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The Effect of Using Cell Phone Video Recording Features on Iranian EFL Learners' Fluency

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Abstract: To examine the effect of using video recording features of mobile phones on Iranian EFL learners' fluency, 40 Iranian EFL female elementary learners were chosen by means of administering a placement test. Then, they were randomly divided into two equal groups of experimental and control groups. In order to have their speech samples, they were all interviewed both before and after the treatment. While participants of both groups attended their regular traditional elementary classes, the participants of the experimental group used their cell phones to make 15 videos of themselves talking on given topics every five days as the study treatment. Then, the participants' fluency was assessed through calculating their speech rate. The results of ANCOVA ($p<.05$) demonstrated that the experimental group outperformed the control group in terms of speech rate. Therefore, using video-recording features of mobile phones can lead to improved rate of speech of Iranian EFL learners.
Keywords: cell phone, fluency, speaking, speech rate, video recording

INTRODUCTION

Speaking a second/foreign language fluently is not so easy and definitely needs more practice. Nowadays, fluency in L2 speech is considered as much important as accuracy. The importance of fluency in language learning has caused different definitions of it to be introduced. Hedge [1], for example, defined it as "the ability to link units of speech together with facility and without strain or inappropriate slowness or undue hesitation." From this point of view, the speed of speech and not having unnecessary pauses no matter whether filled or unfilled and, as a result, using more words in less time are the signs of fluency. This is the most common understanding of the word and the one that is used more in assessing speaking skills.

How to improve fluency has always been the concern of both L2 teachers and learners. One of the biggest problems of EFL students is the lack of acceptable fluency even when they score high on the written forms of grammar, vocabulary, reading, or writing tests [2]. Many researchers tried to propose solutions for this problem using the new technologies of their time. Among them are those who provided evidence on the effectiveness of voice-recording (in its different forms) on communicative competence, and mainly on oral fluency of EFL/ESL learners. For example, Kluge and Taylor's [3] students practiced voice recording as a supplementary activity of their class to foster their speaking fluency. The results of this study showed that at the end of semester, the students' fluency, at least regarding the number of words they could utter per minute, indeed improved. Besides, their students gained a sense of responsibility for their progress beyond the classroom [3].

Another way to enhance fluency is oral presentation which has been proved to be beneficial for L2 learners at all proficiency levels. Nowadays, however, there is a shift from voice recording to video recording as a newer trend of oral presentation mainly because of the visual attraction it adds to voice recording. Weyers [4], for example, found that video-based tasks developed students' oral production and especially improved their "confidence in speech." Language teachers and curriculum developers show an increasing appeal to integrate video (in general and in its different forms) in language classes or programs [5, 6, 7, 8]. Fernández González [9] saw video recording as a way to help students become more reflective practitioners and to build up their self image. Katchen [10] believed that paying attention to fluency is probably the most important lesson students may learn from watching themselves speaking in the target language. She emphasized on the importance of the role teachers have in training "students to become critical of their own content and presentation" and make them see both their problems and improvements (ibid.). Katchen [11] also indicated that learners can be even more critical judges than their teachers regarding their

nonfluencies if teachers train them well. Also, additional practice via video recording cannot be neglected as a way to enhance speaking skills, including fluency. Richards and Schmidt [12] define practice effect as "the effect of previous practice on later performance." Morley and Truscutt [13] found that extra speaking practice outside the classroom for over 12 weeks could improve fluency gain up to 12% comparing with a gain of less than 1% for those students who just attended the regular and conventional classes. Therefore, asking low level L2 learners, like elementary students, to video-tape, revideo-tape, and watch themselves making short monologue presentations on interesting topics, I believe, can help them to be more responsible for improving their own oral performance. Video-recording can provide students with the opportunity to speak without being under any pressure or stress which can develop their self-confidence. To do this, learners would need some electronic aids for video recording. One option is to use the video recording features of mobile phones. As a result, the combination of oral presentation as an accepted practice of language learning and using the new technology of cell phones seems an applicable integration in the domain of mobile assisted language learning (MALL).

The multifunctionality of mobile phones has made them more popular devices in educational environments. Nowadays, as mobile phones are becoming more and more sophisticated, creating and playing multimedia content is possible on many models. Users enjoy larger screens with high quality displays. Capturing, editing, and playing back audios, videos, and photographs are now integral features of a huge number of mobile phone models. The storage capacity is now much larger and can be expanded utilizing SD memory cards. Burston [14] confirmed the above points and referred to mobile phones as ideal "ultraportable language learning tools." Therefore, utilizing them in and out of the classroom is unavoidable.

Research on using mobile devices and specially mobile phones in language learning environments has already started [14-24]. However, the main concern of the above-mentioned experiments had been investigating the effectiveness of sending text messages or applying mobile applications on vocabulary, pronunciation, or grammatical gains of language learners. Therefore, not many researchers have focused on applying audio-visual feature of mobile phones in educational context. Shrosbree [25] suggested using mobile phones to take pictures in order to make photographic slide shows, which can be completed with English commentary. Uzunboylu, Cavus and Ercag's [26] students used their cell phones cameras to take pictures of their environment and uploaded them on their project website where their peers could comment on them.

Although the research backs teaching with the aid of video and introduces several different approaches to it, student-led video production, especially using mobile phones, is an emerging concept in EFL research. Very few researchers have investigated the use of audio-video recording features of cell phones basically in order to investigate their effects on L2 learners' oral performances. Gromik's [27] students were engaged in applying their cell phones in order to video record themselves speaking spontaneously on topics of their interest to make video diaries. Improving students speaking ability and creativity due to producing weekly video diaries through cell phones were among the reported outcomes of Gromik's [27] study. Gromik [28] reported on a case study conducted with nine Japanese EFL students who used the video recording features of their cell phones in order to produce weekly 30-second video productions on given topics. In contrast with other studies considering the effect of producing videos of pair or group conversations on speaking skills, in Gromik's study the participants worked individually and had to make monologue videos for 13 weeks. At the end of the study, his participants could increase the average number of words they spoke in one monologue by 37% which was a sign of fluency development. He also conducted pre and post test surveys to find about Japanese EFL students' opinions towards using cell phone as a language learning tool. His surveys revealed his EFL learners believed that applying cell phone video recording features was a useful activity.

In another study conducted by Lys [29] to investigate the development of learners' oral proficiency, 13 high intermediate to advanced learners used their iPads and produced eight videos over the period of a nine week German course . They video recorded themselves or something else (e.g the place they lived) while speaking on a given topic. The videos were uploaded on a private You Tube channel for peers to view and comment on them. The results revealed a three-fold increase in the length of the videos comparing the first and the last videos. Lys [29] also found that the average number of uttered words significantly increased. In order to calculate the fluency rate, she divided the total number of words produced in the speech samples by the total amount of time expressed in seconds. The results indicated a significant decrease of 15% in the fluency rate after eight video recordings using iPads which was unexpected.

There is a lack of enough experiments in the domain of mobile assisted language learning and video recording in the EFL environment of Iran. Accordingly and in order to examine the effectiveness of using cell phone video recording features on Iranian EFL learners' fluency, in terms of rate of speech, this study attempts to examine the following question:

Question: Does Iranian EFL learners' rate of speech improve after self video-recording through mobile phones?

And it is expected that extra practice through applying video recording features of cell phones would have an effect on students' fluency in speech.

The constructivist approach to learning was the theoretical framework of this study. According to it, learner is constantly constructing new concepts or ideas using his current or past knowledge and all the learning process is an active one (Burner, 1966; as cited in [30]). Therefore, applying mobile technology to help learners with entering their individual schemata into learning process could be the revival of the constructivist learning theory. Also constructionism which is derived from constructivism and was first introduced by Papert in 1980's seems more related to the current study. In a constructionist framework, technology is not a "content delivery for learning" but "a cognitive medium" which is used for "intellectual expression and exploration" [31]. In this respect, Karagiorgi and Symeou [32] refer to technology as a knowledge construction tool. Regarding mobile technology the focus should be on student's ability to be self directed and draw conclusions (ibid.). Ackermann, Gauntlett, and Weckstrom [33] also refer to Papert's constructionism as "learning-by-making" (p. 56) and say it is connected with experiential learning.

METHODOLOGY

Participants

First the outline of the project including the purpose, the instrument needed, and the estimated time requirement were explained to120 female elementary EFL learners at Iran Language Institute (ILI) in Dezful, Iran. Then the Quick Placement Test of Oxford University Press and University of Cambridge Local Examinations Syndicate, version 1, [34] was administered to 52 students who found themselves interested in taking part in the project. Based on the manual of the above-mentioned test, 40 learners whose scores fell between 18 and 29, out of a total score of 60, were considered as A2 learners according to Common European Framework Reference (CEFR). These learners who ranged in age from 17 to 57 were selected as the participants of the study and were randomly divided into experimental and control groups with 20 participants in each.

Instruments

Cell Phones

All the participants of the experimental group were required to have a cell phone with video recording features to be used as a technological device.

Placement Test

The Quick Placement Test of Oxford University Press and University of Cambridge Local Examinations Syndicate, version 1, [34] was used to select elementary participants. It is a 60 item multiple-choice test and places learners based on their proficiency and in line with the Common European Framework from A1 to C2. The test was used to select A2 participants. Furthermore, the reliability of the test was estimated to be 0.90.

Pre-test and Post-test Interviews

Both before and after the treatment the participants of the experimental and control group were interviewed by the researcher on the phone. The interviews were all recorded and used as the participants' speech samples for later analysis. The questions asked in the interviews were exactly the same as the topics of the monologue videos given to the experimental group as the treatment (please see Appendix for the questions of the interviews and video topics).

Procedure

After selecting the A2 level participants and putting them into the experimental and control groups and in order to have samples of all participants' oral performances, pre-treatment interviews were conducted on the phone for the average time of 10 minutes. All the interviews were recorded and transcribed to be analyzed later. The questions of the interviews were selected from the topics of the elementary materials the students study in their regular classes at the ILI and they were exactly the same as the topics of monologue videos (see Appendix). Therefore, all questions of the interviews, which were the topics of the videos, were familiar to all participants and they all had the chance of studying about them through their course book materials or participating in class discussions and speaking on them.

While students in both experimental and control groups continued attending their regular classes and course book studies, the experimental group, who were required to have cell phones with video recording features, received topics every five days via text messaging to make monologue videos on them. They received fifteen topics altogether and for each topic they recorded a 30-second to one-minute video of themselves using their mobile phones. The participants were asked to video-record themselves as many times as they wished until they felt satisfied with their final product regarding their fluency. Video recording was considered as part of their homework and the topics were based on the participants' previous course book materials and the class discussions they already had. Therefore, none of the topics was new to the students and they had to use their prior knowledge and experience of language to make the videos.

Then, the final videos of their monologues were handed in to the researcher via Bluetooth. On the other hand, the participants of the control group did not

do any extra activities and only attended the regular classes and received traditional instructions in their classes and did their usual homework. One week after the treatment, participants of both experimental and control groups were again interviewed by the researcher on the phone for the average time of 10 minutes. The procedure was exactly the same as the pre-treatment interviews. The questions of post-treatment interviews were exactly the same as those of pre-treatment interviews. They were all recorded, transcribed, and analyzed regarding the participants' fluency.

Assessing fluency

In order to answer the question posed in the current study, only the speech rate in words as a temporal variable was used to assess the oral fluency of participants. Speech rate in words was calculated by dividing the result of the word count by the total time of the speech sample every participant produced as their own linguistic production in minute including the pause time. It is worth mentioning that the interviewer's turns were excluded from the whole interview. Also the repeated words the participants uttered and used them as their communicative strategies, while trying to find some time for more thinking, were not taken into account. For example, some participant tried to repeat part of the interviewer's questions or keywords from the questions while attempting to organize their answers. Those utterances were not considered in the word count. Therefore, two speech rates were calculated for every participant: one for the pre-treatment interview and one for the post-treatment interview.

RESULTS AND DISCUSSION

In order to examine the effect of using video recording features of mobile phone on Iranian EFL elementary learners' fluency, the mean of the speech rates of the experimental and control groups were compared. To do this the software IBM SPSS Statistics version 19 for Windows was used. Table 1 shows the experimental and control groups' mean and standard deviation of the speech rates in pre- and post- treatment interviews.

Table-1: The speech rate means of experimental and control groups

Group	N	Mean	SD
Experimental pre	20	57.99	13.31
Control pre	20	66.14	18.55
Experimental post	20	69.33	14.6
Control post	20	58.64	18

As it can be seen in Table 1, the speech rate means of the experimental group (M=69.33, SD=14.6) was greater than that of the control group (M=58.64, SD=18) in post-treatment interviews. However, it cannot be concluded that the reason was the treatment because the pre-treatment mean scores were not the same in experimental (M=57.99, SD=13.31) and control (M=66.14, SD=18.55) groups. In order to compare the post-treatment score of the experimental and control groups, therefore, the analysis of covariance (ANCOVA) was conducted to adjust and control the effect of the pre-treatment scores. Table 2 shows the results of one-way ANCOVA on the calculated speech rates of both groups.

Table-2: The results of one-way ANCOVA on post-treatment speech rates of experimental and control groups

Dependent Variable	Source	Sum of Squares	df	Mean Square	F	Sig.
Fluency	Pre-test	4899.31	1	4899.31	34.12	0.000
	Groups	2527.34	1	2527.34	17.6	0.000*
	Error	5312.56	37	143.58		

***** sig < 0.05

Controlling the effect and the interference of the pre treatment scores, Table 2 clearly shows the results of one-way analysis of covariance (ANCOVA) regarding the participants' speech rate. Based on these results, there was a significant difference between the mean scores of both control and experimental groups where F (1, 37) = 17.6 and p < 0.000. Considering the mean scores of participants' speech rate in experimental group (M = 69.33, SD =14.6) and in control group (M = 58.64, SD = 18), this significance is in favor of the experimental group. As a result, self-video recording using mobile phones while speaking on given topics led to experimental group's better speech rate, and as a result fluency, in comparison with the participants' performances in the control group.

According to the obtained results of the above mentioned statistics, it can be concluded that self video recording, using mobile phones, indeed had a significant impact on the performance of the participants of the experimental group regarding their rate of speech. More specifically, not only the fluency of learners changed, but also this change was a positive one.

One explanation can be the extra practice which the experimental group enjoyed through using video recording features of mobile phones as tools. Therefore, referring to practice effect [12], in this study the participants of the experimental group, comparing with those of the control group, simply were more familiar with the topics through having additional homework practice and had worked on them individually in order to produce their videos using their cell phones. Therefore, when they were asked to speak about related topics in their post interviews, they simply could retrieve their prior knowledge faster and as a result they spoke more fluently and had a faster speech rate. On the other hand, participants of the control group, who only attended their usual class and did not use their mobile phones to make videos of themselves speaking, needed more time to first think about the questions and then organize their answers which led to their slower speech rate. The participants of the current study acted very similar to Morley and Truscott's [13] students who had extra speaking practice outside the classroom and enjoyed a significant gain in fluency compared with those just attending classes. Their findings emphasized the practice effect, too.

The fluency improvement in the experimental group was in line with the results of some experiments which focused on the effect of self or pair voice recording on fluency; for example Kluge and Taylor's [3] participants experienced improvements in speaking fluency after voice recording. Regarding video recording using mobile devices, the findings of this study were also in line with those of Gromik's [28]. Although he had a quasi-experimental research design, He noticed a 37% improvement in the average number of words uttered after his participants produced 13 thirty-second videos applying mobile phones.

The findings, however, were in contrast with those of Lys's [29] who applied a similar method but ended up in experiencing 15% decrease in the fluency of her participants after eight weekly video recording using iPads.

CONCLUSION AND IMPLICATIONS

This study aimed at understanding the extent to which using video recording features of mobile phones affect the fluency of Iranian EFL elementary students. The findings suggest that it is possible to integrate video recording activities applying mobile phones in EFL contexts in order to help L2 learners with their fluency. Therefore, the results were in line with that of Gromik's [27] who found it generally feasible to engage students to apply their mobile phones as modern, at-hand, and cheap technology to orally express their opinions. Also in consistence with constructivism, the participants of the experimental group applied the video recording features of their mobile phones as tools to build up their new knowledge based on their old individual schemata. The participants also used their technological tools, i.e. mobile phones, to make an artifact for others to see. Therefore, the task was successfully based on constructionism learning theory and as a result it was learning by making. As a result, the task participants did to have more practice in order to improve their speech rate was in a constructionism framework.

Mobile phones are among the most accessible devices almost every student possesses. It seems logical if teachers make their students use the video recording features of their cell phones in order to practice speaking in L2 and have more opportunity to express themselves in less stressful situations. This may increase students' autonomy and engage them more in their own learning process. As mentioned earlier, Katchen [10] believes that fluency is the first thing students notice when whatching themselves speaking in a foreign language. Therefore, if they receive appropriate trainings, video recording can help them judge their own fluency and try to improve it [11]. These are good reasons for having student-led video production tasks in or out of language classes. Regarding improvement of speech rate in L2, it is more probable that under the supervision of teachers, learners benefit more.

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Appendix

Speaking Topics of the Project (Videos and Interviews)

1. What is a good roommate like in your opinion?
2. Why are you learning English?
3. What makes a neighborhood a horrible place to live in?
4. Why do most high school students like to go to large universities?
5. Who do you like the most in your family? Why?
6. What are the effects of sports on your body/ mind?
7. What do you have to do when you have a bad cold?
8. What do you need to think about before renting a place to live in?
9. What should you do to lose weight? (What should you do to stay thin/ avoid getting fat?)
10. What are the most important problems for somebody who starts living in another country?
11. What country would you like to visit? Why?
12. How can you stay healthy/ keep fit? (How can you live a healthy life style?)
13. How can you save more time in your everyday life? (How can you stop wasting your time? Provide examples.)
14. What are the characteristics of an ideal job? (Payment, workplace, colleagues…)
15. What is your best friend like? Why do you like him/her? (Appearance, personality)