign language in the Focus English Classes organized by the Department of English Programs at the American University of Armenia. The participants were mixed gender students; their age ranged from 10 to 16. The level of English language proficiency of all the participants was low intermediate(Communication 5)determined on the basis of EFL (English as a Foreign Language) placement test, which the

students took before being admitted to the AUA EEC program. The teacher of the students was the researcher herself.

Group	Level	Total Number	Age Range
Focus Group	Low- intermediate	15	10-16
Comparison Group	Low- intermediate	11	10-15

Table 1 General information of the participants

3.2 Materials

The textbook which was used for the classes in this research was 'English in Mind 2' by Herbert P. and Jeff S. (2010) published by Cambridge University Press . It is a "six-level, communicative, multi-skills language course. It uses communicative, multi-skills approach to develop the students' foreign language abilities in an interesting and motivational way. A wide range of interesting text types is used to present authentic use of language, including magazine and newspaper clippings, interviews, narratives, songs and engaging photostories. It is also based on a strong grammatical syllabus and takes into account students' mixed abilities by dealing with grammar in a carefully graded way. English in Mind offers a systematic vocabulary syllabus, including important lexical chunks for conversation and extension of the vocabulary in a bank at the back of the book. The textbook consists of Student Book, Workbook with language activities sections for writing, vocabulary, grammar, reading, and listening. It also has a DVD with appealing extra activities including the practice of all the skills. The textbook consist of 14 units each of which focuses on one particular topic. Five units are covered in one 20-hour term.

3.3 Instrumentation

For the purposes of this research, quantitative and qualitative data was collected. The data was collected through:

- pre-test and post test (see Appendix A&B)
- a questionnaire (see Appendix C)
- \circ time log (see Appendix F)

3.3.1 Pre and Post Tests

At the beginning of the course the students of both focus and comparison groups were given a pre and at the end of the course a post tests which were an essay writing tasks. Both tests were parallel and were developed by the researcher/teacher. Students were asked to write an essay within the given word limits and within a given period on the topic not related but similar to what they would be writing throughout the course. The essays were graded by the researcher herself and by another rater. They were graded based on the analytical rubric (See Appendix D) in terms of organization, development, grammar usage, word choice. For establishing interrater reliability of pre and post test results, a reliability test was conducted with the help of SPSS to find out the consistency between the scores (see Interrater Analysis in Chapter 4).

3.3.2 Questionnaire

The questionnaire designed for this study integrated open and close-ended items aimed to collect qualitative and quantitative data. Most of the statements for the questionnaire were designed based on the relevant literature and the instructor's. Some of the questions were piloted and afterwards some certain changes were made based on them.

A Likert scale was used for the questionnaire to get information about the students' attitudes towards screen captured audio-recorded corrective feedback. (See Appendix D,). The

reason for choosing a Likert scale was because the questionnaire was in statement form. Farhady (1995) states that a questionnaire, which is in statement form with a range of responses, in addition to giving the respondent not only choices to select from, it is also easy to analyze.

The students' questionnaire consisted of 11 items, where 9 items were closed-ended and 2 items opened-ended (See Appendix ?). The options for the closed-ended questions were the following: $SA = strongly \ agree; A = agree; D = disagree; SD = strongly \ disagree, Not Sure, Very Useful, Useful, Somewhat Useful, Not Useful, Always, Sometimes, Rarely, and Never. The aim was to have quantitative understanding of the students' attitudes towards the screen captured audio-recorded corrective feedback.$

The number of the students who completed the questionnaire after the treatment was 15. They were given enough time to read all the items carefully and ask questions in advance (if they had any). If the students had questions concerning the items, the teacher explained to them.

3.3.3 Time Log

For establishing whether there was a significant difference in time between providing traditional corrective feedback (on the margins electronically) and screen captured audio-recorded corrective feedback, the teacher used timer for keeping time log. She checked every paper keeping time log and fixing the amount of time spent on one paper (**See Appendix F**).

3.4Procedures

3.4.1 Experiment

The participants were informed about the study at the beginning of it. The goals and procedures of the study were presented to them and they were given a choice to participate or not in the study. All the students agreed to participate in the study. Two groups were involved in the

experiment. Both groups used the same textbooks and had English classes for the same amount of time. In both groups the same syllabus was used. The experiment lasted for one term (10 weeks) the classes were held twice a week for an hour. The teacher of both groups was the researcher herself. During the experiment both groups did the same activities and performed the same tasks. Even extra activities had been planned and used in both groups. The students of both focus and comparison groups were placed according to the placement test results they took for the EEC classes but some of the students.

At the beginning of the classes both groups had a pre test aiming to test their writing ability. Students were asked to write an essay within the limits of 200 and more words in a given period of time (30min) on the topic not related but similar to what they would be writing throughout the course. The topic of the pretest was "*Do you agree or disagree with the following statement? Technology has made the world a better place to live. Use specific reasons and examples to support your opinion.* After the completion of the task, they were collected by the researcher. The next step was the analysis of the students' pretest. They were graded based on the analytical rubric (See Appendix D) in terms of organization, development, grammar usage, word choice. Each criterion in the rubric received a separate score on the scale of 1-5. The essays were graded by the researcher herself and by another rater.

At the end of the term both of them were given a post test aiming to test their writing achievement. The latter intended to show whether the use of screen captured audio-recorded corrective feedback had had any impact on the learners' writing enhancement. The students of both focus and comparison groups were assigned a paper based essay writing task, similar to the genre they had for the pretest. The topic of the post test was "*Do you agree or disagree with the following statement. There is nothing that young people can teach older people. Use specific reasons and examples to support your answer*". After the administration of the posttest the

writing assignments were collected for further analysis. Again, they were graded based on the analytical rubric in terms of organization, development, and grammar usage/word choice. The essays again were graded by the researcher herself and by another rater.

One of the groups (focus group) received the treatment – the application of screen captured audio recorded corrective feedback on writing. The other group (comparison group) received traditional corrective feedback on the margins electronically on their writing.

3.4.2 Treatment

After writing the pretest, the focus group was introduced to the screen capture software, namely JING. The participants were low intermediate level students and they possibly were exposed to the screen captured audio recorded corrective feedback for the first time in their life. The researcher demonstrated in class how to students might use Jing (screen capture software) through which the students were provided a screen captured audio-recorded corrective feedback.

Students were shown sample videos where a teacher gives feedback to students using JING. An instructor pointed out that they could play the video several times, pause, rewind and that it may be a good idea to listen and take notes and try to make the corrections the instructor was suggesting directly in their essays.

Comparison group students were explained that they were going to get electronic feedback, revise their papers after getting the teacher's feedback and resubmit them.

As it was mentioned both groups used the same syllabus and the same materials. Students were assigned four writing tasks in both groups. The only difference between focus and comparison groups was that focus group received screen captured audio recorded corrective feedback on their essays and the comparison group received a traditional one i.e. on the margins electronically. The instructor gave corrective feedback on students' organization, development,

word choice/grammar usage based on an analytical writing rubric (See Appendix D) used in the pre and post tests. That is, the focus group received screen captured audio-recorded corrective feedback on their global and local mistakes while comparison group received traditional one i.e. on the margins electronically. The instructions for all the tasks in both groups were the same. Students were required to write 4 essays on the assigned topics (See Appendix E) which were not related but similar to the topics they covered throughout the course. Thus, they students wrote 4 essays and emailed them to the teacher. As it was mentioned above, focus group received screen captured audio-recorded corrective feedback and the comparison group the traditional one. After getting the feedback, students revised and resubmitted their essays for later grading. Afterwards, the teacher checked their essays based on the same analytical rubric. Below in Table 2, it can be seen the timeline of students' writing assignments. Starting from Week 3, students were assigned writing tasks, i.e. essays. They got treatment on their writing only in weeks 3, 5, 7, 9.

	Day 1	Day 2
Week 1		
Week 2	Pre-test- focus	Pre-test-comparison group
	group	
Week 3		Writing Task
		(to be revised and
		resubmitted for grading)
Week 4		
Week 5		Writing Task
		(to be revised and
		resubmitted for grading)
Week 6		
Week 7		Writing Task
		(to be revised and
		resubmitted for grading)
Week 8		
Week 9		Writing Task
		(to be revised and
		resubmitted for grading)
Week 10		Post Test

Table 2 Timeline of students' writing assignments

Chapter 4 Results and Analysis of the Collected Data

The current study was carried out to investigate whether screen captured audio-recorded corrective feedback improves students' writing performance. It was also aimed at investigating students' attitudes towards screen capture audio recorded corrective feedback. Moreover, it also intended to find out which type of the feedback that is, screen captured audio-recorded vs. traditional (on the margins electronically) corrective feedback was more time efficient for grading. For the current study, quantitative and qualitative data was collected through pre and post instructional achievement tests, attitudinal questionnaire and time log. This chapter presents the results of the data analyzed quantitatively and qualitatively.

4.1 Interrater Reliability Analysis

The ultimate purpose of this study was to improve the writing performance of the students and for finding out the impact of the treatment and non-treatment, pre and the post writing tests were conducted. The pre and post tests of the focus and comparison groups' were rated by two non-expert raters in order to establish interrater reliability of the scores of the writing tests. To establish the interrater reliability, statistical analysis was conducted using the reliability test.

Table 3 Interrater reliability analysis of the pre tests of the Focus and Comparison groups

-	-	Ν	%
Cases	Valid	26	100.0
	Excluded ^a	0	.0
	Total	26	100.0

Reliability Statistics

Cronbach's	
Alpha	N of Items
.920	2

Table 3 depicts the reliability statistics of the scores of pre tests of the focus and comparison groups. As it can be seen from the table, the Cronbach's alpha for focus and comparison pre tests is 0.92. This means that there is good internal consistency reliability between the two raters . As Pallant (2007) states, there is good internal consistency reliability when the Cronbach's alpha is greater than 0.7, which is the cut point for the reliability. Thus, it can be concluded that there is a high interrater reliability between the writing pre tests score ratings.

Table 4 Interrater reliability analysis of the post tests of the Focus and Comparison groups

Case Processing Summary				
		Ν	%	
Cases	Valid	26	100.0	
	Excluded ^a	0	.0	
	Total	26	100.0	

Reliability Statistics

Cronbach's	
Alpha	N of Items
.962	2

 Table 4 shows the reliability statistics of the scores of post tests of the focus and

 comparison groups. As Table 4 shows, the Cronbach's alpha for comparison and focus post tests

 is 0.96. Again, here we can see good internal consistency reliability as Cronbach's alpha is great

than the cut point. Thus, we can conclude that there is a high interrater reliability between the writing pre and post tests score ratings.

As interrater reliability is high, so average pre and post tests scores have been calculated for further analysis.

4.2 Analysis of the Quantitative and Qualitative Data

The quantitative data included pre and post instructional achievement tests, attitudinal questionnaire and time log analysis. For the pre- and post-tests Mann-Whitney and Wilcoxon Tests were used to compare the scores obtained from the tests of both groups. The quantitative part of the attitudinal questionnaire was analyzed through frequency analyses and where the numbers were converted into percentages. As for the open-ended questions of the questionnaire, they were analyzed qualitatively. For time log analysis again Mann-Whitney Test was applied.

4.2.1 Pre - and Post-test Analyses

The first data for the current study was collected with the help of pre and posttests. Two groups took the writing test before and after the treatment. As the number of students was small (26 students), the research was quasi-focus, the non-parametric Mann-Whitney U Tests were used for between group comparisons and Wilcoxon Signed ranks Tests were used within group comparisons of the two sets of scores for the focus and comparison groups. It was done with the aim to find out whether there was any significant difference in the improvement of writing performance between the students who receive traditional corrective feedback (on the margins electronically) and those who receive screen captured audio-recorded corrective feedback on their essays. Mann-Whitney U test is used to test the differences between two independent groups on a continuous measure. This test is the non-parametric alternative to the t-test for independent samples. Instead of comparing the means of the two groups, as in the case of t-test,

the Mann-Whitney U Test actually compares mean ranks. It converts the scores on the continuous variable to ranks, across the two groups. Then it evaluates if the ranks of two groups differ significantly on average or not. As the scores are converted to ranks, the actual distribution of the scores does not matter (Pallant, 2007).

Table 5 Descriptive Statistics and Mean Ranks of the groups for the writing pre-and post-tests

	N	Mean	Std. Deviation	Minimum	Maximum
pretest	26	6.8269	1.74896	4.00	9.50
posttest	26	10.5385	3.33743	4.50	15.00
Experimental and Control	26	1.42	.504	1	2

	Focus and Comparison	N	Mean Rank	Sum of Ranks
pretest	focus	15	14.17	212.50
	comparison	11	12.59	138.50
	Total	26		
posttest	focus	15	16.50	247.50
	comparison	11	9.41	103.50
	Total	26		

To answer research question one, which aims to find out whether there is any significant difference in the improvement of writing performance between the students who receive traditional corrective feedback (on the margins electronically) and those who receive screen captured audio-recorded corrective feedback on their essays, the following four comparisons were made. After doing the Mann Whitney U Tests and Wilcoxon ranks Tests, **r** was calculated manually to find the effect size. This calculation was done through all the comparisons. To make sure that the expected and observed differences between the groups are in the direction of the research questions.

Comparison 1. Were the comparison and focus groups similar at the beginning of the

study?

In other words, was there any significant difference between the writing performance of

the comparison and focus groups before the experiment?

To answer this question, Mann-Whitney U test was performed between the mean ranks of

scores of focus and comparison groups on pretest. Table 6 shows the results.

Table 6 Descriptive Statistics and Mann-Whitney Test of Pre Test Scores of Focus and Comparison groups

	N	Mean	Std. Deviation
pretest	11	6.6364	1.81784
pretest	15	6.9667	1.74711

	pretest
Mann-Whitney U	72.500
Z	529
Asymp. Sig. (2-tailed)	.597

As it can be seen from the *Table 6*, the Z value for writing performance is -0.529 with a significant level of p=0.597. The probability value is greater than 0.05, so the result is not significant. There was not statistically significant difference between the comparison and focus groups before the treatment, that is, they had an equal level of writing performance. As it was mentioned above, we were going to calculate **r** manually. It is calculated according to the following formula: r=z/square root of N, where N=total number of cases. The effect size (**r**) for Mann-Whitney test for comparison of pre tests of both group is **0.1**. This number, according to

Pallant (2007), indicates there was a small effect size between the groups, which once again confirms that there was no significant difference between the groups.

For within group comparison (of pre-test results with post-test results) a Wilcoxon Signed ranks test was applied. This test is the non-parametric alternative to the repeated measures t-test, but instead of comparing means the Wilcoxon converts scores into ranks and compares them.

Comparison 2. Did the comparison group significantly improve their writing performance due to following the instruction?

This comparison was carried out to reveal whether comparison group has significantly improved their writing performance due to the instruction. To perform this comparison, a Wilcoxon Signed ranks test was implemented.

Table 7 Descriptive Statistics and Wilcoxon Test Statistics for Comparison Group Pre and PostTests

	N	Mean	Std. Deviation	Minimum	Maximum
pretest	11	6.6364	1.81784	4.00	9.50
posttest	11	8.8182	2.57170	4.50	12.00

	Ν	Mean Rank	Sum of Ranks
posttest - pretest Negative Ranks	0 ^a	.00	.00
Positive Ranks	10 ^b	5.50	55.00
Ties	1 ^c		
Total	11		

Test Statistics^{b,c}

	posttest - pretest
Z	-2.812 ^a
Asymp. Sig. (2- tailed)	.005

Table 7 shows the results of the analysis of pretest and posttest of the comparison group. Here Z value equals to -2.812 and p value 0.005. So, p-value is less than our selected α (α =0.05). This means that there is a significant difference between the pretest and the posttests of the comparison group in favor of posttest. **r** is also calculated which is 0.6. This means that there was a large size effect, that is, the students improved their writing performance largely due to the instruction.

Comparison 3. Did the focus group significantly improve their writing performance due to instruction?

This comparison was implemented to find out whether focus group has significantly improved their writing performance due to following the instruction.

Table 8 Descriptive Statistics and Wilcoxon Test Statistics for Focus Group Pre and Post Tests

	N	Mean	Std. Deviation	Minimum	Maximum
pretest	15	6.9667	1.74711	4.00	9.00
posttest	15	11.8000	3.33702	6.00	15.00

	Ν	Mean Rank	Sum of Ranks
posttest - pretest Negative Ranks	0 ^a	.00	.00
Positive Ranks	15 ^b	8.00	120.00
Ties	0 ^c		
Total	15		

Test Statistics^{b,c}

	posttest - pretest
Ζ	-3.414 ^a

As *Table 8* depicts the Z value of -3.414 with significance level of p=0.001 which is less than 0.05. The results show that there is statistically significant difference between the pretest and posttest scores of the focus group in favor of posttest. **r** is also calculated which is 0.62. It shows that that there is a large size effect, which means that focus group improved their writing performance largely due to following the instruction.

The results of the Wilcoxon Signed Rank test displayed the outcomes of the focus and the comparison groups separately. It showed that there had been a significant improvement in the writing performance of both groups. Therefore, it can be assumed that writing instruction had a beneficial effect on the learners and that they improved their writing performance. However, in order to see whether screen captured audio-recorded corrective feedback, the main variable in this study, had any effect on the writing performance of the focus group and whether there is a significant difference between the focus and the comparison groups, a Mann Whitney U test was applied between the mean scores of the focus and the comparison groups on the post-test to compare average ranks of the students' scores. Thus, the last comparison aimed to answer again the first research question.

Comparison 4. Were the comparison and focus groups similar at the end of the study?

In other words, was there any significant difference between the writing performance of the comparison and focus groups after the experiment?

The following comparison was conducted to reveal if the results of the focus and the comparison groups are similar at the end of the study in terms of writing performance.

Table 9 Descriptive Statistics and Mann-Whitney Test of Post Test Scores of Focus and Comparison groups

	N	Mean	Std. Deviation
post	11	8.8182	1.74711
posttest	15	11.8000	2.57170

Mann-Whitney U	37.500
Z	-2.346
Asymp. Sig. (2-tailed)	.019

Table 9 shows that the Z value is -2.346 with a significance level of p=0.019. Here the probability value is less than .05 which implies statistically significant difference between comparison and focus groups. Thus, the analysis of pre and post test data rejected the null hypothesis of the study and shows that screen captured audio-recorded corrective feedback had positive effect on the students' writing performance. Here **r** is 0.4, which shows that there is a medium size effect, which means that students benefited due to following the instruction.

4.2.2 Analysis of the Questionnaire

The students' questionnaire consisted of 11 items with 9 closed and 2 open and closed ended items (See Appendix C). Fifteen students of the focus group completed the questionnaire after the treatment. They were given enough time to read all items carefully and ask questions in advance (if they had any). *Table 10* presents students' attitude towards screen captured audio-recorded corrective feedback.

Questionnaire Items	Strongly Agree	Agree	Disagree	Strongly Disagree	Not Sure
1. Jing recorded instructor comments were difficult to follow and understand.	-	-	80%	13%	7 %
2 . I prefer written feedback on paper to video feedback in Jing.	-	-	80%	13%	7 %
3. Jing based feedback has improved my writing.	67 %	13 %	-	-	20 %
4. I would like to get feedback on my papers in my next English class by Jing.	27 %	67 %	-	-	7 %
5. It is easier to follow the corrections when they are written on your papers than follow the video feedback (Jing).	-	13 %	53 %	13 %	20%

	Very useful	Useful	Somewhat Useful	Not Useful	Not sure
6. In general, the video feedback with Jing was:	60 %	33 %	7 %	-	-
7. Please, rate how helpful Jing was in improving the following aspects of my writing:					
Vocabulary	13 %	53 %	27 %	7%	-
Organization	74 %	13 %	13 %	-	-
• Grammar	40 %	40 %	13 %	7 %	-
Development of ideas	47 %	27 %	27%	-	-
Formatting, spelling, mechanical mistakes	47 %	27 %	27%	-	-

	Always	Sometimes	Rarely	Never
8.Select how often you have had the following technical problems with Jing.				
• I couldn't hear the audio well	-	27%	67 %	7 %
• I couldn't hear anything in the recording	-	-	7%	93 %
• I didn't have speakers or a headset to listen to the audio	-	-	7%	93 %
• I couldn't see the video very well	-	7%	-	93 %
• The page with the link was blank	-	_	7%	93 %
• I could find the pause and replay buttons	20 %	-	7%	67 %

• My internet connection was not good enough	-	20 %	13%	67 %
• I couldn't open the link	-	13%	-	87 %

	Always	Sometimes	Rarely	Never
9. How did you use the Jing feedback?				
• Played it several times then made changes on my paper	53 %	20 %	20 %	7 %
• Paused it while listening and making changes directly on my paper	40 %	20 %	13 %	27 %
Never played	-	-	-	100 %

Based on our data collected through questionnaire (see Appendix C), it can be seen from **Table 11** that majority of the students liked the idea of working and getting feedback screen captured audio-recorded corrective feedback. It became clear that the majority of the students agreed that it was easier for them to follow the Jing-based feedback and they would like to get this type of feedback in their next English class. Additionally, most of the students thought that Jing based feedback helped them improve the following writing aspects: organization, development of ideas, vocabulary, grammar, formatting, spelling, and mechanical mistakes. However, some students had some mechanical problems as having a decent internet connection, not being able to hear the audio well, and find the pause and replay buttons. Even though, students were shown the place of pause and click button in the class, they still had that problem.

The questionnaire also had 2 open-ended items. The first open-ended question aimed at finding out what students most of all liked about the video feedback. In response to this question, the majority of the students mentioned that they liked listening to the teacher correcting their mistakes. They also mentioned that it was interesting and easier to understand.

The last open-ended question tried to find out what students liked least of all about the video feedback. The one student answered the he/she liked least of all that he/she could not

revise the new words, vocabulary or grammar. The rest of the students, mentioned that there was not anything that they did not like.

4.2.3 Analysis of the Time Spent per Each Paper

In order to answer the third research question which aims to find out whether there is a significant difference between the time spent by the instructor on providing traditional corrective feedback (on the margins electronically) and screen captured audio-recorded corrective feedback.

To answer the above stated question another Mann-Whitney U test was implemented. For finding out the answer to the third research question, we took the average time spent per paper of all the students of both groups (focus and comparison) and compared them. **Table 9** present the results.

Table 11 Descriptive Statistics and Mann-Whitney Test for time spent on Focus and Comparison groups Essays

	N	Mean	Std. Deviation	Minimum	Maximum
avtime	26	20.3096	5.81830	11.81	31.04
group	26	1.42	.504	1	2

	group	Ν	Mean Rank	Sum of Ranks
avtime	focus	15	18.80	282.00
	comparison	11	6.27	69.00
	Total	26		

Test Statistics^b

	avtime
Mann-Whitney U	3.000
Wilcoxon W	69.000

Ζ	-4.126
Asymp. Sig. (2-tailed)	.000

Table 11 presents the Z value of -4.126 with a significance level of p=.000. This means that probability value is less than our selected α (α =0.05), so the result is significant. It means that our null hypothesis is rejected and there is a significant difference between the time spent by the instructor on providing traditional corrective feedback (on the margins electronically) and screen captured audio-recorded corrective feedback. Corresponding average times (in minutes) for both groups are presented in the descriptive statistics part of the Table 11.

Chapter 5 Discussion and Conclusion

This chapter presents the summary of the findings and points out the limitations faced while conducting the current study. It also discusses the implications and offers suggestions for further research. This study was set up to try to find out the answers to the following questions:

- 1. Is there any significant difference in the improvement of writing performance between the students who receive traditional corrective feedback (on the margins electronically) and those who receive screen captured audio-recorded corrective feedback on their essays?
- 2. What are the students' attitudes toward instructor's screen captured audio-recorded corrective feedback?
- 3. Is there a significant difference in time between providing traditional corrective feedback (on the margins electronically) and screen captured audio-recorded corrective feedback?

5.1 Findings

One of the main purposes of this study was to determine whether screen captured audiorecorded corrective feedback impacts students' writing performance. In order to find out the most effective type of the feedback and answer the research questions, the data was obtained from the pre- and post-test results which were analyzed in between-group and within group comparisons.

The first research question of this study was "*Is there any significant difference in the improvement of writing performance between the students who receive traditional corrective feedback (on the margins electronically) and those who receive screen captured audio-recorded corrective feedback on their essays?*" Quantitative data was collected within the framework of the study. The analysis of quantitative data (pre and post instruction tests) revealed statistical

significance between pre and posttests of focus group suggesting that there is a positive relationship between screen captured audio recorded corrective feedback and writing performance. The data analysis and results of the study also showed an important and promising fact that screen captured audio-recorded corrective feedback has a positive impact on learners' writing performance. Therefore, it might be concluded that teachers can implement screen captured audio-recorded corrective feedback to improve their students' writing performance.

It should be noted that a screen captured audio-recorded corrective feedback is not a simple way of providing feedback, it replaces in a way student-teacher face-to-face meetings, creates a 'real' interaction between a student and a teacher which in traditional (on the margins electronically) way of providing feedback misses.

The second research question of the study was "*What are the students' attitudes toward instructor's screen captured audio-recorded corrective feedback*" Quantitative and qualitative data was collected through questionnaire to answer this question. The analysis of the results of the questionnaire indicates that the students liked working with this program. One thing that they mentioned in the questionnaire that they liked most of all was that they could follow the correction process, see and listen as the teacher was correcting, highlighting and at the same time expanding on their mistakes. They also mentioned that it was easier to understand and correct their mistakes. According to Mayer (2001), a mixture of animation and verbal commentary is the best memorable instructional format. The use of speech, graphics and the written word seems to satisfy the widest variety of learning styles, reaching those who prefers auditory and visual learning and who are less likely to benefit from standard single mode written feedback (cited in Stannard, 2008).

The only problem that students had was related to some technical minor problems mentioned in their answers to the questionnaire.

The third research question of this study was "Is there a significant difference in time between providing traditional corrective feedback (on the margins electronically) and screen captured audio-recorded corrective feedback?" Quantitative data was collected to answer this question.

The analysis of the time log revealed that there is a significant difference between the time spent by the instructor on providing traditional corrective feedback (on the margins electronically) and screen captured audio-recorded corrective feedback. The time spent by the instructor on providing corrective feedback was higher in focus group. Even though screen captured audio recording was not more time efficient, it was worth implementing as it helped students to improve their writing performance.

The main expectation from this study was satisfactory, that is, the screen captured audiorecorded corrective feedback impacted students' writing performance. It was statistically shown that the students who got screen captured audio-recorded corrective feedback benefited from it. Thus, it can be said that screen captured audio-recorded corrective feedback helps students to improve their writing performance. It was motivating, effective and it could also be considered a new phenomenon in teaching writing. It offered students visual and oral feedback and moreover much input, elaborate and comprehensible feedback compared to the traditional one.

5.2 Limitations and Delimitations

No study is perfect. There are several problems encountered while conducting this research. First, the number of the participants was limited (26 students) and as a result, the findings of the research are too limited in order to be generalized to other cases. Second, the time allotted to this research was restricted (one term). Third, students were not assigned to groups randomly. This limitation did not let us investigate the topic more deeply. Fourth, the teacher and

the researcher was the same person. So, the teacher's awareness of the objectives of the research may affect the research results and may be biased. Fifth, novelty effect could also be another limitation. That is, screen captured audio-recoded corrective feedback was a novel way for students to get feedback and they could have been motivated and done well because of it.

A delimitation of this study was that students received a cumulative grade for their essays which did not let us find out precisely which writing aspect of their writing improved more in term of organization, development of ideas, grammar structure, and word usage.

5.3 Implications

The results of the present study seem to support the contribution of screen captured audio-recorded corrective feedback to students' writing performance. Screen captured audio-recorded corrective feedback can be used as an integral part of teaching writing as it gives the students opportunities to see, listen to their mistakes and easily understand them and as a result do self-correction. Besides, it gives students additional listening opportunity out of the classroom. Students can easily do the self correction on their own pace, replay as much as they want to, pause and see their own mistakes. Moreover, they can go back and check their own progress as the links of the recorded files are saved. They can also self-assess themselves.

Even though the findings showed that screen-captured audio-recorded corrective feedback was not more time efficient, applying this type of feedback in schools and universities can be quite beneficial and effective. In addition, it gives students two or three times much feedback and helps students to easily see and understand their own mistakes and afterwards do self correction. Finally, this type of feedback may change the methodology of teaching writing.

5.4 Further Research

Taking into account the above-mentioned limitations, it would be more effective to carry out further research engaging a large number of participants for the results to be generalized to a larger population. It would better to have much time allotted to the research as it was only conducted within one term.

This research was applied to pre-intermediate level students and to age ranging from 10-16. Further studies can be conducted on different age and proficiency levels. For example, it can be tested on students having intermediate language proficiency and above.

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Appendix A

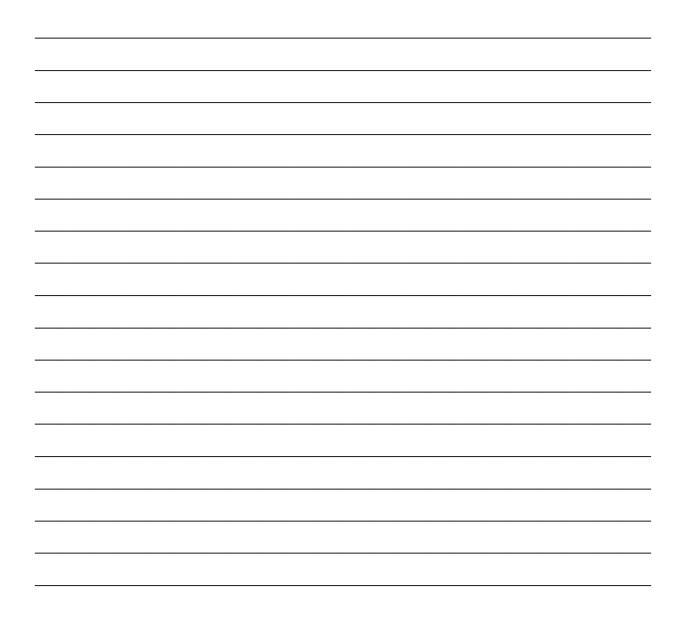
Do you agree or disagree with the following opinion? Technology has made the world a better place to live. Give reasons and examples.

Write your essay using 200-250 words

Appendix **B**

Do you agree or disagree with the following statement. There is nothing that young people can teach older people. Use specific reasons and examples to support your answer.

Write your essay using 200-250 words



Appendix C

Questionnaire

Dear Students,

This questionnaire is developed to find out your opinion about the relationship between audio-recorded corrective feedback and the improvement of your writing performance. Please remember that there is no right or wrong answer in this questionnaire and the confidentiality of your identity and responses will be kept. We will appreciate your help.

Abbreviations: SA = strongly agree; A = agree; D = disagree; SD= strongly D = disagree

1 . Jing recorded instructor comments were difficult to follow and understand.	SA A D SD Not Sure
2 . I prefer written feedback on paper to video feedback in Jing.	SA A D SD Not Sure
3 . Jing based feedback has improved my writing.	SA A D SD Not Sure
 I would like to get feedback on my papers in my next English class by Jing. 	SA A D SD Not Sure
 It is easier to follow the corrections when they are written on your papers than follow the video feedback (Jing). 	SA A D SD Not Sure

6.In general, the video feedback with Jing was:	Very useful	Useful	Somewhat Useful	Not Useful	Not sure
 Please, rate how helpful Jing was in improving the following aspects of my writing: 	Very helpful	Helpful	Somewhat helpful	Not helpful	Not sure
• Vocabulary					
Organization					
• Grammar					
Development of ideas					
 Formatting, spelling, mechanical mistakes 	_				
 Select how often you have had the following technical problems with Jing. 	Always	Sometimes	Rarel	Y N	lever
 I couldn't hear the audio well I couldn't hear anything in the recording I didn't have speakers or a headset to listen to the audio I couldn't see the video very well 					
 The page with the link was blank 					
• I could find the pause and replay buttons					
 My internet connection was not good enough 					
 I couldn't open the link Other: 					
9. How did you use the Jing feedback?	Always	Sometimes	Rarel	y N	lever
 Played it several times then made changes on my paper 					
2. Paused it while listening and making changes directly on my paper					
3. Never played					
4. Other					
				64	

10. Please mention what you liked most of all about the video feedback.

11. Please mention what you liked least of all about the video feedback.

Appendix D

	ORGANIZATION	DEVELOPMENT	SENTENCE STRUCTURE	WORD CHOICE/GRAMMAR USAGE
Score of 5	 Exemplary Organization Clear and logical progression of ideas Strong introductory paragraph, supporting paragraphs and concluding paragraph Sophisticated transition conveys relationships among ideas and paragraphs 	 Exemplary Development Clear focus maintained Strong development of the topic Strong thesis statement for development Strong use of examples, evidence or relevant details Strong use of analogies, illustrations 	 Exemplary Sentence Structure Sophisticated sentence structure; complete and correct sentences Sentence variation Simple Compound Complex 	Exemplary Word Choice/Grammar Usage • Vivid, specific, economical, connotative • Consistent grammar usage > Subject/verb agreement > Singular/plural nouns > Verb (tense and usage) > Pronoun usage Adjective/Adverb
Score of 4	Effective Organization Logical progression of ideas Introductory paragraph, supporting paragraphs and concluding paragraph Purposeful transition conveys relationships among ideas and paragraphs 	 Effective Development Effective focus maintained Appropriate development of the topic Appropriate thesis statement for development Clear use of examples, evidence or relevant details Use of analogies, illustrations 	Effective Sentence Structure Complete and correct sentences Sentence variation Simple Compound Complex	Effective Word Choice/Grammar Usage • Economical, specific • Clear meaning, connotative • Mostly consistent grammar usage > Subject/verb agreement > Singular/plural nouns > Verb (tense and usage) > Pronoun usage Adjective/Adverb
Score of 3	 Adequate Organization Some evidence of a logical progression of ideas Introductory paragraph, supporting paragraphs and concluding paragraph Appropriate use of transition 	 Adequate Development Adequate focus maintained Adequate development of the topic Adequate thesis statement for development Sufficient use of examples, evidence or relevant details Use of analogies, illustrations 	 Adequate Sentence Structure Minor errors in sentence structure Some sentence variation Simple Compound Complex (errors in more complex sentence structure do not detract 	Adequate Word Choice/Grammar Usage • Appropriate, somewhat specific • Somewhat simplistic • Somewhat consistent grammar usage > Subject/verb agreement > Singular/plural nouns > Verb (tense and usage) > Pronoun usage Adjective/Adverb
Score of 2	 Limited Organization Limited evidence of a logical progression of ideas Introductory paragraph and concluding paragraph with limited supporting paragraphs It jumps from one idea to another Limited use of transition 	 Limited Development Some evidence of focus Limited development of the topic Limited thesis statement for development Some use of examples, evidence or supporting details Some use of analogies, illustrations 	 Limited Sentence Structure Some errors in sentence structure Limited sentence variation Simple Compound Complex (errors in more complex sentence structure begin to detract) 	Limited Word Choice/Grammar Usage • Vague, redundant, simplistic > Several inconsistencies in grammar usage > Subject/verb agreement > Singular/plural nouns > Verb (tense and usage) > Pronoun usage Adjective/Adverb

	Inadequate Organization	Inadequate Development	Inadequate Sentence Structure	Inadequate Word
i •]	Little or no progression of ideas; difficult to follow Inadequate paragraphing No transition	 Unclear or no focus Little or no development Little or no development Few or no examples, evidence or supporting details Few or no analogies, illustrations Many ideas do not relate to theme. 	 Contains numerous fragments and/or run-ons Inadequate sentence variation Simple Compound Complex (errors in sentence structure detract) 	 Choice/Grammar Usage Rambling, inappropriate, incorrect Distracting inconsistencies in grammar usage Subject/verb agreement Singular/plural nouns Verb (tense and usage) Pronoun usage Adjective/Adverb

Adopted and adapted from http://wvde.state.wv.us/teach21/writingrubrics/

Appendix E

Essay Topics

Pretest

Do you agree or disagree with the following statement? Technology has made the world a better place to live. Use specific reasons and examples to support your opinion

Week 3

Why do you think some people are attracted to dangerous sports or other dangerous activities. Use specific reasons to support your answer

Week 7

Do you agree or disagree with the following statement. Children should start being educated about natural disasters and about the their prevention from school. Use specific examples to support your answer.

Week 9

Do you agree or disagree with the following statement. People should sometime do things that they do not enjoy doing. Use specific reasons to support your answer.

Week 5

Do you agree or disagree with the following statement. Parents are the best teacher. Use specific example to support your answer.

Post Test

Do you agree or disagree with the following statement. There is nothing that young people can teach older people. Use specific reasons and examples to support your answer.

Appendix F

Time Log of the Focus Group

	Name	Time 1	Time 2	Time 3	Time 4
1	Mosikyan Syuzanna Samvel	29.20	30.68	31.25	30.2
2	Shaljyan Davit Samvel	22.52	19.26	35.85	22.41
3	Ishkhanyan Arus Artur	19.10	20.67	25.54	20.08
4	Aghlamazyan Lianna	15.64	26.78	30.16	21.65
5	Frolov Genadi Vadim	19.30	13	27.15	23.86
6	Gharibyan Mery Zhirayr	20.16	22.54	28.45	23.72
7	Simonyan Anush Artur	32.44	21.34	16.64	25.36
8	Mkrtumyan Tatevik Robert	30.24	19.22	25.45	25.48
9	Zakoyan Mariam Harutyun	28.18	20.34	30.45	26.49
10	Khachatryan Vahan Vazgen	15.43	15.61	17.3	18.35
11	Ghazaryan Sona Ashot	25.47	37.78	23.84	29.27
12	Bezirganyan Grigor Vahan	10.00	17.36	25.84	27.54
13	Ghazaryan Anna Grigor	36.47	23.57	20.54	25.18
14	Hovhannisyan Gabriel	35.23	25.76	34.94	28.23
15	Arzumanyan Gor Simon	25.67	19.41	15.45	20.18

Time Log of the Comparison Group

	Name	Time 1	Time 2	Time 3	Time 4
1	Nazaryan Aram Haykaz	15	14.22	13.25	14.23
2	Khachatryan Anna Sargis	11	18.64	12.32	16.15
3	Martikyan Ruben Artashes	9.32	10.27	12.48	15.18
4	Krist Samuel Siraki	16.49	18.15	20.23	14.52
5	Abrahamyan Veronika	12.48	7.42	9.05	23.07
6	Sargsyan Viktorya Arman	20.18	5.23	15.36	7.32
7	Zmoyan Hasmik Gevorg	19.98	15.45	25.18	20.07
8	Harutyunyan Lilit Novlet	8	11.1	18.49	15.15
9	Sislyan Alexis Gevorg	11.05	12.5	22.1	18.42
10	Babayan Gevorg Samvel	12.07	10.52	22.49	13.52
11	Ghazaryan Mary Ruben	23.36	13.17	16.17	16.45