MOBILE-MEDIATED INTERACTIONAL FEEDBACK (MMIF) EFFECT ON IRANIAN LEARNERS' ACQUISITION OF ENGLISH ARTICLES

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Abstract
The role of interactional feedback (IF) has been the interest of researchers in communicational context. Some studies have shown low rate of improvement following IF in a classroom setting, hence a shift to computer-assisted feedback. This study explored IF in a mobile-mediated environment (MMIF) on Telegram and compared it with in-class IF. The aim was to solve the problem of students who were unable to attend classes regularly due to family or schoolwork conditions. Forty highschool and undergraduate students of low intermediate level were randomly assigned to two groups. The experimental group attended three sessions out of six: an introductory one for pre-test and the procedure; a halfway session for face-to-face discussions with the teacher; and one for post-test and assessment of the procedure. The control group attended six regular classes. The experimental group sent their compositions online to the teacher who highlighted the mistakes and posted them to be discussed by the learners who were further divided into subgroups of five for more opportunity to participate and by the teacher who provided more feedback when needed. Data were collected from the first and last compositions produced in-class by both groups and results were compared with a focus on article use. The mixed method study revealed that MMIF is advantageous and time-saving.
Keywords: English articles; Interactional feedback; Iranian learners; mobile-mediation; self-repair

1. Introduction

Many L2 studies have investigated the effectiveness of feedback on learning improvement from different aspects, such as strategies for providing feedback and how the students

respond to this feedback, but the majority of them focused on teachers' feedback and there is often limitation in negotiation between teachers and learners (Ellis, 2008).

Interactional feedback is a kind of corrective feedback that occurs in the context of communicative interaction (Nassaji, 2015). It is provided through recasts (implicit feedback) or metalinguistic information (explicit feedback) to deal with communication or linguistic problems through negotiation (Nassaji, 2016). It can also be provided through many strategies such as reformulations, prompts, and metalinguistic feedback. These feedback strategies are called input-providing as they provide target-like input for the learners (Ellis, 2009).

On the other hand, the Internet has changed the interaction habits of the learners through distant learning environments in Iran using tools such as blogs, wikis and portfolios, which minimized the need of physically attending the traditional classes (Faramarzi, Tabrizi & Chalak, 2019). In one study, Dashtestani (2016) indicated that language learners have positive attitudes toward mobile learning and suggested guidelines to enhance communication between learners and teachers to facilitate interactive learning.

Researchers report multiple advantages of peer online feedback. Some studies find it effective because peers try to be friendly, supportive and more reassuring when they want to provide online feedback (Ma, 2019). It is also mentioned that online peer interaction leads to more revision of linguistic codes (Arnold, Ducate & Kost, 2012). Thus, online interactions might be effective for improving the accuracy among EFL learners.

The focus of this study is on English articles (*a, an, the,* and *0(zero))* whose grammatical significance might not be realized unless the learners get directly involved in production (Nassaji & Swain, 2000). In Persian, definiteness/indefiniteness is heavily governed by semantics and in some instances the indefinite marker is not necessarily used. While English expresses definiteness using the article 'the', Persian may/may not use definite marker in a noun phrase and in some cases they may use a prefix called *-ra* to show that the speaker has an individual in mind that is known to the hearer, so definiteness/indefiniteness depends on the different interpretations of the sentence (Karimi, 1989).

The present research aims to check the effect of mobile-mediated interactional feedback (MMIF) provided by Telegram (a mobile application) on the acquisition of the English articles. Telegram is a widely used social media tool (SMT) in Iran because it is a free application and easy to use. This application can be used for sending/receiving texts,

images, audios and videos and also different formats of documents like Microsoft Word (*.doc), and portable document format (*.pdf). Besides, this application is greatly used for creating discussion groups or forums in language learning thus serving to enhance the teaching and learning process (Ibrahim et al., 2016).

Thus, the present study is an empirical attempt to determine how interactional feedback could be used, processed and contributes to language development employing online learning environment.

2. Literature review

2.1. Interactional feedback

Given the role of feedback on second language (L2) teaching and learning, studies identified different types of corrective feedback. Two types of feedback which raise debates in different studies are "direct" and "metalinguistic" feedback. Direct feedback involves providing the students with the correct form while metalinguistic feedback entails supplying the students with metalinguistic clue based on the nature of the error they have committed (Ellis et al., 2008). Direct feedback combined with metalinguistic explanation proved to be more effective than direct feedback alone (Sheen, 2007).

On the other hand, some researchers state that these feedbacks should occur in the context of communicative interaction to improve modification process. In this respect, Nassaji (2016) introduced interactional feedback as a kind of corrective feedback which opens an opportunity for the interlocutors to make their input more comprehensible and highlight linguistic problems in negotiation. This negotiation can happen in single or multiple moves and motivates the learners to correct erroneous utterance in the course of interaction (Nassaji, 2016). It is also claimed that not only the errors but also the communicative process will be under consideration in negotiation, which can consequently provide beneficial information for the learners to focus on the language they use (Bruton, 2009).

However, the question arises whether this interaction should be provided by the teacher or peers. Some studies show that both teacher and peer feedback are effective in students' revision (e.g., Tsui & Ng, 2000; Yang, Badger & Yu, 2006) while the characteristics of the feedback seem to differ in these two groups. According to Ruegg (2015), there are some differences in feedback types between teachers and peers as teachers provide more

feedback regarding issues on meaning while peers tend to give insight about the organization of the writing. Ma (2020) also stated that peers provide more feedback on meaning than on form (language) issues. Moreover, some studies proved that the learners who receive feedback in interaction are more willing to communicate and more confident to provide peer feedback (e.g., Sato, 2013; Vasquez & Harvey, 2010).

All in all, the extensive body of research in the past few decades conducted in various contexts determine how interactional feedback can be applied and contribute to language learning. These studies seem to be in line with Vygotsky's theory of sociocultural perspective (Vygotsky, 1986) and emphasize that learning cannot be achieved in isolation, rather it is viewed as a process which occurs in interaction.

2.2. Technology-Assisted Language Learning

The use of technology has recently become increasingly popular in education as a result of digital revolution (Collins & Halverson, 2018). Respectively, computer-assisted feedback has attracted the attention of many academics because it provides an environment in which learning is facilitated through feedback and interaction, so one can learn at any time and in any place (Liu & Chen, 2015). However, some scholars suggest that the nature, type, and degree of online feedback and its effect differ from face-to-face interaction (Nassaji, 2016). Thorne, Black and Sykes (2009) call for a wider use of technology in L2 contexts considering that L2 classrooms provided "limited opportunities for committed, consequential and longer term communicative engagement" (p.804), whereas engaging learners in virtual environments and online games opens up new horizons for them and provides them with opportunities to have "long periods of language socialization, […] creative expression and language use as tools for identity development and management" (p.802). They also put emphasis on hybridized communication where users combine print-based texts with some features of face-to-face conversations on electronic devices. The research also explores the way in which the audience's feedback can mark an improvement in writing as writers try to build awareness to interact with a specific audience in mind, and think about the way they could transfer the meaning through language choice to make themselves understood by the reader (Thorne et al, 2009).

In a similar vein, on-line collaborative tasks have reported to have positive effect on error correction. Through such tasks, the students not only provide feedback on their partners'

writing but also practice their own English writing skill when they are giving explanations to the correction (Zou, Wang, & Xing , 2016).

2.3. Mobile-Assisted Language Learning

Research shows that currently more than 7 billion mobile devices are subscribed worldwide (ITU, 2015), which indicates that the life of millions of people is influenced by the advent of mobile technologies. Mobile devices have currently created new opportunities for language learners to take pictures, watch videos, send text messages, browse the Internet and access social networking applications. Many studies were conducted to create new tasks and investigate the effect of using mobile devices for learning a language (Gedik et al., 2012; Gromik, 2012). Kukulska-Hulme and Shield (2008) have introduced Mobile-Assisted Language Learning (MALL) as a useful methodology supporting various learning such as collaborative learning and social contact. Unlike Computer-Assisted Language Learning (CALL), MALL uses portable, personal devices enabling the users to access new ways of learning which is continuous and spontaneous across varieties of contexts. Learners are equipped with different input modalities like iPods, MP3 players and mobile phones but researchers show that the most frequently used handheld devices is mobile phones (Talan, 2020).

In a meta-analysis study, Burston (2015) reported the advantage of MALL in learning outcomes and explained that technocentricity was one of the reasons for lacking pedagogical innovation of many recent MALL projects in exploitation of communicative affordances of mobile devices. These days, many software applications which were available on computers can be used on smartphones. In case of learning, Google applications (Vurdien, 2020), mobile blogging system (Huang et al., 2009) and game-based learning (Lin et al., 2018) are some of the practical means of collaboration which are available on smartphones.

One of the advantages of MALL is that instructors would play the role of facilitators rather than of teachers. Accordingly, learners can do some activities outside the classroom and still be engaged with the lesson. We applied the same concept in the current study and used a mobile application (Telegram) to motivate the learners to self-regulate and to enhance interaction.

Mobile applications are deemed convenient tools for improving different skills such as reading, speaking and listening but writing has always been the learners' weak point even

though they are provided with a lot of tasks (Yan, 2019). To the best of our knowledge, there are rather few studies on mobile-mediated interactional feedback that could provide opportunities for the learners to improve writing skills (e.g., Vurdien, 2020; Yan, 2019). Therefore, this study will examine whether or not MMIF could pave the way for the learners to develop their writing proficiency, particularly in acquiring the English articles through interactions on social networking sites.

3. Methodology

3.1. The aim of the study

Based on the above-mentioned issues the current study will seek answers to the following questions:

1. Are there any statistically significant differences between the effectiveness of MMIF and the traditional feedback (One-way feedback from the teacher) on the acquisition of articles by lower intermediate Iranian EFL learners?
2. Does MMIF plus a limited number of in-class sessions have any significant effect on the acquisition of the English articles of lower intermediate Iranian EFL learners?
3. Does interactional feedback in a classroom setting have any significant effect on the acquisition of the English articles of lower intermediate Iranian EFL learners?
4. What are the learners' general perceptions of MMIF compared with the interactional feedback in classroom setting?
5. What are the learners' perceptions of the advantages and disadvantages of MMIF compared with the interactional feedback in classroom setting?

To achieve the goal, the researchers focused on negotiation and activities done outside the class such as sharing different documents, engaging in on-line discussions or leaving. Moreover, the target structure chosen for this study was articles used in obligatory contexts in some specific discourses such as narratives.

3.2. Participants and the context

The participants in this study are high school students (45%) and university undergraduates (55%) aged between 16 and 24. The participants were assigned to lower intermediate level of English as per the placement test which they took upon entry to the academy. None of them

has ever been taught by a native teacher or been to an English-speaking country and they had never had any experience with blogs.

To improve their English proficiency, Iranian students usually enrol in language academies, but they have trouble attending them regularly because of their school/ university assignments. To solve the problem of attendance, we agreed with our participants to meet with their teacher three times throughout the course: once at the beginning, another half-way through the course (after three weeks) and the third time at the end of the course. During these sessions, the teacher gives the students feedback on their writing and discusses their mistakes. They had to write one composition per week (six in total) and send them to their teacher on groups formed by the language academy on Telegram.

The academy's educational system was based on the communicative method which focuses on the functional use of everyday language. Many people from different background attend this language academy as public sector in Iran has various drawbacks and does not help the EFL learners survive in real communication (Maftoon et al., 2010). Recently, the academy provided the "Hybrid System" which is an effort to address the learners' and institutional needs in providing movies, online tests and other supplementary activities to enhance learning. It aims at integrating the traditional and distant learning in order to benefit from the mix of classroom and distributed learning environment (Shale, 2002). However, none of the learners in this study benefited from the online products because it is computer-based and does not run on mobile phones. On the other hand, the academy recently formed discussion groups on Telegram and Instagram which were well received by the learners.

3.3. Design and procedure

As a true random selection of participants of the current study was not feasible and we wanted to evaluate the intervention, the quasi-experimental method was employed to create comparison in a small available sample size (Cook & Campbell, 1979). Thus, Oxford Placement Test (OPT) was administered to 47 learners who were selected by convenience sampling. Based on the results, 7 students were excluded from the study because they failed to get the score required for the lower intermediate level, which is between 30 to 39 out of 60, so we were left with 40 participants.

The participants were randomly divided into two groups, each comprising 20 who were 20 years old on average. After the assignment of the groups, the pre-test, treatment, and

post-test phases followed and finally quantitative and qualitative analysis were carried out on the obtained data.

The study and the control groups were both taught by a PhD candidate, who is also one of the researchers, and has a twelve-year experience in EFL teaching.

3.4. Data collection tools and procedures

The topics of the compositions were drawn from the second writing tasks of general IELTS. In this task, the candidates were asked to write a formal essay to present their idea on a point of view, argument or problem. A questionnaire was also made for checking the reaction of the participants to a dynamic assessment of writing skill. The questionnaire (Appendix A) was sent to two professors of the field to confirm the validity and reliability of the instrument to be utilized in this study. The content validity was checked and the instrument was evaluated to ensure that the items are desirable for the construct domain. Moreover, the inter-rater reliability was calculated and found to be above .92. Then, the discrepancies were negotiated to reach the consensus. The first question in this questionnaire checked the participants' general perception of the program and the other two questions enquired about their perceptions of the advent ages and disadvantages of MMIF.

In their first session at the institute, both experimental and control groups were asked to write their first composition between 140-190 words to serve as a pre-test for both groups.

The experimental group was then asked to join a newly-formed group on Telegram as a substitute for their traditional classes. They were divided into four sub-groups comprising five learners each. This subdivision was meant to make the discussions online more focused and to give the learners a better opportunity to participate. The learners were informed that their compositions should be written online and sent to their teacher who would examine them, highlight the mistakes, number them for easy reference, and post them on Telegram to be discussed and corrected by the sub-groups. They had one week to leave their comments and join different discussions. The discussions centred on the content of the compositions and the highlighted mistakes (Appendix B). The participants were allowed to leave messages or upload any files for further explanation.

The teacher would be monitoring the discussions on Telegram and making sure that all participants contributed their input to discussions. She would review the reports and provide feedback online. When she noticed that the learners had communicative breakdowns

or had difficulties in distinguishing the mistakes, she would join the discussions and provide some explanations to facilitate the interaction (Appendix C). She would also make a list of the most recurring mistakes to discuss them during the mid-program meeting. The learners would also have two more meetings with the teacher: one in the third week where face-to-face discussions of the most recurrent mistakes would take place and the last meeting would be at the end of the course for writing the last composition and assessing the MMIF procedure by answering a semi-structured questionnaire with three questions.

The control group would meet weekly with their teacher to discuss the content of the topics and their mistakes on four compositions. This group did not participate in the online discussion or have access to it. They only had interactional feedback in the classroom which was mostly teacher-centered interaction.

The research took six weeks during which six compositions were written by both groups, four of which were checked by the experimental group, while the first and the last one were used as pre- and post tests for further analysis and no feedback was provided for them.

To study the effect of MMIF and its difference from relying solely on feedback done in class, we initially highlighted the number of obligatory contexts for using the articles and compared the means of percentage of correct instances of the use of articles in the pre-test and the post-test of both groups using the Statistical Package for the Social Sciences (SPSS 20) for computing descriptive and inferential statistics. We ran two independent sample t-tests to compare the percentage of correct instances of the use of articles in the study and control groups before and after the treatment. The independent sample t-test compares the means of two unrelated groups, namely, the study and control groups. We also ran two dependent sample t-tests to compare the percentage of correct instances before and after the treatment within the groups to see if any improvement took place.

In order to acquire qualitative insight into the feedback of the learners about the program and triangulate the findings, we distributed a semi-structured questionnaire containing three questions to the participants in the study group and we used the technique of 'quantitizing' the answers (Tashakkori & Teddlie, 1998). 'Present' in this technique is indicated by 1 for what the researchers could see while 'absent' is shown by 0 to indicate what the researchers could not see (Sandelowski, Voils & Knafl, 2009). We opted for this technique because it is considered a key operation in mixed method analysis. It involves

converting qualitative data into numerical codes to be processed statistically (Dorney, 2007). This means that qualitative data can be numerically represented in scores and scales. In this respect, the researchers could prioritize the advantages and disadvantages of MMIF for further analysis. Accordingly, two experts were asked to analyze the semi-structured questionnaire given to the learners, categorize the data and present the frequency of the given information so that the most significant or frequent statements from the data were numerically presented.

4. Findings

This study was done to investigate the effect of MMIF on the acquisition of the English articles compared with interactional feedback done solely in classroom setting, and to identify its advantages and disadvantages from the learners' perspective. In total, 40 learners participated; their compositions were checked with focus on the correct use of English articles, their mistakes were highlighted by the teacher and metalinguistic feedback was provided by both the teacher and their peers. Twenty participants, or the study group, were assigned to interact with each other and react to the papers numbered and posted by the teacher on a social networking site called 'Telegram' easily accessed from their mobile phones and to meet in class at three points in the course: at the beginning where the learners were introduced to the new strategy of negotiating their mistakes and correcting them on Telegram, half way through the course where the teacher gives feedback on the recurrent mistakes, and at the end for the post-test.

We initially determined the numbers of obligatory and correct instances of English articles namely *a, an, the* or *0*. Table 1 below indicates the number of obligatory, correct instances and the percentage of the correct use of the articles in both control and study groups in the pre- and post-tests.

Table 1. Sum and mean of the numbers of obligatory contexts, correct instances and the percentage of correct instances of articles

Written feedback per group on "Telegram"		Number of Obligatory Contexts		Number of Correct Instances		Percentage of Correct instances
		Sum	Mean	Sum	Mean	
Experimental	Pre-test	537	26.85	479	23.95	88.73
	Post-test	571	28.55	551	27.55	96.38

Control	Pre-test	512	25.60	447	22.35	86.50
	Post-test	513	25.65	455	22.75	88.67

Furthermore, an independent-sample t-test was run to compare the mean percentage of correct instances of the use of articles in the pre-test of both groups. The results indicated that there was no significant difference between the experimental (*M= 88.73, SD=5.36)* and control (*M= 86.50, SD=7.22*) groups. Table 2 shows the mean results of both groups on the pre-test (p=.27>0.05). Thus, it can be claimed that the two groups were almost homogeneous in terms of their understanding of the proper use of the English articles prior to the main study.

Table 2. Independent Samples Test; pre-test of the study by groups

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Pretest	Equal variances assumed	1.63	.21	1.10	38	.27	2.22	2.01	-1.84	6.29
	Equal variances not assumed			1.10	35.05	.27	2.22	2.01	-1.85	6.31

To answer the first research question, the mean and the standard deviation of percentage of correct instances in the use of articles in the post-test of both groups were compared, the mean and the standard deviation of the experimental group were 96.38 and 4.55, respectively, while those of the control group stood at 88.67 and 6.69, respectively.

An Independent Sample t-test was run to compare the means of percentage of correct instances in the use of articles in the post-test of both groups (Table 3). As the table shows, the Sig. value for Levene's test was larger than .05, thus we used the first line in the table, which refers to Equal variances assumed. Accordingly, the difference between the mean scores turned out to be significant (t (38) = 4.25, p=0.00<0.05). Thus, there was a statistically significant difference between the study and control groups on the acquisition of articles. Furthermore, the effect size was computed (*d= 1.34*) which shows that effect size was very

large (Leech, Barrett & Morgan, 2013). In other words, MMIF had a significant positive effect on increasing the EFL learners' accuracy in the use of articles.

Table 3. Independent Samples Test; post-test of the study by groups

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Post-test	Equal variances assumed	1.89	.17	4.25	38	.00	7.71	1.81	4.04	11.37
	Equal variances not assumed			4.25	33.45	.00	7.71	1.81	4.03	11.39

To answer the second research question, a dependent t-test (called the paired-sample t-test) was run to compare the means between the pre- and post-tests of the study group. The mean and the standard deviation of the pre-test in the experimental group were 88.73 and 5.36, respectively, while those of the post-test stood at 96.38 and 4.55, respectively. The result of the dependent t-test (p =.00 <0.05) (Table 4) shows that there is a significant difference between the pre-test and the post-test of the experimental group in writing compositions.

Table 4. Paired-Sample Test; Pre-test and post-test of the study in the study group

	Paired Difference							
				95% Confidence Interval of the difference				
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	Df	Sig. (2-tailed)
Pair 1 Pretest-Posttest	-7.65	7.44	1.66	-11.13	-4.17	-4.60	19	.00

To answer the third question of the study another paired-sample t-test was run to compare the mean of the pre- and post-tests of the control group. The mean and the standard deviation of the pre-test in the control group were 86.50 and 7.22, respectively, while those of the post-

test stood at 88.67 and 6.69, respectively. The result of the dependent t-test (p =.20>0.05) (Table 5) shows that there was not a significant difference between the pre-test and the post-test of the control group in the assigned writing compositions.

Table 5. Paired-Sample Test; Pre-test and post-test of the study in the Control group

	Paired Difference							
				95% Confidence Interval of the difference				
	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2-tailed)
Pair 2 Pretest-Posttest	-2.17	7.47	1.67	-5.66	1.32	-1.29	19	.20

The overall results prove that MMIF had a significant positive effect on increasing EFL learners' percentage of correct instances of the use of articles, while relying solely on interactional feedback inside the classroom was not enough to improve the learners' proper use of the articles.

To answer the fourth research question, the results of the questionnaire show that apart from one of the participants, all of them found the program useful and practical. It was a good solution for their inability to attend classes regularly.

To answer the fifth research question, the frequency of the mentioned advantages and disadvantages of MMIF was presented in Figures 1 and 2.

Figure 1 shows the learners' perception of the advantages of MMIF over in-class interactional feedback alone. Based on the data, the most important advantage of MMIF was the practicality of the program. In other words, the majority of the learners (15 learners) were interested in MMIF as it was practical. The other important advantages are 'learners learn from others' error' (13 learners), 'learners are self-regulated' (10 learners). The participants indicated many other advantages such as 'it increases self-awareness', 'feedback is effective' and 'learners do extra practices' which could motivate the learners to sustain in the program.

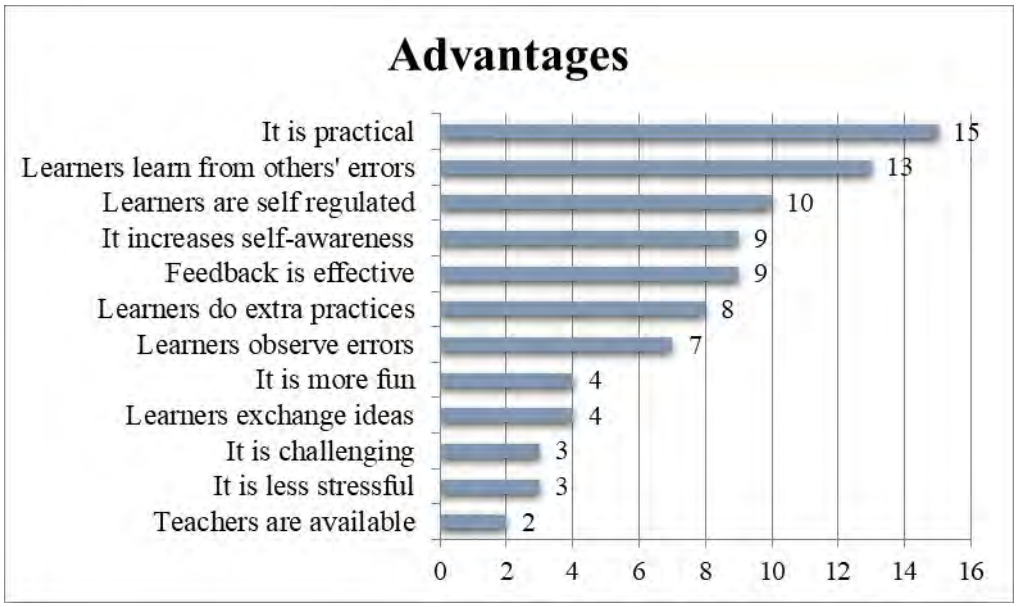

Figure 1. The advantages of MMIF compared with the interactional feedback in classroom setting alone

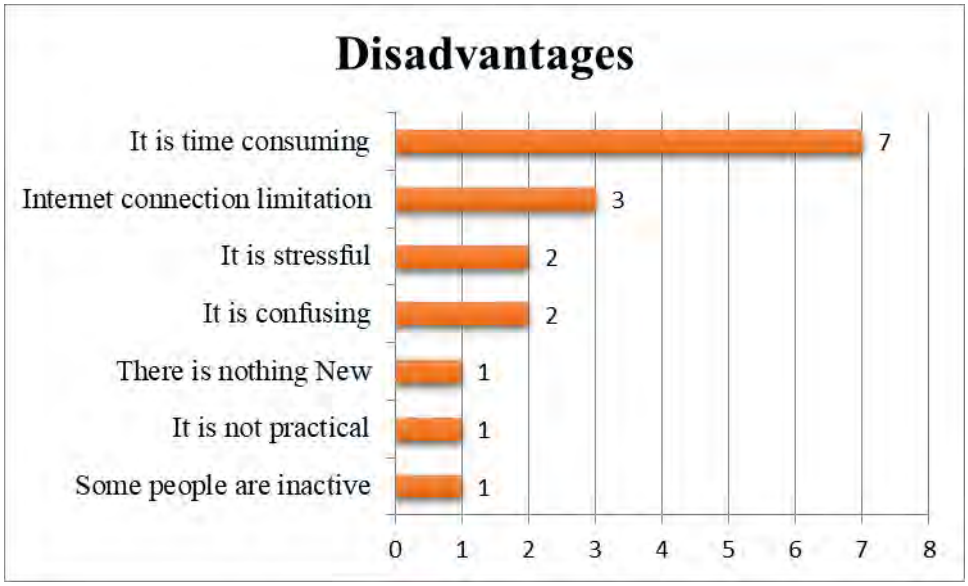

Figure 2. The disadvantages of MMIF compared with the interactional feedback in classroom setting

Figure 2 reveals the most prominent disadvantage of MMIF as indicated by 7 learners that it is time-consuming. The other disadvantages of MMIF are reported to be 'internet connection limitation' (3 learners), that 'it is stressful' (2 learners) , that 'it is confusing' (2 learners), that 'there is nothing new' (1 learner), that 'it is not practical' (1 learner), and that 'some people are inactive' (1 learner).

The comparison of the advantages and disadvantages of MMIF showed that most of the participants talked positively about the program and the advantages outweighed the disadvantages. Moreover, apart from one of the participants who had personal reason, all of them benefited from the program and agreed to continue it.

5. Discussion

The current study was designed to probe the effectiveness of MMIF on L2 learners' acquisition of articles and investigate the learners' perceptions of the advantages and disadvantages of MMIF. The findings indicated that mobile-mediated interactional feedback is positively correlated with accurate use of articles in EFL learners' compositions. These results support the idea that social interaction would result in joint accomplishment and contribute to L2 learning tasks (Swain, 2010). In addition, the attitude of the learners in the experimental group supported the effectiveness of MMIF in complementing the classroom style feedback. In other words, the teachers in traditional classes usually held the floors and corrected the errors and the learners were the mere recipients of information but by attending this program, the learners had more responsibilities and operated within a frame not solely directed by the teachers in teacher-fronted interactions.

The findings of the current study are in line with many other studies such as Azari's (2017) research on process-based writing in which the learners could publish their written drafts and receive feedback from both the teacher and other learners using blogs. However, the learners in our study had no time to attend the class regularly and at the same time they were unwilling to have their name published in any groups with their errors highlighted. Thus, in this study, individual learners sent their compositions to the teacher who examined and highlighted the mistakes, and removed the names before posting them on Telegram. In this respect, the teacher could prevent face-threatening acts.

Similar to the current study, Gedik et.al. (2012) stated that mobile learning can be a stimulus for the learners to start their work which might not otherwise be possible. Moreover, mobile learning is required by the students as a support mechanism for their face to face learning. However, some limitations with cellular phones (i.e., screen size, bandwidth) might prevent the learners from full engagement in on-line instruction.

Gromik (2012) also mentioned the advantages of learners' engagements and argued that mobile learning can motivate the learners to participate in on-line tasks and recollect

their prior cognizance of the target language. In addition, cell phones provide students with the opportunity to recognize their weak points in writing, empower them to improve and assess their performance.

The results are also consistent with what Zou et al. (2016) found in their study. Their findings showed that learners benefited from the corrections provided by their partners on the wiki platform and they enjoyed correcting language errors for each other. Similarly, the learners in the current study declared that one of the prominent advantages of the program was learning from others' errors.

The findings of the present study corroborate the results in the recent study done by Haghighi et al. (2019), which showed that Iranian learners willingly accept Telegram as an efficient application in EFL learning. The authors indicated that Iranian students are highly familiar with Telegram and they do not need any courses for learning the functionality of this application. They added that the messages and other materials will always be accessible in Telegram groups which enables the applicants to review them any time of the day.

However, the results showed some rather contradictory results as some participants mentioned some disadvantages of the program but almost all of them (95%) asked to continue this program. This discrepancy could be attributed to limitations on the Internet access in Iran. Most people purchase it monthly with different speed limits and it is not free of charge. Moreover, the high rate of interactions required from the learners, specifically peer interaction, put the learners out of their comfort zone as they were required to negotiate the meaning and forms to prove their point of view.

In a 2018 study, Kukulska-Hulme and Viberg mentioned some similar positive aspects of mobile interactions such as providing individual and collaborative tasks, awareness raising, providing opportunities for negotiating meaning in mutual encouragement. However, few negative aspects are also mentioned such as technical problems and feelings of uncertainty or confusion which are in-line with the present study.

Furthermore, the participants in this study seemed not to be aware of defects in their language and so they needed to notice them by any means. This is in line with Nassaji (2011), who found that self-repair is followed by elicitation, Ellis (2009) who introduced some feedback strategies and called them input-providing and other researchers who also proved them to be effective (Erlam, Ellis & Batstone, 2013; Ammar & Spada, 2006; Lyster, 2004).

6. Conclusion

Using applications on mobile devices in EFL context is now commonplace in many countries. This might support the acceptance of MMIF among teachers and learners. In this study, we tried to lay the foundation for mobile-mediated interactional feedback (MMIF), which supports on-line interactional activities, and we applied it in dealing with one grammatical notion of the English language, namely, the English articles. Peer collaboration, feedback strategies and instructor guidance were delivered outside the classroom setting to enhance the learners' understanding and compensate for their inability to attend classes regularly. Our findings shed light on the positive role of MMIF in EFL contexts and confirm that such a process can help learners collaborate more with one another, reflect on their own and others' mistakes and consequently consolidate their learning.

These findings could have some far-reaching implications. Firstly, MMIF can be used as a pedagogical tool to facilitate L2 writing proficiency in big classes where teachers cannot devote much time to dealing with errors. Secondly, we believe that the present study should not be restricted to EFL contexts, but to other areas of language learning as well. Thirdly, it is essential for educators to rethink the issue of learner engagement making use of mobile technologies in interactive contexts as these might encourage learners to make use of their spare time and space outside the classroom. In addition, when providing online materials, teachers need to consider download time unless such an issue could be a strong drawback. Finally, the program may give the learners a chance to talk about their difficulties with the group members or in some specific situations privately with the teachers by sending messages. This is in contrast with traditional classes where teachers have limited opportunities to talk to the learners in person because of their high number and because teachers usually have some classes back to back and the breaks are short.

Like many other studies, the findings of the current study are subject to some limitations. First, the project used a convenience sample which was relatively small in size that may limit the generalizability of the findings. Thus, more research needs to be done with different and larger communities to be able to generalize the results. Second, the present improvement is probably short-term which might turn into a long-term one, but a delayed post-test should prove it. In this respect, the researcher could measure retained learning of each group and check that the level of significance is greater than chance.

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References

Ammar, A., & Spada, N. (2006). One size fits all?: Recasts, prompts, and L2 learning. *Studies in Second Language Acquisition*, *28*(4), 543-574. https://doi.org/10.1017/S0272263106060268

Arnold, N., Ducate, L., & Kost, C. (2012). Collaboration or cooperation? Analyzing group dynamics and revision processes in wikis. *CALICO Journal*, *29*(3), 431-448.

Azari, M. H. (2017). Effect of weblog-based process approach on EFL learners' writing performance and autonomy. *Computer Assisted Language Learning*, *30*(6), 529-551.

Bruton, A. (2009). Designing research into the effects of grammar correction in L2 writing: not so straightforward. *Journal of Second Language Writing, 18*(2), 136-140. https://doi.org/10.1016/j.jslw.2009.02.005

Burston, J. (2015). Twenty years of MALL project implementation: A meta-analysis of learning outcomes. *ReCALL*, *27*(1), 4-20. https://doi.org/10.1017/S0958344014000159

Collins, A., & Halverson, R. (2018). *Rethinking education in the age of technology: The digital revolution and schooling in America*. New York: Teachers College Press.

Cook, T. D., & Campbell, D. T. (1979). *Quasi-experimentation: Design and analysis issues for field settings*. Chicago: Rand McNally.

Dashtestani, R. (2016). Moving bravely towards mobile learning: Iranian students' use of mobile devices for learning English as a foreign language. *Computer Assisted Language Learning*, *29*(4), 815-832. https://doi.org/10.1080/09588221.2015.1069360

Dorney, Z. (2007). *Research methods in applied linguistics.* Oxford, UK: Oxford University Press.

Ellis, R. (2009). Corrective feedback and teacher development. *L2 Journal*, *1*(1), 3-18. https://doi.org/10.5070/l2.v1i1.9054

Erlam, R., Ellis, R., & Batstone, R. (2013). Oral corrective feedback on L2 writing: Two approaches compared. *System*, *41*(2), 257-268. https://doi.org/10.1016/j.system.2013.03.004

Ellis, R., Sheen, Y., Murakami, M., & Takashima, H. (2008). The effects of focused and unfocused written corrective feedback in an English as a foreign language context. *System*, *36*(3), 353-371. https://doi.org/10.1016/j.system.2008.02.001

Faramarzi, S., Tabrizi, H. H., & Chalak, A. (2019). Telegram: An Instant Messaging application to assist distance language learning. *Teaching English with Technology*, *19*(1), 132-147.

Gass, S. M. (2003). Input and interaction. In C. J. Doughty & M. H. Long (Eds.), *The handbook of second language acquisition* (pp. 224-255). Malden, MA: Blackwell.

Gedik, N., Hanci-Karademirci, A., Kursun, E., & Cagiltay, K. (2012). Key instructional design issues in a cellular phone-based mobile learning project. *Computers & Education*, *58*(4), 1149-1159. https://doi.org/10.1016/j.compedu.2011.12.002

Gromik, N. A. (2012). Cell phone video recording feature as a language learning tool: A case study. *Computers & Education*, *58*(1), 223-230. https://doi.org/10.1016/j.compedu.2011.06.013

Haghighi, H., Jafarigohar, M., Khoshsima, H., & Vahdany, F. (2019). Impact of flipped classroom on EFL learners' appropriate use of refusal: achievement, participation, perception. *Computer Assisted Language Learning*, *32*(3), 261-293. https://doi.org/10.1080/09588221.2018.1504083

Huang, Y. M., Jeng, Y. L., & Huang, T. C. (2009). An educational mobile blogging system for supporting collaborative learning. *Journal of Educational Technology & Society*, *12*(2), 163-175.

Ibrahim, M. N. B., Norsaal, E. B., Abdullah, M. H. B., Soh, Z. H. B. C., & Othman, A. B. (2016). Teaching and Learning Enhancement Based on Telegram Social Media Tool. *Jurnal Intelek*, *11*(1), 7-11.

ITU. (2015). ITU releases 2015 ICT figures. Retrieved from http://www.itu.int/net/pressoffice/press_releases/2015/17.aspx#.V643yJgrLIU

Karimi, S. (1989). *Aspects of Persian syntax, specificity, and the theory of grammar*. (Unpublished doctoral dissertation). Seattle: University of Washington.

Kukulska-Hulme, A., & Shield, L. (2008). An overview of mobile assisted language learning: From content delivery to supported collaboration and interaction. *ReCALL*, *20*(3), 271-289. https://doi.org/10.1017/S0958344008000335

Kukulska-Hulme, A., & Viberg, O. (2018). Mobile collaborative language learning: State of the art. *British Journal of Educational Technology*, *49*(2), 207-218. https://doi.org/10.1111/bjet.12580

Leech, N., Barrett, K., & Morgan, G. A. (2013). *SPSS for intermediate statistics: Use and interpretation*. New York: Routledge.

Lin, C. J., Hwang, G. J., Fu, Q. K., & Chen, J. F. (2018). A flipped contextual game-based learning approach to enhancing EFL students' English business writing performance and reflective behaviors. *Journal of Educational Technology & Society*, *21*(3), 117-131. https://www.jstor.org/stable/26458512

Liu, P. L., & Chen, C. J. (2015). Learning English through actions: A study of mobile-assisted language learning. *Interactive Learning Environments*, *23*(2), 158-171. https://doi.org/10.1080/10494820.2014.959976

Lyster, R. (2004). Differential effects of prompts and recasts in form-focused instruction. *Studies in Second Language Acquisition*, *26*(3), 399-432. https://doi.org/10.1017/S0272263104263021

Ma, Q. (2020). Examining the role of inter-group peer online feedback on wiki writing in an EAP context. *Computer Assisted Language Learning*, *33*(3), 197-216. https://doi.org/10.1080/09588221.2018.1556703

Maftoon, P., Yazdani Moghaddam, M., Gholebostan, H., & Beh-Afarin, S. R. (2010). Privatization of English education in Iran: A feasibility study. *The Electronic Journal for English as a Second Language, 13*(4), 1-12.

Nassaji, H. (2011). Immediate learner repair and its relationship with learning targeted forms in dyadic interaction. *System*, *39*, 17–29. https://doi.org/10.1016/j.system.2011.01.016

Nassaji, H. (2015). *The interactional feedback dimension in instructed second language learning: Linking theory, research, and practice*. London: Bloomsbury.

Nassaji, H. (2016). Interactional feedback in second language teaching and learning: A synthesis and analysis of current research. *Language Teaching Research*, *20* (4), 535-562. https://doi.org/10.1177/1362168816644940

Nassaji, H., & Swain, M. (2000). Vygotskian perspective on corrective feedback in L2: The effect of random versus negotiated help on the learning of English articles. *Language Awareness*, *9*(1), 34-51. https://doi.org/10.1080/09658410008667135

Ruegg, R. (2015). The relative effects of peer and teacher feedback on improvement in EFL students' writing ability. *Linguistics and Education*, *29*, 73-82. https://doi.org/10.1016/j.linged.2014.12.001

Sandelowski, M., Voils, C. I., & Knafl, G. (2009). On quantitizing. *Journal of Mixed Methods Research*, *3*(3), 208-222. https://doi.org/10.1177/1558689809334210

Sato, M. (2013). Beliefs about peer interaction and peer corrective feedback: Efficacy of classroom intervention. *The Modern Language Journal*, *97*(3), 611-633. https://doi.org/10.1111/j.1540-4781.2013.12035.x

Shale, D. (2002). The hybridisation of higher education in Canada. *The International Review of Research in Open and Distributed Learning*, *2*(2), 1-11. https://doi.org/10.19173/irrodl.v2i2.64

Sheen, Y. (2007). The effect of focused written corrective feedback and language aptitude on ESL learners' acquisition of articles. *TESOL Quarterly*, *41*(2), 255-283. https://doi.org/10.1002/j.1545-7249.2007.tb00059.x

Swain, M. (2010). Talking-it through: Languaging as a source of learning. In R. Batstone (Ed.), *Sociocognitive perspectives on language use/ learning* (pp. 112-130). Oxford: Oxford University Press.

Talan, T. (2020). The effect of mobile learning on learning performance: A meta-analysis study. *Educational Sciences: Theory and Practice*, *20*(1), 79-103.

Tashakkori, A., & Teddlie, C. (1998). *Mixed methodology: Combining qualitative and quantitative approaches*. Thousand Oaks, CA: Sage.

Thorne, S. L., Black, R. W., & Sykes, J. M. (2009). Second language use, socialization, and learning in Internet interest communities and online gaming. *The Modern Language Journal*, *93*, 802-821. https://doi.org/10.1111/j.1540-4781.2009.00974.x

Tsui, A. B., & Ng, M. (2000). Do secondary L2 writers benefit from peer comments? *Journal of Second Language Writing*, *9*(2), 147-170. https://doi.org/10.1016/S1060-3743(00)00022-9

Van Lier, L. (1988). *The classroom and the language learner: Ethnography and second-language classroom research*. London: Longman.

Vasquez, C., & Harvey, J. (2010). Raising teachers' awareness about corrective feedback through research replication. *Language Teaching Research*, *14*(4), 421-443. https://doi.org/10.1177/1362168810375365

Vurdien, R. (2020). Enhancing writing skills via mobile learning and wikis. In B. Zou and M. Thomas (Eds.), *Recent developments in technology-enhanced and computer-assisted language learning* (pp. 99-121). Hershey, PA: IGI Global.

Vygotsky, L.S. (1986). *Thought and language*. Cambridge, MA: MIT Press.

Yan, L. (2019). A study on WeChat-based collaborative learning in college English writing. *English Language Teaching*, *12*(6), 1-9.

Yang, M., Badger, R., & Yu, Z. (2006). A comparative study of peer and teacher feedback in a Chinese EFL writing class. *Journal of Second Language Writing*, *15*(3), 179-200. https://doi.org/10.1016/j.jslw.2006.09.004

Zou, B., Wang, D., & Xing, M. (2016). Collaborative tasks in Wiki-based environment in EFL learning. *Computer Assisted Language Learning*, *29*(5), 1001-1018. https://doi.org/10.1080/09588221.2015.1121878

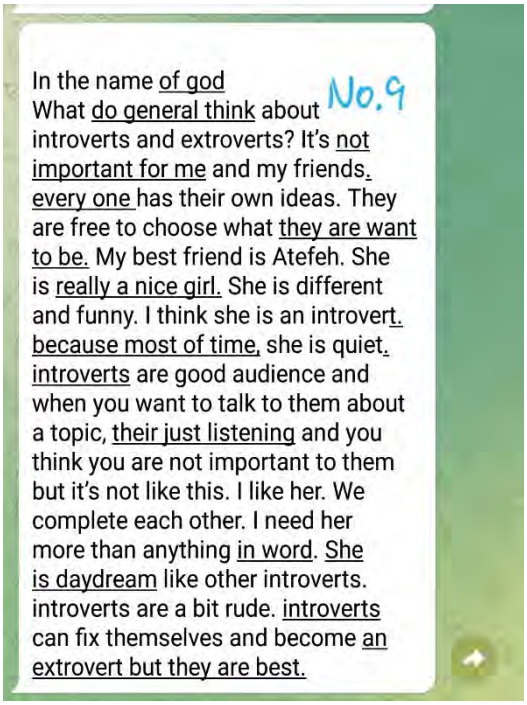
Appendices

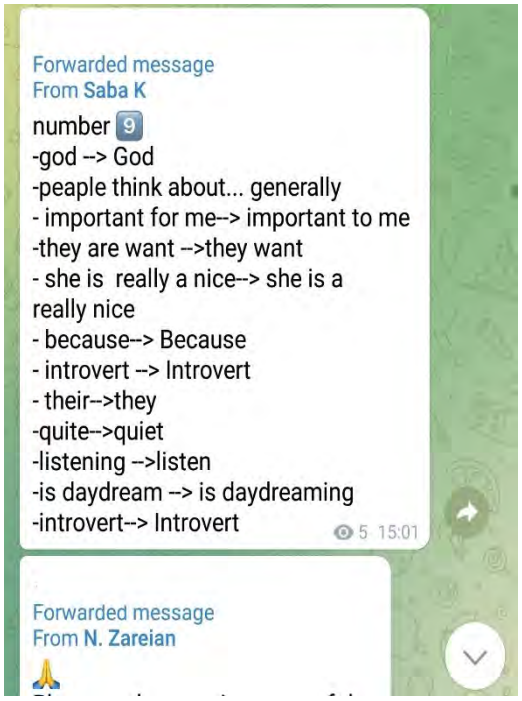
Appendix A. The questions which were used in the semi-structured interview

1. How did you find your experience of your current mobile learning?
2. What are the benefits of the mobile learning in this program? Why?
3. What are the drawbacks of the mobile learning in this program? Why?

1. تجربه خود را از یادگیری الکترونیکی با گوشی همراه چگونه ارزیابی می کنید؟
2. مزایا و فواید یادگیری الکترونیکی با گوشی همراه در پژوه ی اخیر چیست ؟ چرا؟
3. نقاط ضعف و چالش های یادگیری الکترونیکی با گوشی همراه در پژوه ی اخیر چیست؟ چرا؟

Appendix B. An Example of a highlighted composition and the feedback from one of the learners





Appendix C. Interactional feedback between the teacher and the learners