AUTOMATED FEEDBACK AND TEACHER FEEDBACK: WRITING ACHIEVEMENT IN LEARNING ENGLISH AS A FOREIGN LANGUAGE AT A DISTANCE

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ABSTRACT

Information and communication technologies have been transforming the way we teach and learn. Either for facilitating teaching practices or for making learning more interesting and joyful for the learners, artificial intelligence-based applications are utilized in recent years. In this connection, this study intends to examine if automated feedback and teacher feedback contribute to academic writing achievement and whether they differ in their effect on achievement in learning English as a foreign language in an open and distant learning context. The participants of the study were open education faculty students in a higher education institution in Turkey. In this quasi-experimental quantitative study repeated measures design was adopted. the participants were given writing tasks each week in a nine-week writing activity and they received feedback from their English language teachers for the first three tasks, and they received feedback from the software for the last three tasks. All participants wrote an English text as a diagnostic test at the beginning of the process. At the end of the teacher and software feedback phases, they took post-tests. All grades were statistically analyzed in order to find any effect of regular feedback either from a language teacher or from an online software on academic writing achievement. Results revealed significant differences between the diagnostic test and two achievement tests. Participants tended to improve their academic writing skills by taking regular feedback, and it was observed that the writing scores increased slightly more when receiving feedback from teachers compared to automated feedback software.

Keywords: Automated feedback, English as a foreign language, writing achievement, open and distance learning, teacher feedback.

INTRODUCTION

The English language has become a global language and medium of both traditional and online instruction across the world. This has made English a must course in many countries. It is known that teaching English as a foreign language (EFL) in open and distance education context has its own difficulties, and it becomes even more challenging for those instructors who have less favorable views of technology (Kessler & Plakans, 2008). Interaction, as one of the most essential components of open and distance learning (Simonson, Smaldino, Albright & Zvacek, 2006), can be supported via regular, effective, and timely online feedback. Likewise, Moore and Kearsley (2012) highlight the importance of timely, effective feedback. Particularly, in language learning, certain skills like writing require regular, continuous feedback from the instructor (Andersen,

Yannakoudakis, Barker & Parish, 2013, p. 32). Studies in the literature report large amounts of evidence in favor of enhancing the role of feedback on EFL writing achievement (Bozkurt & Acar, 2017; Daneshvar & Rahimi, 2014; Ferris, 2006; Hattie & Timperly, 2007). In these studies, timely and effective feedback given to writing activities significantly increases student success (Daneshvar & Rahimi, 2014; Hattie & Timperley, 2007; Scheeler, McKinnon, & Stout, 2012; Shute, 2008). Moreover, formative feedback has been seen to increase fluency in writing skills (Hier & Eckert, 2014). With the help of feedback, learners engage in dialogue within themselves by making reflections on what they produce, develop their own understanding and ensure their language development by internalizing correct forms (Swain, 1995). According to the Interaction Hypothesis (Swain, 1985) in foreign language learning, learning occurs through the exposure of the student to the target language, the production of the language, and feedback they receive about this production (Gass & Mackey, 2007). However, the growing number of students in mega universities makes it even harder to provide language learners with individualized feedback (D'antoni, et al., 2015, p. 2). In this study, an automated feedback tool within the scope of EFL learning at a distance is examined in terms of enhancing English writing achievement.

THEORETICAL FRAMEWORK AND LITERATURE REVIEW

Feedback in Foreign Language Learning

Feedback, which has various definitions in the literature (Carter, 1984; Mory, 2004), is defined in this study as any kind of formative, indirect or indirect semi-corrective remedial written commentary, sign, or indicator that a learner can approve (Wu, 2014), evaluate (Johnson & Johnson, 1993), add, and restructure his/her existing knowledge whenever he/she needs it during the learning process. This feedback might be for learner's current activity, for the learning process, for the learner's own development, or for his/her future planning as long as it serves their learning aims.

There are different sources of feedback, and the most common one is teacher or instructor feedback (Martin & Valdivia, 2017). Apart from teacher feedback, there are also peer feedback, automated feedback, and self-correction. It is emphasized that learners tend to find teacher feedback more complex, yet they perceive it as more reliable and effective when compared to other sources of feedback. This might be due to the fact that teachers mostly use their expertise and reflect their own insights onto the feedback they give, which in result creates more effective feedback process (Gielen, Tops, Dochy, Onhema & Smeets, 2010).

Feedback plays a significant role in foreign language learning processes as well, and especially developing productive skills requires more intensive practice along with more feedback exchanges between content-teacher-learner. According to the Interaction Hypothesis in the field of foreign language acquisition, structures such as input (Krashen, 1982, 1985, Long, 1996), interaction (Pica, 1998), feedback, and output (Swain, 1985, 1995) play an important role in the learning process. Feedback encourages learners to create hypotheses by reviewing what they produce about the nature of language problems. Thanks to the feedback, the learner gets the opportunity to make performance arrangements by interacting with the more competent and knowledgeable counterparty. Feedback also efficiently combines input, student prior knowledge, selective attention, and output (Long, 1996, pp. 451-452). Krashen (1985) stated that language learning is directly related to the amount of understandable input a learner receives. In order for learners to internalize the forms and structures in a foreign language, learners need tools such as repetitions, affirmations, re-corrections, and controls to reinforce the meaning (Pica, 1994, s. 500). Learners become aware of their linguistic problems and structures that they do not know or know wrong with the productions they make in a foreign language. This awareness can be achieved through explicit or implicit feedback (Swain, 1995, p.129).

Particularly, writing has always been recognized as an effective skill that contributes to students' language learning. However, for many EFL learners, writing is considered to be challenging since it is an active, productive skill (Erkan & Saban, 2011), and because it requires rhetorical organization, proper language use, and a certain level of vocabulary background. Therefore, the questions whether feedback improves learners' academic writing skills and what kind of feedback is more effective have been the focus of attention in many studies (Bozkurt & Acar, 2017; Hattie & Timperly, 2007). Gebhard (2000), underlines the importance of process approach to writing by pointing out that learners should engage in a process of creating and recreating by writing multiple drafts so that they can make inner evaluations. According to Sulistyo, Mukminatien,

Cahyono, and Baukah, (2019) writing in foreign language as a process becomes more effective when it is accompanied by educational technologies.

Feedback has been discussed and categorized according to its functions such as error analysis, motivation, and interaction. Of these functions, the error analysis helps learners clarify and understand their errors (Mory, 2004). The other function of feedback might be to motivate and encourage learners by making them realize that they are making progress (Hattie & Timperley, 2007; Pyke & Sherlock, 2010). One function of feedback might be to enhance interaction in the learning process, which in return might diminish the learners' feelings of isolation (Alger & Kopcha, 2009).

Automated Feedback in Foreign Language Learning

The increasing demand for foreign language learning tools to support the teaching and learning of the English language all around the world (Chodorow, Gamon & Tetreault, 2010, p. 420) triggered the development of automated scoring and feedback systems for the assessment and learning of a language. However, giving automated scores and feedback is regarded as an extremely complex task as it requires expertise in first or second language acquisition (SLA), language assessment, educational measurement, and computational linguistics (Xi, 2010). It is expected that machine learning and NLP will have a major impact on teaching EFL (Al Emran & Shaalan, 2014, p. 393). To the authors, these technologies have led to the creation of intelligent language tutoring systems (ILTSs), which attempt to process and assess learner input to provide error detection, error source, and immediate individualized feedback. Automated feedback is of paramount importance in the learning experience, especially thanks to the effective and rapid response it provides in language learning (Boud & Molloy, 2013; Nicol, 2010). Among reasons for using automated feedback systems is their structure that is ".... claimed to be effective if it (a) is individualized according to specific learner input, (b) points to the error type, (c) explicitly explains the error, and (d) leads to self-correction" (Cotos, 2011, p.423).

Automated feedback is not only regarded as cost-effective, but it is believed to give rigorous and prompt feedback as well (Hyland & Hyland, 2019). The effect of automated feedback on foreign language writing quality has been examined in only a small number of studies (Wilson, Olinghouse & Andrada, 2014). When the studies in the literature are evaluated, it is observed that the automatic feedback has the potential to improve the writing skills of EFL learners (Grimes & Warschauer, 2010; Shermis & Burstein, 2013; Cheng, Law & Wong, 2016). Some findings indicate that automated feedback helps learners reduce the number of errors in grammar, mechanics, and style (Kellogg, Whiteford, & Quinlan, 2010). Also, automated feedback increases content and holistic quality of papers (Wade-Stein & Kintsch, 2004), and overall writing ability of students in school districts (Vantage Learning, 2007). Even though there are few studies that suggest positive effects of automated feedback on the quality of learner texts, studies demonstrating the positive effects of these tools on overall writing proficiency are still limited (Stevenson & Phakiti, 2019). Despite highly positive perception on the benefits of the systems indicated above, there is still inadequacy that causes contradictions between instructors and narrow revisions among students (Warschauer & Grimes, 2008; Schulze, Heift, Thomas, Reinders & Warschauer, 2013). More studies regarding the empirical evaluation of automated writing evaluation feedback used for foreign language teaching/learning and academic writing should be conducted (Cotos, 2011) because studies have focused mainly on outcomes, and those studies tend to lack a focus on the learning process. Therefore, they shed no light on how automated feedback may shape learning to write (Chen & Cheng, 2008). According to Ramaswamy (2012), studies on automated feedback tools tend to give more importance to technical developments and the accuracy of the tools rather than the learning and teaching process. That is why, these studies are regarded as methodologically unsound and outcome based (Ramaswamy, 2012). More importantly, most of these studies in the literature focus on the efficiency of automated feedback systems in face-to-face learning contexts (Wilson & Czik, 2016) or distance education contexts. According to Stevenson and Phakiti (2019), automated writing feedback and evaluation tools have been designed for classroom use in order to decrease teacher labor on papers. They are regarded as supplementary tools, not as substitutes for teachers (Stevenson, 2016). These automated writing tools seem to be often used in English as a second language (ESL) settings) like college and high school classes with diverse student population (Stevenson & Phakiti, 2019). Some other studies analyzed automated writing tools in tertiary EFL settings (Li, Link & Hegelheimer, 2015; Lu & Li, 2016; Yu, 2015). These tools have the potential

to improve English writing proficiency of learners who are not necessarily students at a formal educational institution but might be adult learners who embark on lifelong learning in their own open learning contexts such as social networking sites. With these considerations in mind, this study focuses on those adult learners who voluntarily participate in the study to improve their English writing skills.

Write & Improve and Teacher Feedback

Write & Improve, an automated writing practice and feedback tool, used in this study, might provide an insight into the potential contributions of such tools on writing achievement. Write & Improve brings together long-standing academic research and technology in teaching/learning English in association with Cambridge English (Cambridge English, 2018). The platform provides writing practice and feedback in an intuitive, engaging, and easily interpretable way for EFL learners and it may be considered as a pedagogical application environment rather than a text-editing tool. Writing is regarded as a significant skill in language classrooms, and improvement in linguistic accuracy helps learners better communicate their ideas. More important point is to provide effective corrective feedback to improve linguistic accuracy (Li, Link & Hegelheimer, 2015). As an automated feedback tool Write & Improve also provides graphical feedback showing how well the student is writing (Caccamise, Franzke, Eckhoff, Kintsch, & Kintsch, 2007; Kintsch et al., 2007). Although there are studies in which different automatic feedback tools are used, current studies especially on Write and Improve are still limited (Cheng, Law & Wong, 2016, Czaplewski, 2009). For example, in Wali and Huijser's (2018) study majority of the learners found automatic feedback very useful and emphasized that it contributed to their development not only in writing but also in grammar and vocabulary.

The software feedback content that the participants of this study were exposed to included indirect, semi-corrective feedback on word-level such as spelling, grammar and vocabulary choice. Also, the tool drew attention of the students by coloring parts of sentences where more attention needed. The software did not provide direct correction. An example of software feedback can be seen in Figure 1.

Figure 1. Software feedback sample

The content of teacher feedback included mostly direct, semi-corrective feedback on word-level and mechanics including punctuation, word choice, tense, word order and spelling. The teacher gave feedback on the social media platform just below the tasks submitted by the students as a comment. The teacher either capitalized the correct form or suggested revision for problematic areas. An example for teacher feedback can be seen in Figure 2.
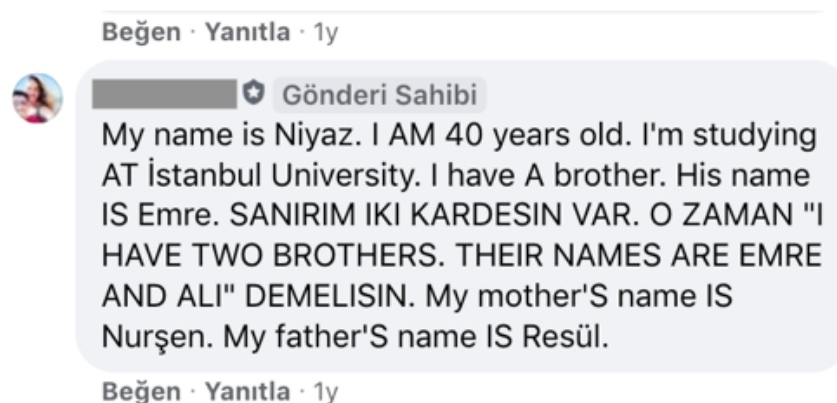

Figure 2. Teacher feedback sample

SIGNIFICANCE OF THE STUDY

Automated feedback tools have been investigated in a variety of studies across different contexts and genres, yet there is not much empirical evidence on the implementation of such tools with adult learners in an open and distance learning context. This study aims to investigate potential contributions of regular feedback from teacher and automated feedback tools to writing achievement in EFL learning for guiding writing practice purposes rather than writing assessment. Distance education that particularly depends on technological innovations may require new and authentic ways, which may require different feedback methods (Borup, West & Thomas, 2015). By means of these methods, learners can receive synchronous or asynchronous feedback that may have a positive impact on their online learning performance (Goldsmith, 2014). As a striking concept that pushes new boundaries in distance education, human-like feedback started to be given by automated feedback tools.

Another importance of this study is that it can give ideas about how much these tools, by giving fast and quality feedback on writing tasks as supposed, can help alleviate the burden of dealing with mechanical errors on adult learners who try to learn English as a foreign language with their own efforts in the context of lifelong learning. The study intends to answer the following main research question:

"To what extent does regular feedback contribute to English writing achievement of adult learners in an open and distance learning context?"

In order to anlayze the main research question, the following sub-questions were sought:

a. To what extent does teacher feedback contribute to English writing achievement of adult learners in an open and distance learning context?"

b. To what extent does automated feedback contribute to English writing achievement of adult learners in an open and distance learning context?"

c. Is there any significant difference between the intial step of regular feedback treatment (diagnostic test) and final step of the regular feedback treatment (software feedback post test)?

METHODOLOGY

In this quasi-experimental quantitative study a repeated measures design was used as it employs only a single group of participants. It is known that in "a repeated measures design, all participants in a single group participate in all experimental treatments, with each group becoming its own control. The researcher compares a group's performance under one experimental treatment with its performance under another experimental treatment" (Creswell, 2012, p.315).

In this study, the participation was on a voluntary basis and 36 learners participated in the study all by taking a pretest, three writing tasks on different topics in which they received feedback from language teachers, a post-test followed by three more writing tasks on different topics in which they received feedback from Write and Improve software, and another post-test. Creswell (2012) points out that "…in terms of threats to internal validity, this design is not affected by threats related to comparing groups (i.e., selection, treatments, regression, mortality, maturation, or interactions with selection)" (p.316). However, time can be seen as a potential problem that increases the likelihood of influencing the outcome measure. Adequate time intervals should be left between the first application and the second application. Otherwise, the first application may affect the second application (Creswell, 2012, p. 316). In order to minimize the effect of the first treatment (teacher feedback), on the second one (the software feedback), the participants did not start the following tasks until 3 weeks passed.

Participants and Settings

The participants of the study were members in an open learning study group on a social networking platform, Facebook, and they were of various cities in Turkey. They were all graduates of an open education faculty. English language was compulsory and embedded in the curriculum in the majority of the programs in the faculty they were graduated from. Researchers made an announcement regarding the invitation to the study in the closed group. Those who wanted to take part in the study were grouped in another closed group that was opened particularly for the study. In the group the participants were informed about the procedures and how to use the automated feedback platform through videos and announcements. The learners participated in the study voluntarily, and their ages ranged from 28 to 54. All participants had completed their compulsory English I and English II courses successfully. These two compulsory courses at the faculty covered learning outcomes at A2 level of English proficiency. The number of participants varied from the first week of the study to the last week that is because some of them did not submit a few tasks. Therefore, the number of those who consistently participated throughout the study was 36.

Instruments

The announcements for the study were made in an open learning study group on a social networking platform, Facebook. The participants were invited to the study via this online platform, and they received writing tasks and instructor feedback on the same platform. The teacher raters who evaluated the diagnostic test and post tests were at least 10-year experienced EFL lecturers at Anadolu University School of Foreign Languages. For the diagnostic test, the teacher feedback post-test, and the software feedback post-test independent raters' scores were compared and correlation was found to be .951, .985, and .915 respectively. This shows a high level of inter-rater reliability between the two raters of the study as Intraclass Correlation Coefficient (ICC) of .80 or higher reflects high reliability (Prince, Makrides, & Richman, 1980).

An analytic EFL writing criterion (see Appendix A), which belongs to Anadolu University School of Foreign Languages Testing Office, was used in the study with an official permision. This analytic criterion consists of components which are content, organization, grammatical competence, and lexical competence. It was used to to grade pre-tests and post-tests of both software feedback phase and teacher feedback phase outputs.

Procedures

The study was conducted in 2019. The participants were invited to the study on the closed Facebook group called "Distance Learners". The researchers opened another closed group called "Write and Improve" for those distant learners who accepted the invitation. Volunteered participants were primarily given a

diagnostic test that was a paragraph describing themselves. As the study aimed to analyze whether there would be development of writing proficiency at individual level, the purpose of the diagnostic test was to evaluate the writing proficiency level of each participant as their own starting points. Two independent raters evaluated the texts based on the criteria, and interrater reliability of the raters was calculated. Throughout the study the participants were given only descriptive tasks so that there would be no impact of genre difference on their achievement scores. After the diagnostic test, participants were given three different tasks, and they received online indirect semi-corrective feedback for each from a language teacher in two weeks' time. The indirect semi-corrective feedback included underlying problematic areas and suggesting learners' alternative corrections. Once the participants received their feedback for the last task, they were given a post-test that asked them to write a paragraph about their daily routines. This post-test at the same time served as a diagnostic test (starting point) for the second treatment, which was software feedback. After three-week interval the participants were given short information about how to use Write and Improve and they received three more tasks in each following week. They uploaded their tasks on the platform, and received automated feedback for their work as many times as they wished. The software provided indirect semi-corrective feedback by highlighting problematic areas such as spelling, word choice, tense, part of speech sentence fragments, and punctuation. It also offered possible corrections for those problematic areas. Once task and feedback processes were completed, the participants took a post-test that asked them to write a paragraph about the reasons why learning English was important to them. Their paragraphs were evaluated by two independent raters based on a holistic criterion. The scores for pre-test and post-tests were compared statistically via repeated measures t-test. Figure 3 describes the procedure of the study.
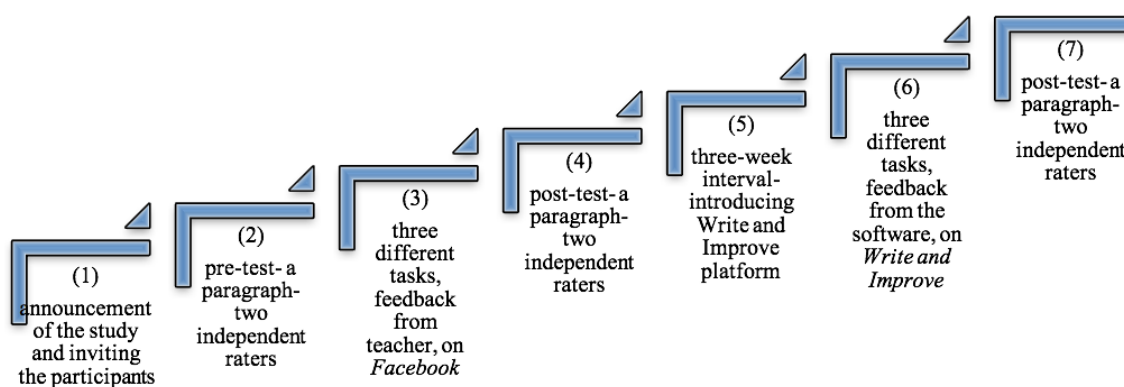

Figure 3. Procedure of the study

Data Analysis

In this repeated-measures design study, diagnostic test, post-test after teacher feedback (which also served as a diagnostic test for the second treatment) and post-test after software feedback were all evaluated by two independent raters based on a specific writing evaluation criterion. Inter-rater reliability of the raters for each test was calculated by correlation coefficient statistics (see Appendices B, C, D). Before running paired-samples t-test analyses to compare the mean differences of diagnostic and post-tests in each treatment, normality tests were calculated (see Appendix E). For normality tests Shapiro-Wilk was preferred as it is accepted as stronger and more convenient when the number of participants is lower than 50 (Razali & Wah, 2011).

FINDINGS

In order to answer the sub-research questions (a) and (b), researchers analyzed possible differences between mean scores of pre and post-tests for each application phase. The means scores of pre-test and post-test were compared using paired samples t-test statistics. As an assumption of t-test analysis, the normality test was run for pre-test, teacher feedback phase post-test and software feedback post-test. The calculated value was higher than .05, which shows that the distribution is normal (see Appendix E). A paired-samples t-test was conducted to compare writing achievement of the learners in no feedback (diagnostic test) condition and

teacher feedback condition. There was a statistically significant difference in the mean scores for diagnostic test (M=9.31, SD=2.012) and teacher feedback post-test (M=13.39, SD=3.515) conditions; t(35)=-6.680, p<.001. Table 1 shows the paired-samples t-test analysis.

Table 1. Paired samples t-test between pre-test and teacher feedback post-test

Paired Samples statistics	$\bar{X}$	n	SD	t	df	p
Diagnostic	9.31	36	2.01	68	35	.001
Teacher_Feedback_PostTest	13.39	36	3.51			

At the end of the automated feedback phase the participants took another post-test, which was rated by two independent raters through the same holistic criteria and which revealed high inter-rater reliability. A paired-samples t-test was conducted to compare writing achievement of the learners in teacher feedback post-test, which served as the diagnostic test for the second treatment (software feedback), and software feedback post-test. There was a significant difference in mean scores for teacher feedback (M=13.39, SD=3.515) and software feedback post-test (M=14.71, SD=3.274) conditions; t(35)=-2.104, p=.04 (Table 2).

Table 2. Teacher feedback post-test as a diagnostic test and software feedback post-test

Paired Samples statistics	$\bar{X}$	n	SD	t	df	p
TeacherFeedbackPostTest as Diagnostic test	13.39	36	3.515	-2.10	35	.04
Software_Feedback_PostTest	14.72	36	3.274			

Regarding the last sub-research question (c), the researchers intended to see if there is any significant difference between the intial step of regular feedback treatment (diagnostic test) and final step of the regular feedback treatment (software feedback post test). For this purpose, a paired-samples t-test was conducted to make the comparison. Findings revealed that there was a significant difference in mean scores for no feedback (M=9.31, SD=2.012) and software feedback post-test (M=14.71, SD=3.274) conditions; t (35)=-10.637, p=.001 (Table 3).

Table 3. No feedback (diagnostic test) and software feedback post-test

Paired Samples statistics	$\bar{X}$	n	SD	t	df	p
Diagnostic (No feedback)	9.31	36	2.012	0.63	35	.001
Software_Feedback_PostTest	14.72	36	3.274			

DISCUSSION

This study took place in an online open and distance learning context with voluntary participation of 36 adult learners. This study did not intend to compare and contrast each treatment condition post-tests with each other. Instead it aimed to examine if regular feedback, regardless of its source, contributes to EFL writing achievement to some extent. Findings of the study revelaed that there is improvement in writing achievement of EFL learners with each treatment. Therefore, it can be concluded that software feedback might support learners' writing achievement when teacher feedback is elusive or it can be used as supplementary to the teacher feedback. There is evidence in the literature that automatic feedback can be more useful when used with teacher guidance (Sherafati et al., 2020; Wang & Wang, 2012).

The mean score of the diagnostic test was calculated as 9.31 out of 20, which can be regarded as a moderate achievement. For the first three tasks the participants received regular feedback from a language tutor on a social networking site. At the end of the first phase, the learners took a post-test, which was evaluated by two independent raters, and the inter-rater reliability was found to be high. The mean score of teacher feedback

post-test was calculated to be 13.39. The mean scores show that there is a sharp increase in learner writing achievement after receiving regular teacher feedback. The increase was found to be statistically significant. This might show that the writing achievement of the learners increased with the help of regular online teacher feedback. Since the study took place in open and distance learning context, there might also be other factors affecting the achievement such as extra instruction, exposure to target language, private course, social learning networks, learner WhatsApp groups, and mobile language learning application. However, these outside factors cannot be controlled unless the study has an experimental design. Therefore, these probabilities were counted beyond the scope of this quantitative study. As an essential part of learner success in achieving target skills, feedback plays a significant role in EFL (Boling et al., 2012; Bonnel, 2008; Hattie & Timperley, 2007). In this sense, this study showed parallel findings with the relevant literature (Alharbi, 2016; Purnawarman, 2011). For many language learners writing skill is regarded as one of the compelling skills (Erkan & Saban, 2011), yet the learners in this study seemed to overcome this challenge by receiving regular online feedback from the language tutor and revising their work based on teacher's semi-corrective feedback.

In order to minimize the effect of first treatment (teacher feedback), on the second one (the software feedback), the participants did not start the following tasks until three weeks passed. As the second phase the participants completed three different writing tasks for each of which they received regular feedback from the software. The mean score of the software feedback post-test revealed that the achievement level of the participants increased at a statistically significant rate. Even if the mean score of software feedback condition did not increase as sharp as the teacher feedback condition, the gradually increasing scores showed gains in EFL writing achievement thanks to automated feedback, which is a similar finding with some studies (Graham et al. 2015; Wilson & Czik, 2016; Wilson, Olinghouse & Andrada, 2014). This finding might also indicate that automated feedback software supports EFL writing achievement at a certain extent, yet they might not adequately replicate a real teacher (Cheng, 2017). Automated feedback software can be regarded as supplementary tools in EFL writing feedback (Wang & Wang, 2012). When evaluated in the context of this study, automated feedback tools can be seen as reinforcing the learner's own efforts and contributing to the motivation of the learner to sustain.

As advantageous sides are taken into account, learners can be free to upload their works on the system as many times as they desire. In this study, the online classroom learner activity data showed that learners tended to have their work checked by the system multiple times. They kept revising their works according to the formative feedback provided by the system. These attempts might be regarded as an application of self-regulated learning, which is known to increase learner achievement and motivation (Pintrich, 2000; Zimmerman, 2001) as learners engage in a process of continuously regulating their own learning with effort (Winne, 2011), managing their learning actively by themselves. In this study learners repeated attempts might indicate that learners' motivation and interest steadily increased thanks to the feedback provided by the system. It can be concluded that an automated feedback system might contribute to learner motivation and learner autonomy in EFL context (Fang, 2010) even in open learning context with adult learners. With another perspective, such tools, even though they are limited in detecting typing errors, help learners to receive immediate feedback, and this is what real teachers might not always do (Lavolette, Polio & Kahng, 2015).

The main aim of the research was to examine to what extent regular feedback contribute to the EFL writing achievement of adult learners. For this purpose, the scores of diagnostic test (no feedback condition) and final step of the regular feedback treatment (software feedback post test) were compared. Findings revealed that there was a significant difference in mean scores for no feedback and after treatments conditions. This difference cannot be owed to solely software feedback treatment or teacher feedback treatment. There must have been contribution of both treatments. The ultimate goal of the study was not to compare which treatment was more effective, but to find out if these treatments together contributed to writing achievement in general. This shows that regular feedback, regardless of its source (either from teacher or from software) contributes to EFL writing achievment to some extent. The regular feedback treatments provided by the teacher and the software might have helped learners to be better writers and each process might have created maturation for learners. Based on these findings, it can be concluded that both online teacher feedback and automated feedback have great importance when learning foreign languages. Whether from a real person or an automated system, getting regular feedback is a very useful step when practicing foreign language writing skills. Adult learners in open learning context can benefit from this service thanks to the immediate and continuous support it provides. Through learning with this kind of software, learners can practice on their own at their own pace and place.

This convenience might help develop learner autonomy because such systems allow learners to try as many times as they need, and they provide instant individualized feedback. By this way, the process of feedback practice loop accelerates, which is significant for fostering EFL writing achievement (Kellogg & Whiteford, 2009). Wang and Wang's (2012) study reveals similar results and the authors conclude that an intelligent software can encourage learners for continuous writing practice thanks to instant feedback. This, eventually, help them become more aware of their strengths and weaknesses. Moreover, on demand feedback motivates learners to revise their work based on instructional feedback continuously. Nevertheless, Wang and Wang (2012) claim that the automated feedback system fails to offer adequate feedback, and so it can be used as a supplementary tool to improve writing quality. Comparing to face to face traditional feedback, instructors may integrate intelligent technologies as supplementary tools more into their teaching processes in open and distance learning. In this way, the interaction between the content-learner in distance education can be maintained.

This study is expected to fill the gap in EFL learning at a distance through automated feedback system research. Little research explored the use of these systems in open and distance EFL learning contexts with adult learners. According to Moore and Kearsley (2012, p. 115), in open and distance learning context most learners want immediate feedback, and very few people will be satisfied with ongoing one-way communication without feedback. In this connection, the automated feedback system used in this study might meet the specific need for immediate feedback of EFL distance learners. In particular, the most important method for developing a productive skill such as writing skill is that the learner regularly writes and receives continuous formative feedback (Andersen, Yannakoudakis, Barker & Parish, 2013, p. 32). In order to achieve this, automated feedback systems might be promising for the improvement of writing as a productive skill.

CONCLUSION

According to the result obtained with the quantitative findings of this study, the writing skills of the distance learning participants improved from the first attempt to the last attempt with the contribution of formative automatic feedback and teacher feedback. This improvement was observed to increase significantly from the first task to the last one. It can be observed that regardless of its source, formative feedback seems to have a contributing role in the dvelopment of foreign language writing skill. Therefore, including formative feedback in foreign language learning processes in open and distance learning contexts can be a promising attempt that encourages learners to engage in self-correction and reflection on their own learning. As open and distance education is heavily dependent on self-regulated learning strategies, this study can be regarded as a promising one in literature. The participants of this study were adult open and distant learners who were graduates and who voluntarily joined the writing activities. When the participant profile is considered, timely and prompt automated feedback and online teacher feedback can be considered as contributors to writing improvement of self-directed learning. It is known that growing number of students create large class sizes in open and distance learning. This situation means that the workload of instructors in large classes becomes heavier. Considering that giving feedback for the language instructures is a difficult and time-consuming process, with such automatic feedback tools, the majority of the minor mistakes in the assignments from the first to the last attempt might be corrected, which makes language instructures to save time and effort. By this way, the language instructors might use more time on rather serious language problems of the learners. As these tools can provide instant feedback to learners and take on the role of an assistant, they might reduce instructor workload and shorten the grading time. From this perspective, in an open and distance learning context, such automated feedback tools can support teachers in terms of the burden of increased classroom sizes and increased expectations for individualized support. In these cases, automated feedback tools can be viewed as a cost-effective way to fix and improve learners' written outputs by providing timely and limitless feedback. They could also reinforce the learners to put efforts to accomplish the given tasks and sustain their motivation in the long term

Limitations and Suggestions for Future Research

The results of this study were based on quantitative analysis using achievement scores of the participants in different treatments. However, as pointed out in the literature a student's editing, correcting his/her drafts by using automated feedback is inadequate information for us to infer that the students actually acquire that specific feature (Hyland & Hyland, 2019). Also, these behavioural attempts are not necessarily proof of development of meta-cognitive skills, by means of which learners are able to notice, evaluate and correct

textual problems in other texts successfully (Stevenson & Phakiti, 2014). Similarly, the participants of this study might have had completely different experiences at individual level during the automated feedback process. Their achievement scores tell us very little about their engagement, social and cognitive presence, interaction, learning strategies, attitudes, and motivation levels.

In future studies, programs supported by automated feedback can be used in different foreign language contexts focusing on different feedback types. By this way, comparisons on the effect of intelligent feedback systems on the development of foreign language skills can be made accordingly. Moreover, future research regarding the scope of this study can be conducted with qualitative research designs that include other data collection methods such as interviews, observations, think alouds and reflective diaries. Also, detailed data can be collected from language specialists, software developers, distance education experts, course designers and distant learners regarding their experience. Finally, the number of the students participating in this study were limited to 36 students, so generalizing the results may not be applicable for more valid and reliable results. In this regard, future studies can consist of larger groups of learners studying in the Open Education Faculties across Turkey.

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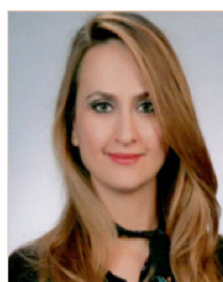
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Criterion

	Writing Criteria v3	
Components	**Descriptors**	**Grades**
Content	Addresses the topic with a wide range of details (explanations and/or exemplifications)	5
	Has some components of 3 and some components of 5	4
	Addresses the topic with moderate details with a few repetitions and/or some points are considered irrelevant.	3
	Has some components of 1 and some components of 3	2
	Is unable to include most of the details; and/or most details are irrelevant and/or mostly repeated.	1

Organisation	Establishes an effective organisation of ideas with a wide variety of cohesive devices **(transitions, sequencers, linking devices, referring expressions and punctuation)**	5
	Has some components of 3 and some components of 5	4
	Establishes a moderate organisation of ideas with a moderate variety of cohesive devices **(transitions, sequencers, linking devices, referring expressions and punctuation)**	3
	Has some components of 1 and some components of 3	2
	Is unable to establish any organisation; no variety of cohesive devices **(transitions, sequencers, linking devices, referring expressions and punctuation)**	1

Grammatical Competence	Uses a wide variety of language forms appropriately and accurately.	5
	Has some components of 3 and some components of 5	4
	Uses a moderate variety of language forms; and/or there are a few inaccuracies.	3
	Has some components of 1 and some components of 3	2
	Uses almost all language forms inaccurately; and shows no variety.	1

Lexical Competence	Uses a wide variety of vocabulary appropriately and accurately; and/or shows a good control over spelling and capitalisation.	5
	Has some components of 3 and some components of 5	4
	Uses a moderate variety of vocabulary; and/or there are a few inaccuracies; and/or shows a moderate control over spelling and capitalisation.	3
	Has some components of 1 and some components of 3	2
	Uses almost all vocabulary items inaccurately and shows no variety; and/or shows no control over spelling and capitalisation.	1

NOTES TO THE TEACHER:
1. A paper will be scored **1 out of 20; that is, 5 out of 100** if it
   - is **off-topic.** That is, it answers a completely different question or doesn't answer the given question at all.
   - doesn't answer the question **with at least 2 (two) supporting details.**
   - is **too little to assess.** That is, it doesn't meet **60% of the minimum word limit.**
2. If the **discrepancy** between two graders is **higher than 2 points**, the graders will **negotiate.**

APPENDIX B

Inter-Rater Reliability for Pre-Test

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.951	.953	2

Intraclass Correlation Coefficient

	Intraclass Correlation[b]	95% CI		F Test			
		LL	UL	Value	df1	df2	Sig
Single Measures	.907[a]	.826	.952	20.569	35	35	.000
Average Measures	.951[c]	.905	.975	20.569	35	35	.000

Two-way mixed effects model where people effects are random and measures effects are fixed.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type C intraclass correlation coefficients using a consistency definition. The between-measure variance is excluded from the denominator variance.

c. This estimate is computed assuming the interaction effect is absent, because it is not estimable otherwise.

APPENDIX B

Inter-Rater Reliability for Pre-Test

Inter-Rater Reliability for Teacher Feedback Post Test

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.985	.986	2

Intraclass Correlation Coefficient

	Intraclass Correlationb	95% CI		F Test			
		LL	UL	V	df1	df2	Sig
Single Measures	.907[a]	.942	.985	65.996	35	35	.000
Average Measures	.985[c]	.970	.992	65.996	35	35	.000

Two-way mixed effects model where people effects are random and measures effects are fixed.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type C intraclass correlation coefficients using a consistency definition. The between-measure variance is excluded from the denominator variance.

c. This estimate is computed assuming the interaction effect is absent, because it is not estimable otherwise.

Inter-Rater Reliability for Write And Improve Software Feedback Post-Test

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.915	.917	2

Intraclass Correlation Coefficient

	Intraclass Correlation[b]	95% CI		F Test with True Value 0			
		LL	UL	V	df1	df2	Sig
Single Measures	.843[a]	.714	.917	11.766	35	35	.000
Average Measures	.915[c]	.833	.957	11.766	35	35	.000

Two-way mixed effects model where people effects are random and measures effects are fixed.

a. The estimator is the same, whether the interaction effect is present or not.

b. Type C intraclass correlation coefficients using a consistency definition. The between-measure variance is excluded from the denominator variance.

c. This estimate is computed assuming the interaction effect is absent, because it is not estimable otherwise.

Tests of Normality for Diagnostic, Teacher Feedback Post-Test, Software Feedback Post-Test

Tests of Normality						
	Kolmogorov Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Diagnostic	.135	36	.095	.949	36	.094
Teacher_Feedback_ Post test	.093	36	.200*	.958	36	.185
Software_Feedback_ Posttest	.119	36	.200*	.954	36	.139

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction