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UNLEASHING THE POWER OF COMPUTER-MEDIATED ANONYMOUS PEER FEEDBACK IN ENHANCING SELF-REGULATED LEARNING

Students were expected to employ self-regulated learning (SRL) skills to take control of their learning in computer-mediated learning environments during emergency remote teaching (ERT). Considering its importance, it is a must to foster SRL through various practices in English writing classes. Peer feedback is practical in that it enables students to monitor their writing, foster SRL skills, and facilitate learning. Therefore, the study aimed to explore the impact of computer-mediated anonymous peer feedback on students' SRL skills and find out students' experiences of giving and receiving feedback. Employing a quasi-experimental design, the study used an online SRL scale and reflective journals for data collection from preparatory school students. The data were analyzed using paired samples t-test and coding of the reflective journals. Results demonstrated that computer-mediated anonymous peer feedback significantly improved the SRL skills of students. Moreover, students stated that reviewing peers' papers and making self-evaluations helped them improve their linguistic performance. However, it was found challenging to trust the provided feedback. Students also felt anxious about offending classmates or giving inaccurate feedback, embarrassed of making mistakes, and exhausted from reviewing papers. Along with these negative feelings, they also reported positive emotions such as self-confidence and enthusiasm. The results emphasize that computer-mediated anonymous peer feedback can be incorporated into English writing courses, especially in online settings. Future studies should investigate how computer-mediated anonymous peer feedback affects students' writing performance and SRL skills in different modes of instruction among different student populations.

Keywords: emergency remote teaching; computer-mediated anonymous peer feedback; peer-teacher conference; ESL writing; self-regulated learning.

1. INTRODUCTION

Internet use and technological advancements have facilitated education by transforming its form into distance education that allows learners to reach educational resources through different media channels. English language education has also been influenced by this transformation with the introduction of various computer-mediated synchronous and asynchronous resources such as blogs, web conferences, and learning management systems (LMS), which are resorted to enable language content delivery and interaction between learners and teachers. (Higgins, 1995; Thorne & Payne, 2005).

These resources were substantially used during the COVID-19 pandemic with the sudden pivoting to online education, leading many teachers to conduct their lessons through emergency remote teaching (ERT). ERT is distinguished from the distance or online education in terms of its purpose, which is "not to re-create a robust educational ecosystem but rather to provide temporary access to instruction and instructional supports in a manner that is quick to set up and is reliably available during an emergency or crisis" (Hodges et al., 2020, para. 13).

English language teaching and learning (ELTL) during ERT has drawn the attention of many learners who lack financial support and convenience, but it has remained unclear if they can master certain skills through remote instruction such as writing. Regarded as one of the most challenging tasks by language learners, writing requires the use of grammar and vocabulary coherently with a high level of organization skills (Hedge, 2000). In traditional writing education, teachers expect students to create a text grammatically and linguistically accurate to be graded, which is called as product approach (Matsuda, 2003). At this point, teachers may tend to focus only on errors while evaluating papers (Lee, 2017). On the other hand, the process approach highlights the use of such cognitive skills as inference, deduction, memorization, generalization, and monitoring (Pritchard & Honeycutt, 2006). In both approaches, the fluency and accuracy of vocabulary, grammar, content, organization, and mechanics determine the quality of writing. Hence, any point students have difficulty in needs to be treated through corrective feedback (Ellis, 1993). However, teachers' taking the responsibility of responding to students' papers as the only authority can sometimes be intimidating for students and exhausting for teachers. Besides, it may lead to an unbalanced classroom environment where teachers notice and correct errors, and the students act as passive learners who solely examine the corrections.

As writing requires both the writer and the audience to negotiate for meaning, it can also be considered a social activity (Carson & Nelson, 1996). Due to the transition to the process approach from the product approach, corrective feedback has gained more importance in its social context. It is hard to deny that agents' comments and suggestions serve considerable benefits to students to attain their learning goals (Boud & Molloy, 2013). In this respect, giving feedback, regardless of the feedback source and type, is significant since it forms a supportive learning context by helping students gain awareness of their performance (Richards & Lockhart, 1994).

Huang (2004) argues that students should be in cooperation with their peers and teachers to master their writing skills. In peer feedback which facilitates the internalization of what is learned, students get scaffolded by both peers and teachers until they gain independence in their learning (Vygotsky, 1978). Yet, the literature puts forth that relationships among students may harm the peer feedback process (Carson & Nelson, 1996). As it is possible to damage interpersonal relationships due to negative comments, scholars suggest using such a means of feedback as computer-mediated anonymous peer feedback to prevent bias and hurting, or rewarding peers (Topping, 1998; Zhao, 1998). Keeping peer feedback providers and receivers anonymous yields such positive outcomes in learning as objective and critical feedback, less interpersonal concerns, self-regulation, and autonomy (Hyland, 2003; Valacich et al., 1992). Moreover, by taking responsibility of their own learning through self-regulated learning (SRL), students perform better in academic tasks (Boekaerts, 1999; Ehrman et al., 2003).

As a crucial component of learning and achievement, SRL is a dynamic process defined as "the control that students have over their cognition, behaviour, emotions and motivation through the use of personal strategies to achieve the goals they have established" (Panadero & Alonso-Tapia, 2014, p. 450-451). In another term, SRL, is the ability of students to monitor and manage their own learning process by taking the ownership of their learning. Besides engaging in self and peer assessment during the learning process, SRL involves shifting the focus from teaching to learning. Bandura's (1986) social cognitive theory contending that learning occurs when behavioral, environmental, and personal factors interact reciprocally serves as the foundation for the SRL theory, in particular Zimmerman and Moylan's (2009) cyclical SRL model.

Regarding second language acquisition (SLA), language proficiency and achievement are highly correlated with the use of SRL strategies and social cognitive theory (Oxford, 2003; Wood et

al., 1990). Pointing to the significance of SRL skills in language learning, Ellis (1989) claims that successful language users and learners regulate their learning by determining their needs, setting goals, and using strategies. As online learners have been expected to organize and monitor their own learning during the ERT, online learners should be supported to gain SRL skills such as goal-setting, planning, motivation, self-evaluation, and help-seeking (Cai et al., 2020; Zimmerman, 2004). Therefore, it is substantial to improve SRL skills and integrate them into computer-mediated writing education.

Despite being considered as "an admission of defeat, embarrassing, and something to be avoided whenever possible" by university students, help-seeking may be the most important SRL skill which should be adopted by university students (Karabenick & Dembo, 2011, p. 33; Koc & Liu, 2016). Self-regulation does not necessarily mean that students should be left alone with no external support from their instructors and peers (Butler, 1998). Conversely, what helps these students have self-regulation skills is providing learning contexts in which they can be part of peer and group activities, not isolating them from their socially constructed environment. Thus, peer and teacher scaffolding are necessary to effectively adopt an array of skills and strategies (Reeve et al., 2008). Callan et al., (2020) argue that settings which promote active participation, activities encouraging students to reflect on their learning, and tasks facilitating information exchanges between students and teachers are effective ways to promote SRL.

Tung and Chin (2011) express that the social interaction among students is beyond the scope of many SRL approaches. Moreover, a vast majority of previous studies identify SRL activities, practices, and strategies in traditional classes rather than online ones. This study takes on a pivotal role by exploring students' SRL perceptions, the impact of computer-mediated anonymous peer feedback in English writing courses on students' SRL perceptions, and ultimately, the experiences of students during the computer-mediated anonymous peer feedback intervention.

1.1. Significance of the Study

Although Akbana et al. (2021) and Erarslan (2021) indicate that numerous national and international studies in language learning were conducted during the pandemic, they mostly focus on students' and teachers' perceptions and attitudes towards the ERT. Therefore, the use of peer feedback in writing lessons for the improvement of SRL skills during ERT remained unexplored (Wulandari, 2022).

Furthermore, the integration of both synchronous and asynchronous tools to structure the lessons and provide different feedback types from various sources can be considered as a novel aspect of the study. It must also be emphasized that exploring how computer-mediated anonymous peer feedback influences learning academic English writing during the pandemic can contribute to the literature substantially.

It was also essential to conduct this study as it would possibly serve as one of the first studies yielding results for the impact of computer-mediated anonymous peer feedback on the SRL skills of preparatory school students. Despite a great many studies, they do not seem to address the above-mentioned concerns (Cai et al., 2020; Csizér & Tankó, 2015; Farahani & Faryabi, 2017; Klein et al., 2021; Lam, 2015; Naibaho, 2016; Pintrich, 2000; Teng & Zhang, 2016; Uka & Uka, 2020).

Since such topics as online peer feedback and SRL of EFL university students in academic writing lessons during ERT deserve more attention for further empirical research, promoting SRL skills by gaining a deeper insight into practices and strategies used during the pandemic will have a significant contribution to the literature.

2. LITERATURE REVIEW

In his social constructivism theory, Vygotsky (1978) puts forth that knowledge exchange in a social context, active engagement, and scaffolding are factors positively affecting learning. When the adverse impacts of the pandemic are considered, one can easily claim that the isolation and lack of interaction were the primary issues both teachers and students suffered from. Therefore, the present study was conducted to create a social context to minimize the effects of these problems and

encourage learning cooperatively during the ERT.

The lockdowns around the world compelled several instructors to incorporate technology into their lessons by making adaptations in their teaching methods to create synchronous or asynchronous learning environments for students. During this period, many studies were carried out to explore different aspects of computer-mediated lessons, writing instruction and assessment, and students' self-regulation.

The present study introduces a brief literature review for a more comprehensive understanding of the research which aims to measure the impact of computer-mediated anonymous peer feedback on students' self-regulated learning skills during ERT. Previous studies have specifically focused on:

- the effects of the pandemic on education, teachers, students, resources, and policies (Atmojo & Nugroho, 2020; Dhawan, 2020; Donitsa-Schmidt & Ramot, 2020; Haslam et al., 2020; Kerres, 2020; König et al., 2020; Octaberlina & Muslimin, 2020; Rapanta et al., 2020; Rinekso & Muslim, 2020; Schultz & DeMers, 2020; Son et al., 2020; Şendoğan Erdoğan, 2020; Taşçı, 2021)
- students' writing skills during the pandemic (AbuSa'aleek & Shariq, 2021; Bin Dahmash, 2020; Öztürk Karataş & Tuncer, 2020; Yamashita, 2021; Zhang & Chen, 2021)
- the impact of peer feedback on students' writing, autonomy, and self-evaluation (Hyland, 2000; Rollinson, 2005; Villamil & De Guerrero, 1996)
- the importance of peer feedback training (Can, 2019; Min, 2005, 2006; Rahimi, 2013; Subaşı, 2002)
- effectiveness of computer-mediated writing instruction and anonymous peer feedback (Alharbi, 2018; Alhujaylan, 2019; Blake & Delforge, 2006; DiGiovanni & Nagaswami, 2001; Jiang & Yu, 2014; Lee, 2005; Liaw, 1998; Liu & Sadler, 2003; Razı, 2016; Tanaka, 2015; Tatsanajamsuk & Saengboon, 2011; Zaini & Mazdayasna, 2014)

The above-mentioned studies revealed that the main problems experienced during the pandemic were the lack of familiarity with online learning, lack of Internet connection and necessary equipment, health problems resulting from immobility, and low level of learner attention, motivation, and self-discipline. However, computer-mediated education during the pandemic was also found less demanding for teachers and more helpful for students due to its contribution to strategic skill-based learning, self-regulation, metacognitive language learning, and student-teacher interaction besides time and place flexibility, cost efficiency, and helpful technological resources.

The studies focusing on writing during the pandemic have shown that writing skills were the most improved upon the introduction of synchronous grammar and spelling tasks. In addition, corrective peer feedback during computer-mediated writing lessons was found to be effective to foster grammatical accuracy. Despite the technical challenges of online writing education, both teachers and students had a positive attitude due to the flexible nature of the online environment.

The present study is theoretically based on Zimmerman and Moylan's (2009) cyclical SRL model designed after Bandura's (1986) social cognitive theory. The model consists of three phases: forethought (planning) involving self-motivation and task analysis, volitional control (performance) involving self-observation and self-control processes, and self-reflection with self-reaction and self-judgment (Figure 1).

In the planning phase, students are expected to analyze the task by setting a goal. They use certain behavioral, cognitive, metacognitive, and environmental strategies in the performance phase to reach their goals determined in the planning. Finally, they reflect upon their performance and strategies in the self-reflection phase. Self-reflection helps students make necessary strategical changes in their learning process through self-evaluation and self-reaction.

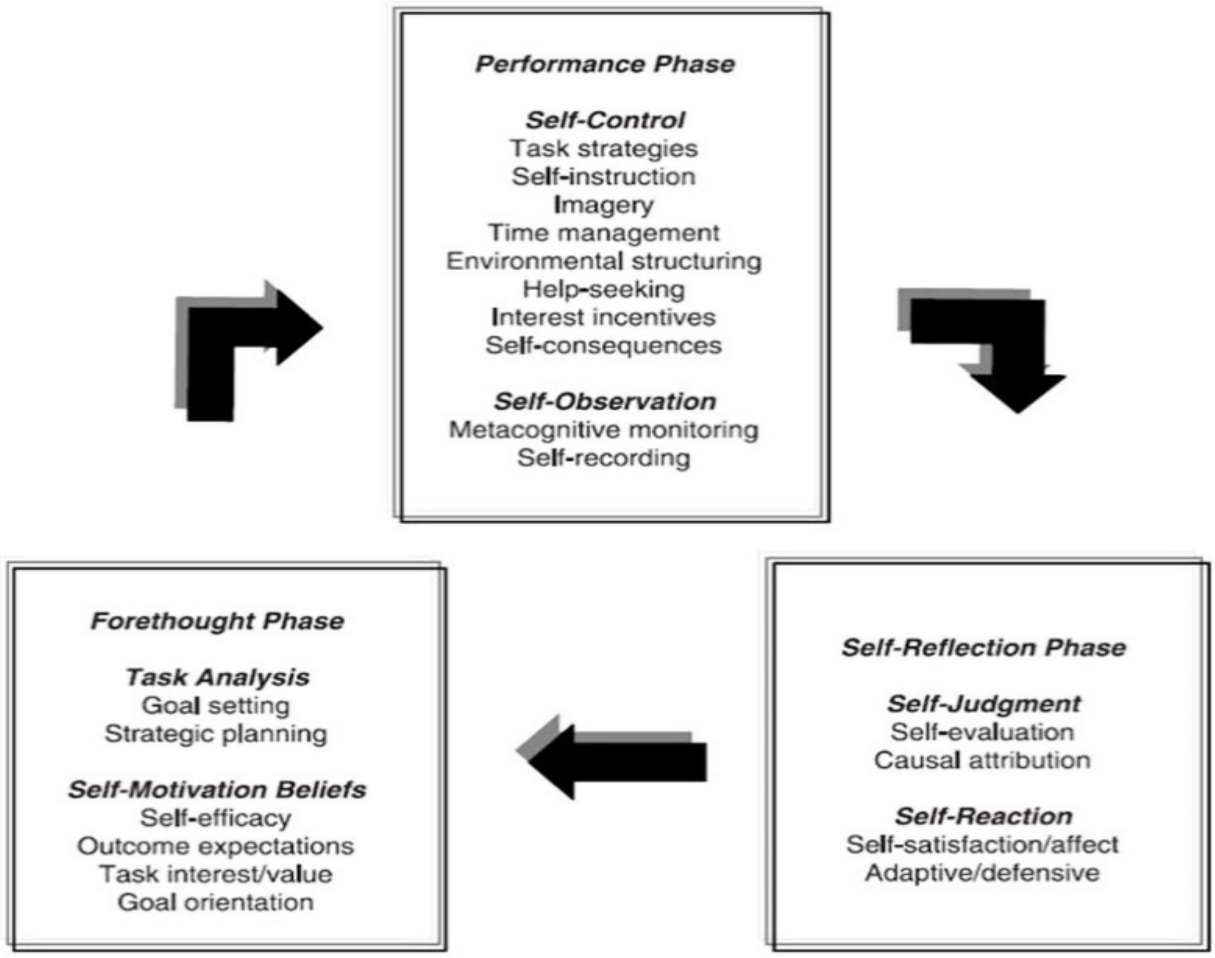

Fig. 1. Cyclical SRL model

SRL and writing, which require students to make plans by using appropriate writing strategies, are interwoven learning processes. Therefore, having SRL skills can help students write more proficiently by using a self-regulated writing process that includes planning, monitoring, and evaluation. As stated by Graham and Harris (1997, p. 109), it is of great importance to equip students with SRL skills in writing by providing "a writing environment or writing situations that increase the likelihood of self-regulation". Peer feedback is, therefore, a crucial component of writing classes as it enables students to prepare, use different methods to assess and evaluate their peers' performance, reflect on their own performance, and learn from the process.

Regarding SRL in general and ELTL context during the pandemic, the majority of the previous research has focused on:

- motivation, teacher and student attitudes, and academic achievement (Adıgüzel & Orhan, 2017; Dursun Sürmeli & Ünver, 2017; Yalçın & Karadeniz, 2016)
- the impact of different SRL methods (Karaoğlan Yılmaz et al., 2018)
- the relationship between SRL and online learning (Bradley et al., 2017; Kuluşaklı, 2022; Lin et al., 2015; Mickwitz & Suojala, 2020)
- SRL skills in ELTL, the relation between SRL skills in writing and different feedback during the ERT (Fathi et al., 2019; Mahmud & German, 2021; Teng & Zhang, 2017; Vasu et al., 2020; Xu, 2021)

These studies have concluded that EFL students' academic success and writing proficiency are correlated with SRL strategies and skills such as goal-setting and planning. However, such SRL skills as time management, self-motivation, and managing the learning environment less improved. It is also claimed that SRL skills in writing are enhanced by self and peer assessment. In particular, written peer feedback was found more practical as students' help-seeking skills improved due to the flexible

learning environment during the ERT.

Despite the importance of these studies in enhancing our insights into corrective feedback, teaching writing abilities, and learning English by using SRL skills during ERT, there is little research on the use of different feedback types and sources as well as the connection between SRL skills and writing proficiency in Turkish ERT context that involves students at preparatory schools. Therefore, it is a must to explore how the SRL skills of preparatory school students in EFL writing are impacted by online anonymous peer feedback.

Therefore, the research attempts to answer the following research questions:

1. What are the perceptions of students about their SRL skills?
    a. Is there any statistical difference in students' SRL perceptions before and after the computer-mediated anonymous peer feedback intervention?
2. What are students' opinions about the computer-mediated anonymous peer feedback
    a. as a peer feedback provider?
    b. as a peer feedback receiver?

3. METHODOLOGY

3.1. Research Design

The one-group pretest-posttest quasi-experimental design has been employed in this study. In the quasi-experimental research design, a cause-effect relationship between dependent and independent variables is established, and the researcher administers pre/posttests with non-randomly selected participants (Creswell, 2012). The present study explored whether preparatory school EFL students' SRL skills in writing improved by computer-mediated anonymous peer feedback activity. Due to the pandemic conditions, the experimental design was set with one group to compare the results obtained from the treatment.

3.2. Setting and Participants

Participants of the study were selected through convenience sampling which is a non-probability sampling type in which participants are selected considering such criteria as the accessibility, availability, and geographical proximity of participants (Dörnyei, 2007). As Dörnyei and Dewaele (2022) further indicate, "captive audiences such as students in the researcher's own institution are prime examples of convenience samples" (p. 63) Due to the accessibility and availability reasons, 26 preparatory school students with complete attendance in lessons during the ERT at the School of Foreign Languages at Kütahya Dumlupınar University participated in the study.

3.3. Instruments

The instruments used in the study were the SRL scale designed by Koçdar et al. (2018) and a reflective journal. The scale owners were contacted in advance to receive their permission.

At the beginning of the study, the 5-point Likert scale consisting of 30 items was administered to 213 students through a Google form. The reliability of the scale was found to be $\alpha = 0.923$, which can be accepted as a reliable instrument (DeVellis, 1991). The reflective journal was used for the qualitative data collection, and students anonymously shared the difficulties, emotions, and experiences they had during the peer feedback activity. The reflective journals in Turkish were translated into English. Then, a field expert back-translated the responses, and the translation was compared to the initial text for reliability and accuracy.

3.4.Data Collection

Before implementing the study, ethical approval was obtained from the Ethics Committee of the university. Moreover, pseudonyms were used to protect the anonymity of the participants due to ethical and privacy concerns.

Multiple data collection sources were used in the study. According to Dörnyei (2007), the differences in groups after certain treatments should be considered to establish causal relationships based on quasi-experimental research. Therefore, an online SRL scale was administered before and

after the computer-mediated anonymous peer feedback activity to compare the results. After the pretest, students were given a two-hour peer feedback training in accordance with Min's (2005) training model by considering that the forethought phase requires students to analyze the task, set goals, use various strategies to fulfill the task, plan their studies, and determine their performance level. Thus, in the training, they were informed about the objectives, procedure, and Jacobs et al.'s (1981) ESL Composition Profile which was found as a reliable evaluation rubric by previous research (Kalajahi & Abdullah 2015; Setyowati et al., 2019). Then, the researcher modelled giving feedback and asked them to practice it on a given paragraph.

In the performance phase, multiple-draft essay assignments were given to students for the 14-week academic term. During this period, students submitted five essays on the topics in the coursebook. After each assignment, the researcher paired up students without revealing their identities and sent the essays to pairs through the LMS the university used. Then, students gave coded feedback by using the error correction codes (Appendix A) prepared by the researcher and shared their written evaluation on the use of vocabulary, content, grammar, organization, and mechanics of their peer by using the writing rubric inserted into the virtual feedback platform *TEAMMATES* (Appendix B). After students received their own paper with the coded feedback and checked the evaluation for their essays on the platform, they rewrote their essays for teacher feedback. After receiving written teacher feedback, 30-minute online peer-teacher conferences were held with each peer group so that obscure points could be clarified and discussed. In these conferences serving for the self-reflection phase, students were encouraged to reflect on their papers as well as those of their peers. Figure 2 shows the conference structure was repeated for each student.

At the end of the academic term, the SRL scale was answered as a posttest. The data collection part was completed with students' writing a reflective journal to evaluate the whole process in a self-reflective way on the LMS.

3.5. Data Analysis

The qualitative and quantitative data were analyzed by using one of the Computer-Assisted Qualitative Data Analysis Systems (CAQDAS) and an open-source statistical analysis program respectively. A paired samples t-test was performed on the quantitative data to examine the mean differences in the scores of students' perceptions of SRL before and after computer-mediated anonymous peer feedback. For the qualitative data analysis, thematic analysis and open coding were employed. Thematic analysis is a technique for finding, interpreting, and reporting patterns or themes in data while open coding is a procedure to identify and code critical concepts hidden in the data by thoroughly reviewing the text (Braun & Clarke, 2006; Strauss & Corbin, 1998). The study employed data-driven concepts and categories. The data were first coded under the conceptual framework related to the study and categorized after reflective journal questions which provided the basis to generate the categories. The coded data were reviewed by an expert in the field for inter-coder reliability. Accordingly, the codes expanded or narrowed as the data were reviewed over time. Following adjusting the codes and reaching a mutual agreement with the field expert, the reliability of the analysis was ensured.

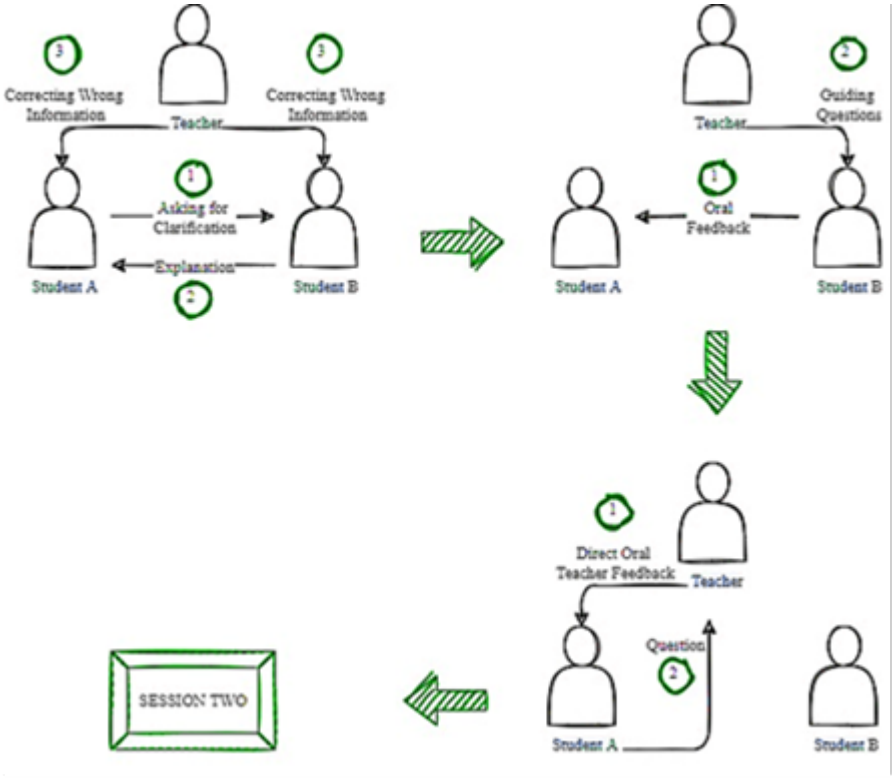

Fig. 2. Peer-Teacher conference

4. RESULTS

4.1. Quantitative Results

Regarding the quantitative analyses, the descriptive statistics for pre- and post-scores of students' SRL skills are demonstrated in Table 1. The results reveal that students' SRL scores after computer-mediated anonymous peer feedback (M = 114.36, SD = 15.78) are higher than those before the peer feedback activity (M = 105.12, SD = 19.15), which indicates that students' SRL skills have improved.

Table 1. Descriptive Statistics

	N	Mean	Median	SD	SE	Skewness	Std. Error Skewness
Pre GS	25	16.36	17	4.37	0.873	-0.47	0.46
Post GS	25	17.48	17	2.92	0.583	0.01	0.46
Pre HS	25	29.84	31	6.08	1.216	-0.44	0.46
Post HS	25	32.28	34	8.22	1.644	-0.41	0.46
Pre SS	25	28.12	29	5.67	1.135	-0.18	0.46
Post SS	25	30.72	31	5.26	1.051	-0.38	0.46
Pre MPE	25	23.60	25	5.78	1.156	-0.83	0.46
Post MPE	25	25.68	26	4.08	0.816	-0.60	0.46
Pre ER	25	7.20	7	1.94	0.387	-0.75	0.46
Post ER	25	8.20	8	1.38	0.277	-0.49	0.46
Pre-total	25	105.12	113	19.15	3.830	-1.18	0.46
Post-total	25	114.36	116	15.78	3.157	-0.17	0.46

As for the paired samples t-test results in Table 2, the mean difference in students' perceptions of their SRL skills, -9.24, 95% *CI* [-14.31, -41.6], is statistically significant ($t(24) = -3.76$, $p = 0.001$). Despite the mean difference in students' goal-setting ($M = 16.36$, $SD = 4.37$; $M = 17.48$, $SD = 2.92$), help-seeking ($M = 29.84$, $SD = 6.08$; $M = 32.28$, $SD = 8.22$), and managing physical environment ($M = 23.60$, $SD = 5.78$; $M = 25.68$, $SD = 4.08$) shown in Table 1, this difference is respectively found nonsignificant ($t(24) = -1.58$, $p = 0.126$; $t(24) = -1.50$, $p = 0.146$; $t(24) = -1.89$, $p = 0.070$). These results suggest that the difference in goal-setting, help-seeking, and managing physical environment is not statistically significant while self-study strategies and effort regulation skills showed significant improvement.

Table 2. Paired Samples t-test

						95% Confidence Interval		
	t	**df**	**p**	**Mean difference**	**SE difference**	**Lower**	**Upper**	**Effect Size**
Pre GS - Post GS	-1.58	24	0.126	-1.12	0.708	-2.58	0.34	-0.31
Pre HS - Post HS	-1.50	24	0.146	-2.44	1.628	-5.80	0.92	-0.30
Pre SS - Post SS	-2.81	24	0.009	-2.60	0.926	-4.51	-0.68	-0.56
Pre MPE - Post MPE	-1.89	24	0.070	-2.08	1.098	-4.35	0.18	-0.37
Pre ER - Post ER	-2.15	24	0.041	-1.00	0.465	-1.96	-0.03	-0.43
Pre-total - Post-total	-3.76	24	0.001	-9.24	2.459	-14.31	-41.6	-0.75

Karabulut (2020) states, that it is essential to take into account the context of the research for the effect size. As the context of the study is SLA and education, a value that is higher than 0.4 ($d > 0.4$) can be regarded as reliable (Hattie, 2009). Plonsky and Oswald (2014) indicate field-specific benchmarks for the effect size in pre-post or within-groups studies as small ($d = 0.6$), medium ($d = 1.0$), and large ($d = 1.4$). As shown in Table 2, the effect size in total scores ($d = -0.75$) means that computer-mediated anonymous peer feedback has a small to medium statistically significant impact on SRL skills of students.

4.2. Qualitative Results

The qualitative results will present the experiences, challenges, and emotions students had during the computer-mediated anonymous peer feedback providing and receiving process. Students stated that the computer-mediated anonymous peer feedback supported their linguistic performance by driving them to start researching, reinforcing their prior knowledge, noticing their mistakes after seeing peers' papers, learning from those mistakes, making a self-evaluation, and allowing them to see various uses. Students also appreciated the opportunity to make revisions before turning in their papers for teacher feedback.

> P13A: "*I learned how to use commas and conjunctions… how to form a complex sentence in an essay… how to make a good impression on the reader... anything that comes to mind about writing and essay types. I had a chance to learn in this way and I used it. I believe that being a provider for your friend makes you more careful and focused on essays as you need to give correct feedback… being a provider for another student gave me a feeling that I really need to be a hardworking student. I always said myself that I have to prepare good feedback for my friends, and they also need to learn something as well as me. I mean I wanted to say being a provider is something that triggers your brain with full of working instinct. I do this with a great desire*."

> P13M: "*It is really nice that someone other than our teacher checks our work. At first, I could not trust my friends' feedback completely as I do in teacher feedback. However, later I noticed that my friends are better than me and they recognized some of my big*

mistakes in some topics, so I cared about them more."

P13H: "*Learning about my mistakes from my friends made me so comfortable because I had a chance to fix them later*."

As for the difficulties that students faced during the study, some students found the feedback they received discouraging, useless, and difficult to trust. Although most of their comments on giving and receiving peer feedback were positive, students expressed that they suffered a lot from the anxiety of giving inaccurate information, misleading their peers, using offensive language while delivering the feedback, and hurting their friends with their comments. Therefore, studying more than usual to make up for their lack of knowledge was regarded as a challenge.

P15Y: "*Although I thought I used the vocabulary differently, I was a little dissatisfied when I saw the vote 'fair to poor' in TEAMMATES.*"

P13O: "*The most challenging part of peer feedback for me was the fear of giving incorrect information. While evaluating my peers' papers, the only thing I thought was whether the correct form was something different than I know*."

Additionally, two students believed that addressing the mistakes without using codes would be simpler as it was challenging to identify correction codes appropriately and explain them clearly. Students also mentioned that it was hard for them to remain fair while examining the papers and deciding how to evaluate them since they did not feel qualified. Other difficulties experienced during the activity were the absence of a peer in peer-teacher conferences, distrust in the information provided, the obscurity of structures in peers' papers or their feedback, the anonymity of feedback givers, harsh criticism, poor-quality feedback, and the need to make modifications after getting the comments.

P15D: "*Sometimes grammatical mistakes in the paper I read were too many, and the sentences were difficult to understand. After I saw the evaluated paper, it was difficult to understand why they marked this in the coding section and why they thought so, but we could express ourselves well about what we wanted to say thanks to feedback meetings*."

Finally, regarding their negative and positive feelings, most of the students reported they felt entertained, curious, enthusiastic, capable of self-evaluation, self-motivated, proud of learning and making fewer mistakes, like an expert, relaxed, and self-confident. On the other side of the coin, they mentioned the anxiety of providing incorrect feedback, embarrassment with the given feedback, dissatisfaction with making the same mistakes repeatedly, and exhaustion from providing feedback.

P13E: "*It was actually exhausting, but I started to have fun as the time passes. I felt happy when I identified the errors in papers and gave correct feedback which helped the feedback receivers understand their mistakes because it showed that I understood the topics and the logic of giving feedback. Reading others' papers and finding their mistakes made me feel like a teacher. As I do the assignments, I found the mistakes more easily, which made me happy*."

5. DISCUSSION

The present study reveals that computer-mediated anonymous peer feedback had a statistically significant effect on students' SRL abilities, notably on self-study strategies and effort regulation. Moreover, it had a small to medium effect on elevating students' SRL skills. Another point showing that students improved their self-regulation skills is their attitudes and reactions during the study and comments in peer-teacher conferences.

Considering each factor in the SRL scale, findings on goal-setting abilities show that students had better time management skills, performance, and active engagement in learning activities when they set specific objectives and goals, which is in line with the previous studies (Atasoy, 2021; Milligan & Littlejohn, 2017).

Regarding help-seeking, previous research suggests that students with SRL skills are open to receiving help from their teachers or peers to fulfill tasks and develop strategies and coping skills (Wandler & Imbriale, 2017). According to Karabenick and Dembo (2011), university students may feel embarrassed about seeking help from friends and teachers; however, the participants of the present study reported that they sought help from their teachers and friends without feeling embarrassed.

Furthermore, results indicate that such self-study strategies as organizing and reviewing the learning material, practicing, and making self-evaluations were utilized by students to become self-regulated writers. Since computer-mediated education has a positive impact on SRL ((Lim et al., 2020; Lizarraga et al., 2011), participants might have acquired new strategies and learning habits with the compulsory shift to ERT. In addition, the student-centered learning environment during ERT may have allowed self-regulated students who use self-study strategies to enjoy self-directed learning. Since making self-studies to provide feedback and get prepared for peer-teacher conferences are also a part of SRL, computer-mediated peer feedback can be an effective practice in promoting SRL skills.

Another result shows that the skill of managing the physical environment improved by the computer-mediated anonymous peer feedback. It can be assumed that the interactivity of computer-mediated resources and tools used in the study contributed to students' SRL skills including choosing the most appropriate learning environment to learn (Bejtkovský, 2016). Moreover, such skills as cooperation and interaction in an online learning environment might have been fostered through the peer feedback activity.

Lastly, effort regulation as an SRL skill statistically improved less than the other skills despite the eagerness and efforts of students during the feedback sessions and peer-teacher conferences. In writing courses, peer feedback positively impacts effort regulation, allowing students to manage their learning and dedicate effort to write more proficiently. Thus, feedback from peers appears to potentially enhance students' autonomy, motivation, and participation, which is also underlined by Pintrich (2004). The qualitative results reveal the challenges, experiences, and feelings of students as feedback receivers and givers. Students claimed that reviewing their peer's essays enhanced their writing skills in terms of organization and the correct use of vocabulary and grammar, which is in line with the results of Efe's (2014) study pointing out that peer feedback affects certain language skills positively.

Furthermore, giving feedback was found to be more helpful than receiving it since it required students to do extensive research to provide correct feedback. Yet, the reason for doing the research before providing feedback can be attributed to the anxiety of misinforming their peers. Despite the peer feedback training which models how to use correction codes to give feedback without offending peers, students had the anxiety of giving incorrect feedback or delivering offensive comments. Thus, the finding contradicts with Zhang's (1995) claim that students' anxiety levels can be reduced by peer feedback training.

Students also stated that providing computer-mediated feedback gave them the opportunity to learn from the proficient and poor language use in their peers' papers. In addition, they could construct an understanding of the erroneous uses in each other's work while listening to the teacher's comments during the peer-teacher conferences. Along with this, peer feedback allowed students to see alternate perspectives and writing styles, leading to developing their writing abilities through self-evaluation and rewriting (Lundstrom & Baker, 2009). Within the framework of sociocultural theory, feedback providers were able to scaffold their peers by using correction codes, clarifying their feedback at peer-teacher conferences, identifying their strengths and weaknesses, and encouraging them to improve those weaknesses in the next assignments. Moreover, students could compare their strengths and weaknesses with those of proficient and less proficient peers. Contrary to Nelson and Murphy's (1992) findings, all participants regardless of their writing proficiency were willing to learn from and

with their peers, which highlights the usefulness of peer feedback in mixed-proficiency classes. With proper guidance and training, peer feedback can be an effective assessment and learning way benefitted by all students (Can, 2019). Accordingly, the classroom atmosphere encouraging peer interaction helped students become more autonomous and self-regulated learners (Fahim & Rajabi, 2015).

Although students found computer-mediated anonymous peer feedback beneficial in identifying and correcting the weak points in their essays before submitting them, they also pointed out problems with inaccurately given feedback causing them to doubt the validity of it. This result is consistent with Hu's (2005) study revealing students' concerns regarding the quality and accuracy of peer comments. Nevertheless, they expressed that they had still learned from their friends.

Following the computer-mediated anonymous peer feedback practice, students shared both positive and negative emotions such as pride, entertainment, motivation, self-confidence, anxiety, embarrassment, exhaustion, and disappointment.

In the light of these findings, it cannot be disregarded that computer-mediated anonymous peer feedback can improve and promote students' SRL skills in writing courses by helping them monitor both their and peers' learning, gain new learning strategies, learn from their peers, and enhance their writing skills.

6. CONCLUSIONS

This study investigated EFL students' perceptions of their SRL skills by implementing an online SRL scale after the computer-mediated anonymous peer feedback practice. During this practice adapted from Zimmerman and Moylan's (2009) SRL model, students anonymously provided coded feedback on their peers' essays on a computer-mediated platform and in online peer-teacher conferences. Eventually, they shared their experiences as feedback providers and receivers by writing a reflective journal. The quantitative and qualitative data analysis imply that the computer-mediated anonymous peer feedback promoted students' SRL skills.

The study demonstrated that such SRL skills as goal-setting, planning, help-seeking, task analysis, self-study, and time management improved after the computer-mediated anonymous peer feedback. Learning new strategies to cope with the challenges of ERT, students benefitted from the integration of tasks requiring them to monitor and evaluate both their own and their peers' learning. In this regard, the computer-mediated anonymous peer feedback allowed students to practice their newly acquired skills and contributed to SRL. In the course of the study, students regulated their efforts to fulfill assigned tasks and keep up with online education. Therefore, it can be argued that the flexible, yet in some respects demanding, learning environment during the ERT might have enhanced students' time management and effort regulation skills, which, in turn, increased the impact of computer-mediated anonymous peer feedback on their SRL skills.

Based on students' experiences, it can be concluded that students' linguistic proficiency, particularly in grammar and vocabulary use, and writing skills including organization and content development improved. Allowing students to examine others' essays and make self-evaluations by reflecting on their papers, the feedback activity plausibly enhanced their SRL skills and possibly made their learning more permanent as they frequently repeated what they learned during the process. Besides, students expressed that they gained self-confidence and a sense of pride in their achievements through self-evaluations leading to making fewer mistakes and improving their writing. This statement highlights the need for teachers to introduce supportive, engaging, and encouraging tasks which assist students to recognize and utilize their strengths.

On the other hand, students mentioned some challenges such as anxiety which reportedly arose from the likelihood of misinforming their peers due to their lack of knowledge. However, the anxiety might have been triggered by the close friendship relationships which drove students to avoid being criticized, offending friends with the feedback, or being evaluated by more proficient peers. While the anonymity might have helped them not to compare themselves to proficient writers and feel demotivated or less self-confident, the supportive and friendly learning environment may have negatively influenced their behaviors or emotions as feedback providers by leading to anxiety about

offending or misleading friends.

In line with the existing literature and findings, it is crucial to promote SRL skills in online learning settings since students who regulate their learning can effectively utilize resources and learning materials, motivate themselves, and monitor their own progress. Hence, the results are expected to inspire researchers to conduct further research on the theme and educators to adopt online peer feedback as a teaching and assessment way to foster self-regulation.

Since students can become reviewers and gain autonomy regardless of their proficiency level, computer-mediated anonymous peer feedback offers a less teacher-centered learning environment by challenging the conventional idea that teachers are the only source of information. However, well-designed peer feedback training should be provided by establishing assessment criteria, modeling feedback and the delivery style, and engaging in peer feedback practice to maximize the efficiency of the practice. As SRL depends heavily on help-seeking, the importance of manner, tone, and wording to provide constructive feedback and enhance motivation should not be disregarded (Newman, 1994).

It is also important to provide students with enough opportunities to practice what they have learned to improve their SRL skills. For instance, the process-based writing approach which allows students to engage in multiple drafting could improve their planning, task analysis, revision, and time management skills.

Additionally, using various feedback types such as coded indirect peer feedback and direct teacher feedback involving oral and written communication can facilitate the online learning process. Involving the use of synchronous and asynchronous tools such as LMS and TEAMMATES can help teachers take advantage of the strengths of these tools and each feedback type.

It is also recommended that SRL should be one of the main curricular objectives in higher education. previous research has shown that computer-mediated anonymous peer feedback in an online learning context can help students form friendships, develop coping strategies, learn collaboratively, set goals, and take responsibility of their learning. Thus, activities and materials promoting SRL skills through reflection, review, and evaluation should be one of the primary concerns of coursebook designers and material developers.

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Гюльша Нарлу, Аухан Кахраман. Розкриття потужності анонімного зворотного зв'язку за допомогою комп'ютерних технологій у вдосконаленні саморегульованого навчання. Очікувалося, що студенти будуть використовувати навички саморегульованого навчання (SRL), щоб контролювати своє навчання в комп'ютерно-опосередкованому навчальному середовищі під час екстреного дистанційного навчання (ERT). Враховуючи його важливість, необхідно розвивати SRL через різні практики на уроках письма англійською мовою. Зворотний зв'язок є практичним, оскільки він дозволяє учням стежити за своїм письмом, розвивати навички SRL та полегшувати навчання. Таким чином, дослідження мало на меті дослідити вплив анонімного зворотного зв'язку за допомогою комп'ютера на навички SRL студентів і з'ясувати досвід студентів щодо надання та отримання зворотного зв'язку. Використовуючи квазіекспериментальний дизайн, дослідження використовувало онлайн-шкалу SRL і рефлексивні журнали для збору даних від учнів підготовчої школи. Дані були проаналізовані за допомогою t-критерію парних вибірок і кодування рефлексивних журналів. Результати показали, що анонімний зворотній зв'язок за допомогою комп'ютера значно покращив навички SRL студентів. Крім того, студенти заявили, що рецензування робіт однолітків і самооцінка допомогли їм покращити свої мовні показники. Однак довіряти наданим відгукам було складно. Студенти також відчували занепокоєння через те, що можуть образити однокласників або дати неточні відгуки, соромитися помилок і втомлюватися від рецензування робіт. Разом із цими негативними почуттями вони також повідомили про позитивні емоції, такі як впевненість у собі та ентузіазм. Результати підкреслюють, що анонімний зворотній зв'язок за допомогою комп'ютера можна включити в курси письма англійської мови, особливо в онлайн-режимах. У майбутніх дослідженнях має бути досліджено, як комп'ютерно-опосередкований анонімний зворотній зв'язок однолітків впливає на успішність студентів у письмі та навички SRL у різних режимах навчання серед різних груп студентів.

Ключові слова: екстрене дистанційне навчання; анонімний зворотний зв'язок за допомогою комп'ютера; конференція однолітків; написання ESL; саморегульоване навчання.

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