

EFL Learners' Speaking Enhancement through WhatsApp Messages: A Case of Learners' Gender and Affection

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Abstract

Mobile technologies and portable devices have a crucial role in mobile-assisted language learning (MALL). This paper evaluates the difference of gender in the improvement of oral skills via WhatsApp Application (WAA) and the impression of mobile devices on students' motivation, satisfaction, and anxiety and the learners' opinions. A mixed method study was used on the sample size. Quasi-experimental and non-experimental survey designs were carried out in this research. The study's participants were composed of 30 EFL learners at an upper-intermediate level in Zanjan, Iran. A face-to-face verbal interview was implemented for recording the pre-test before setting up the experimental course on WAA and by creating the interaction group on WAA, the learners communicated (written and voice messages) with the tasks that they received every week for six weeks. Then the teacher ran another interview and used a questionnaire consisting of thirty 5-point Likert item questions adopted from Horwitz et al. (1986) to estimate the participants' contentment and attitude with mobile education classes, the effectiveness of this process on their inspiration to get involved in class interaction, and the anxiety of learners in this approach. The findings displayed that the female participants' performance was slightly better than male participants and the use of WAA on mobile devices can enhance speaking proficiency among EFL learners by decreasing their anxiety and increasing motivation resulting in their satisfaction.

Keywords: [anxiety](#), [gender](#), [motivation](#), [proficiency skills](#), [satisfaction](#), [WAA](#)

1. Introduction

In the mobile device, WAA is the slightest achievement of its functionalities. Occasionally, it is uncomfortable and tough to chat on small-size mobile screens, and screen firmness itself adds to the hardship (Andujar, 2016). In recent years, the use of WAA has expanded in education. Nevertheless, in higher education, some matters are encountered in applying WAA. The issue concerning the use of WAA is related to its application in training as a piece of equipment for education, cooperation, and connection.

The matter of utilizing WAA for communication as a tool is the first aim. Nevertheless, research concerning the impact of WAA on the enhancement of educational goals at universities as an effective communication system is still scarce (Roman Gravan, Ballesteros Regana, & Noguera, 2018). Teachers realize it is not convenient to use WAA in education and learning; whereas, it is easier to apply computers in return. WAA is typically regarded as the least favored tool for training and learning even if it is one of the most preferable tools for daily communications (So, 2016). There is a shortage of encyclopedic perceptions of applying WAA in training and learning despite the widespread application of mobile instant messaging (MIM) in the market.

In recent years, since there has been increasing attention to MALL improvements, WAA is an approvable social media utilized to interact and communicate through internet networks. WAA is now being applied not only for social communications but also for instructional purposes. “WAA is so efficient for learners since it is accessible anytime and anywhere, both inside and outside the classroom to reinforce cooperative learning” (Fattah, 2015, p.117). Instructors are not able to manage language learning exercises, in an online learning state, due to their limitations to interact (Gudu, 2015). However, there has been no controlled research that compares differences between males and females in progressing oral skills through mobile devices like WAA. Moreover, there has been little focus on the affections that were impressed by using mobile devices.

MALL can extend teachers' and ESL learners' receptive roles; however, it might disregard professional interaction or the awareness paid in traditional pedagogical methods. A review of the related literature shows numerous studies concerning research on MALL worldwide, comprising over 345 various mobile-related technologies that are carried out in the area of L2 education and instruction (Burston, 2014). Previous research has emphasized the importance of mobile education and its impact on boosting students' cooperation and class engagement, cooperating with their fellow classmates (Jeno et al., 2019).

The study intends to evaluate EFL learners' speaking complement through WAA messages via chat or voice-based in the case of learners' gender and affections such as motivation, satisfaction, and also anxiety. This exploratory paper seeks to address the questions below:

1. Is there any significant difference between males and females regarding the development of their speaking skills through WAA?
2. What are the student's views about motivation, satisfaction, and anxiety on using chat or voice-based messages on WAA to communicate?

2. Literature Review

2.1 Developing Speaking Skills

Speaking is a significant skill in language education, and plays an essential role in transmitting knowledge. Speaking proficiencies require someone to learn various things in speaking such as grammar, pronunciation, vocabulary, perception, and application. Following the Covid pandemic, the field of education in general and language learning, in particular, went through remarkable changes, yet instructors and learners had to master new knowledge with the contribution of technology to progress in learning to talk inside the class. Converting learning approaches from break-and-mortar classes to online ones occurred rather suddenly which was a big challenge for teachers and educators. Concerning online education, teachers are required to develop learners' abilities, particularly in favor of teaching oral skills. Accordingly, teachers are required to have the creativity to use technology and provide sophisticated strategies to enhance learners' abilities, remarkably in oral skills.

A piece of research done by Zou et al. (2023) examined the effect of social network-based communication on the development of learners' oral English skills in China. The results depicted that artificial intelligence (AI) applications positively affected students' ability to speak efficiently by reducing their anxiety to a high extent. AI is defined as

computational structures that can utilize information to act in human-like procedures like education, self-correction, and answering complicated activities. Particularly, it has been used in education in language learning areas. While MALL is gaining more popularity, AI-based speaking platforms and assessment systems have been applied in favor of EFL speaking activities. Previous studies revealed that AI speaking platforms were able to help promote oral skills. Despite all this, the function of network-based communication in oral practice in an AI-assisted language learning context is under-explored. Previous studies aimed at increasing the research by MALL context to the AI-assisted learning context. In particular, they mainly concentrated on students' awareness of different communicative tasks via performing speaking proficiencies through AI applications. Furthermore, the efficiency of interaction in promoting EFL oral skills was explored.

Mobile education provides opportunities for students to find learning resources and interact with people around the earth every time and everywhere with no barriers (Rudzinska, 2013). Because of the stunning utilization of mobile devices, nowadays, its main use has become subordinate due to the widespread use of social media and other similar mobile programs (Maulina et al., 2023). Via practicing voice messages, learners recite their speaking proficiencies with APPs which assist them to communicate more effectively in online classes, like sharing their ideas, switching information, and taking their time in favor of talking. Such activities are like what they normally do daily with their mates even in distance education. By reviewing the literature, one can get insightful information about previous research done on speaking education in online classes.

According to Nurazizah et al. (2019), the utilization of WAA as an online media to exercise learners' oral proficiency is significant. Learners record voices and further send recordings of their voices to WAA group. Former studies advise more survey research on social media, like WAA, in order to find how EFL instructors and students apply them in the classroom to develop their oral skills (Allam & Elyas, 2016; Maulina et al., 2023). Therefore, researchers made a resource named WAA-Based Speaking Instructional Material (WABSIM), which learners apply throughout their regular chat-based routine to create involving oral tasks inside and away from class (Maulina, 2023).

Aryanata et al. (2022) explored how instructors use voice messages to train oral skills at a high school via depicting text subjects. It was found that voice messages are practical in enhancing students' oral proficiency specifically when slight commands and descriptions are provided by voice messages. Moreover, students' pronunciation is exercised as they concentrate on pronunciation when reciting text stories and lectures. Learners were able to promote their oral proficiency by utilizing voice messages and focusing on reciting monologue narratives of recount content. Moreover, learners' views were studied through the performance of voice messages in the classroom. Learners stated that they got motivated, attracted, and surprised to exercise their speaking abilities via voice messages. Consequently, they expressed their consent that educating via WAA voice messages improved their pronunciation, reduced grammatical errors, promoted vocabulary, expanded their perception, and improved fluency, despite a few negative views from some learners.

Concerning EFL speech rehearsal, Tragant et al. (2022) investigated how applying immediate messages through WAA groups might assist with language education outside the classroom. Teachers inducted some learning activities, consisting of verbal tasks, in WAA groups in five weeks of a summer course at a Spanish university. Participants were asked to get involved in a set of language-learning activities on WAA. Eight teacher-inducted tasks were classified into four types: question and answer, guessing tasks, drills, and information giving. The on-task and off-task messages by instructors and learners were estimated to investigate learners' involvement through education activities. The research discovered that task-based communication motivated learners to get involved in language practice, although not formal interaction was also beneficial in fostering students' practice, while it did not investigate interactions' effect on progressing students' language capacities.

Previous studies investigated how communicative activities efficiently progress students' speaking proficiency, as well as, the motivational impact of social media interaction on oral practice. For example, Mykytiuk et al. (2022) explored the efficiency of Facebook-assisted communication in improving the EFL oral proficiency of undergraduate pupils in Ukraine. The Facebook program was included in academic classes by contextual tasks in an experiment group whereas traditional training was followed in the control group. The communicative tasks in the Facebook group consisted of a set of language input tasks and interactive output tasks. In language input tasks, content-oriented input tasks (communicative videos, presenting learning subjects with images, and quizzes), speaking shadowing tasks (repeating the content, listening to the words in the video), and organized output tasks (completing information intervals in materials commented on the Facebook group) were included. The interactive output tasks consisted of

tasks in favor of stating opinions, role-playing (performing an interview chasing the Facebook link), digital tale narration (verbally giving views in posted videos), and story filling (sending related vocabularies concerned with the story).

To assess the efficiency of Facebook communication, and to estimate the enhancement of verbal skills based on glossary and grammar, communicative conversation, pronunciation, and discourse implementation, the pre-test and post-test were conducted. Moreover, according to the four factors presented above, students' perceptions of their progress were analyzed in speaking proficiencies. The conclusion revealed that the experiment group gained importantly better grades than the control group, therefore, demonstrating the efficiency of communicative tasks. Also, according to learners' perceptions, many students admitted that interactive tasks were useful on Facebook to improve their speaking proficiency, in particular promoting vocabulary and grammar information.

The other study by [Ahmed et al. \(2022\)](#) aimed to explore the influences of Duolingo and WAAs on improving oral exactness and fluency of Iranian EFL students. The influences of WAA on the oral proficiencies of students were investigated and the conclusions specified that there was a significant difference between the speaking implementations of the control group and the two experimental groups. The results displayed that the WAA importantly promoted the motivation of learners in experimental groups and positively influenced learners' vocabulary learning in the Duolingo test. The study analyses indicated that learners who applied Duolingo had a high level of vocabulary and grammar improvement. Besides, the findings of this research confirmed that the Duolingo application was an efficient gadget for learning English as it incorporates many advantages for students' educational development.

[Ainun et al. \(2020\)](#) presented that training in oral language can be carried out with computers or mobile devices where learners are allowed to boost consent and exercise the target language in speech. Regarding [Quinn \(2014\)](#), the challenges for instructors in training speaking are because of a shortage of confidence, fear of talking, insufficiency of vocabulary, and learners' fear of making errors. In typical classes, these regular challenges may be observed. Learners' speaking education gets less productive due to distance learning activities which include the implementation of online education for learners. Regarding this condition, it can be inferred that it is a problem among online learning actions and verbal proficiency practices. Moreover, WAA can assist students to increase their knowledge of academic organization. Thus, WAA is regarded as a tool in favor of awareness in education to progress learning accomplishment, particularly in training and learning English. As the most significant proficiency in communicating and interacting, speaking proficiencies ought to be taught through correct methods, correct media, and valid evaluations ([Gudu, 2015](#)).

2.2 MALL in Relation to Anxiety

[Alamer et al. \(2022\)](#) examined the effect of utilizing WAA on learners' autonomy, language anxiety, and real language accomplishment. The results indicated that instant messaging applications include important total impacts on autonomous incentive and second language accomplishment, however, language anxiety was negatively affected through equipped education. Instant messaging improves motivation and success and reduces anxiety. Language anxiety is a kind of emotion that is widely evaluated in the field of second language education ([Alamer & Almulhim, 2021](#)), that has a critical role in students' motivation and their learning procedure. Research explores that autonomous motivation provides by WAA use brings about less anxiety, horror, and shame in education procedures ([Alamer & Lee, 2021](#)).

[Alamer et al. \(2022\)](#) studied the use of MALL in the process of English education. Moreover, they investigated the learners' level of anxiety at the post-pandemic condition. Regarding learners' degree of anxiety, the results indicated that 27% of learners graded low-level anxiety, 46% graded an average level of anxiety, and 27% had high-level anxiety. According to the findings, learners' anxiety degree was moderate, which indicated that learners did not feel anxiety significantly, however, did not have convenient education either. MALL's performance implemented such as additional media to facilitate education. The utilization of media assisted the instructor in preparing the materials and doing the assessment. The task did not involve discussion because learners' devices were efficient enough for this purpose. Consequently, the anxiety encountered by learners was at an average level. The issue that should be considered is the convenience of learners when using MALL as the internet and device connections were the issues to be solved to have an effective training procedure.

Regarding the utilization of MALL and anxiety degrees in English education, a study performed by [Sutrisna et al. \(2020\)](#) aimed to search for in-depth data on how teachers observed MALL effectiveness applied in the training of learning English within Covid-19 Pandemic based on language training tasks which learners were involved, and also, how lucrative MALL utilized as teaching. MALL allows lecturers to teach and arrange tasks like spreading teaching instruments such as video, e-books or audio, and video conferences.

2.3 MALL in Relation to Motivation and Satisfaction

A study by [Aliakbari and Mardani \(2022\)](#) showed the outcome of MALL study on EFL learners' development. The outcomes of the study illustrated that EFL learners who were engaged in mobile education classes did better than the students who were in traditional classes, and that classes run by mobile education had a practical effect on developing students' oral proficiency. This concludes that learners' achievement in speaking skills was because of isolation facilitated through mobile education, which made it more convenient in favor of teachers to explore personal strengths and weaknesses via listening to voice many times accurately. Therefore, according to the impacts, it is inferred that even though face-to-face courses have special popularity among students and have a positive effect on motivating students, mobile education classes infer more contentment than face-to-face ones.

[Shi et al. \(2017\)](#) concluded that when investigating their MALL experiences, learners were motivated to talk in a foreign language, learned more with the MALL method, and felt more convenient. [Troussas et al. \(2017\)](#) presented that English talking activities promoted students' motivation and engagement on mobile phones, assisted in the procurement of cognitive proficiencies, and increased essential language learning. Mobile education is a complete chance for pupils to find learning resources and interact with people surrounding the earth every time and everywhere with no barriers.

3. Methodology

3.1 Design of the Study

A mixed-methods design was selected to investigate the collected data. Quantitative data were used to examine the diversities between males and females in line with the enhancement of their oral skills through WAA. Statistical exploration was considered to contrast the diversities in the performance of the learners based on gender under the exploration. Qualitative analysis was also conducted to seek the learners' opinions regarding their motivation, satisfaction, and anxiety via using WAA.

3.2 Participants

The population of this research contains upper intermediate students from one of the English language institutes in Zanjan, Iran. The target sample was carried out to verify the population. The sample size was just 30 learners including 13 males and 17 females. The students ranged from 14 to 20 in age. The students participated in English classes on WAA besides their real English classes. They were supposed to discuss the group which was set up on WAA outside their classroom to have an interaction based on the activities with different subjects. It is noteworthy to mention that ethical approval was obtained in this study to ensure that all the procedures undertaken to prepare this article followed ethical guidelines and considerations. Informed **verbal** consent for participation in the study has been obtained. All human participants expressed **verbally** their consent, which was recorded by an electronic voice recorder, for participation and follow-up publication of the paper as a result of the study.

3.3 Instruments

In this research, the instrument utilized in gathering the quantitative data for the first research question was an interview sample from The Official Cambridge Guide to IELTS ([Cullen et al., 2014](#)). Two interview samples were selected to examine the learners' oral proficiency before and after the experimental course on WAA. The participants' speaking skill was implemented face to face for about 14 minutes for each learner by the researcher and a rater and graded according to IELTS speaking band descriptors. WAA was recommended to be used outside the classroom since the learners had access to it to keep in touch together with the tasks based on the IELTS Maximizer Educational Book that was sent to them by the teacher. Therefore, applying mobile technologies such as WAA in order to communicate with students and participants of the team in greater learning contexts makes the learners communicate via the change of note messages, videos, pictures, and voice messages ([Udenze et al., 2020](#)).

A questionnaire was developed to investigate the EFL learners' perspectives and views regarding their satisfaction with utilizing WAAs outside the classroom and how WAA can have a role in the level of motivation of EFL learners in speaking skills. To collect the above data I used the modified version of the questionnaire by Horwitz et al. (1986), which originally contained 33 items, however, to fit it to the requirement of this research, it was modified what the first version of the questionnaire used in this study contains 15 items. It was utilized to explore the EFL learners' anxiety concerning using WAA to interact outside the classroom. Moreover, the other questionnaire consisting of fifteen 5-point Likert item questions that were taken from Horwitz et al. (1986) was used. The whole questionnaire is also made of thirty 5-point Likert items consisting of the following points: (Disagree, Strongly disagree, Neutral, Strongly agree, and Agree). After implementing the treatment on WAA, the members were asked to answer the 30 questions in 20 minutes that were allocated to the questionnaire. Besides, the reliability of the questionnaire was proved by Cronbach alpha in SPSS software.

3.4 Procedure

To achieve the aim of the study for quantitative data, after determining the participants, the instructor implemented the pre-test by interviewing the students with the interview sample from The Official Cambridge Guide to IELTS (Cullen et al., 2014). The learners were allowed to reply to the questions in a specific time and were rated based on IELTS Speaking Band Descriptors by the teacher and also the other rater. Then the WAA group was set up and the students could interact with each other through the tasks during the six weeks. This experimental study just had a treatment, there were not any control groups. The participants were discussing the subjects (IELTS Maximizer Educational Book (Memarzadeh, 2010) which were shared in the group. The learners were free to choose the way of sending their comments such as written messages, voice notes, or video notes, and sticker notes were also allowed to them. By ending the treatment course on WAA, the teacher interviewed the students as before to gain the pre-test result. For the quantitative research method, a questionnaire consisting of thirteen 5-point Likert item questions that were taken Horwitz et al. (1986) was distributed among the students to assess the level of EFL learners' pleasure with mobile educational classes and the effectiveness of this approach on their motivation to involve class interaction and the anxiety of learners in this approach.

3.5 Data Analysis

In the current study, both quantitative and qualitative data were used to evaluate two research questions. To explore the first research question, descriptive statistics was carried out to show the mean and standard deviation (SD) between males and females and test homogeneity variances for indicating the homogeneity between pre and post-speaking. Furthermore, ANOVA was run to display the significant difference between males and females. To seek the consequence of the second research question, the Reliability of the questionnaire was analyzed and then the Total Variance Explained and Pattern Matrix were conducted to display the loaded items in effective factors.

4. Results

4.1 First Research Question

The first research question addressed whether there is a significant difference between males and females regarding the enhancement of their speaking skills through WAA. To explore this question, the performances of both genders were considered based on the analysis done by SPSS. Descriptive Statistics was used to display the mean scores and SD of pre-tests and post-tests between males and females and compare the implementations of them before and after the treatment. Table 1 shows the mean score of the pre-test among the males was slightly less than the mean score of the pre-test among the females (males = 7.2, females = 7.7). Also, the table shows the mean score of the post-test among the females was significantly higher than the males' mean score (males = 7.8, females = 8.3). Based on the results in Table 1 it can be concluded that the female participants' performance was slightly better than male participants.

Table 1. Descriptive Statistics between males and females in two tests

| | | 95% Confidence Interval for Mean | | | | | | | |
|-----------|--------|----------------------------------|--------|----------------|------------|-------------|-------------|---------|---------|
| | | N | Mean | Std. Deviation | Std. Error | Lower Bound | Upper Bound | Minimum | Maximum |
| Pre_Test | Male | 13 | 7.2115 | 1.04006 | .28846 | 6.5830 | 7.8400 | 5.75 | 9.00 |
| | Female | 17 | 7.7794 | .47502 | .11521 | 7.5352 | 8.0236 | 7.00 | 8.50 |
| | Total | 30 | 7.5333 | .80872 | .14765 | 7.2314 | 7.8353 | 5.75 | 9.00 |
| Post_Test | Male | 13 | 7.8846 | .89916 | .24938 | 7.3413 | 8.4280 | 6.25 | 9.00 |
| | Female | 17 | 8.3088 | .49631 | .12037 | 8.0536 | 8.5640 | 7.50 | 9.00 |
| | Total | 30 | 8.1250 | .71845 | .13117 | 7.8567 | 8.3933 | 6.25 | 9.00 |

The Test of Homogeneity of Variances was carried out to examine the homogeneity of the pre-test and the post-test. As Table 2 shown there is a homogeneity in pre-test ($p = .002 > 0.05$) and post-test ($p = 0.07 > 0.05$) variances.

Table 2. Test of homogeneity of variances between pre and post-speaking

| | Levene Statistic | df1 | df2 | Sig. |
|---------------|------------------|-----|-----|------|
| Pre_Speaking | 11.932 | 1 | 28 | .002 |
| Post_Speaking | 3.424 | 1 | 28 | .075 |

One-way ANOVA was used to confirm any significant difference between males and females in the pre-test and post-test and the outcome was found to be significant. The results of Table 3 display that the pre-test scores between groups (males and females) were found ($F = 4, p = 0.05$), and the post-test scores between groups (males and females) were found ($F = 2.7, p = 0.1$). Consequently, these findings confirm that there is a significant difference between males and females in terms of their implementations in the pre-test and post-test and the female participants' improvement was slightly better than the male participants' improvement therefore, the third hypothesis is rejected.

Table 3. One Way ANOVA between pre-test and post-test

| | | Sum of Squares | df | Mean Square | F | Sig. |
|-----------|----------------|----------------|----|-------------|-------|------|
| Pre_Test | Between Groups | 2.376 | 1 | 2.376 | 4.009 | .055 |
| | Within Groups | 16.591 | 28 | .593 | | |
| | Total | 18.967 | 29 | | | |
| Post_Test | Between Groups | 1.326 | 1 | 1.326 | 2.721 | .110 |
| | Within Groups | 13.643 | 28 | .487 | | |
| | Total | 14.969 | 29 | | | |

4.2 Second Research Question

First, the reliability of the questionnaire was conducted. The Reliability Statistics were used to investigate how much the questionnaire is reliable. Table 4 reveals that the achieved reliability of the questionnaire was measured to be

(80.2%). According to Cronbach's table, the effect size is identified as much larger than typical. On the basis of the results of this table, the reliability of the questionnaire is considered great.

Table 4. Reliability statistics

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .802 | 30 |

Table 5 displays the number of loaded items in effective factors in the questionnaire. The Total Variance Explained was applied to obtain the result. As the table below indicates in the last column, four main factors have been effective in the questionnaire based on the participants' answers.

Table 5. Explanation of the total variance of the questionnaire

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings |
|-----------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|-----------------------------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total |
| 1 | 6.687 | 22.289 | 22.289 | 6.687 | 22.289 | 22.289 | 5.946 |
| 2 | 3.853 | 12.842 | 35.131 | 3.853 | 12.842 | 35.131 | 4.736 |
| 3 | 2.722 | 9.073 | 44.203 | 2.722 | 9.073 | 44.203 | 3.106 |
| 4 | 2.396 | 7.985 | 52.189 | 2.396 | 7.985 | 52.189 | 2.537 |
| 5 | 1.868 | 6.227 | 58.416 | | | | |
| 6 | 1.618 | 5.393 | 63.809 | | | | |
| 7 | 1.554 | 5.180 | 68.989 | | | | |
| 8 | 1.284 | 4.280 | 73.269 | | | | |
| 9 | 1.179 | 3.928 | 77.197 | | | | |
| 10 | 1.047 | 3.490 | 80.687 | | | | |
| 11 | .951 | 3.169 | 83.856 | | | | |
| 12 | .823 | 2.745 | 86.600 | | | | |
| 13 | .730 | 2.435 | 89.035 | | | | |
| 14 | .628 | 2.095 | 91.130 | | | | |
| 15 | .559 | 1.863 | 92.993 | | | | |
| 16 | .489 | 1.629 | 94.621 | | | | |
| 17 | .438 | 1.458 | 96.080 | | | | |
| 18 | .343 | 1.143 | 97.222 | | | | |
| 19 | .231 | .770 | 97.992 | | | | |
| 20 | .180 | .601 | 98.594 | | | | |
| 21 | .138 | .461 | 99.055 | | | | |
| 22 | .093 | .311 | 99.366 | | | | |

| | | | |
|----|------------|------------|---------|
| 23 | .080 | .266 | 99.632 |
| 24 | .068 | .228 | 99.860 |
| 25 | .021 | .072 | 99.931 |
| 26 | .013 | .044 | 99.975 |
| 27 | .006 | .019 | 99.994 |
| 28 | .002 | .006 | 100.000 |
| 29 | 3.260E-16 | 1.087E-15 | 100.000 |
| 30 | -8.313E-17 | -2.771E-16 | 100.000 |

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

The Pattern Matrix is shown in Table 6 and the results can illustrate that each item has been loaded in which factor. It can be seen that nine items have been loaded in the first factor (13, 11, 14, 5, 7, 9, 10, 6, and 19). All the items that were loaded in the first efficient factor, related to the level of their anxiety in English class and the students' preference for mobile learning speaking classes. Therefore, we can call the first factor (the anxiety of speaking English in face-to-face class). In the second factor, ten items were loaded (2, 8, 1, 15, 28, 21, 12, 26, 23, and 25). These items relate to the students' anxiety about foreign languages in face-to-face classes and contrast to this issue the motivation of the students in face-to-face and online classes. So, we can call the second factor (foreign language anxiety and motivation). In the third factor, six items have been loaded (30, 16, 24, 27, 22, and 17). These items concern the level of satisfaction of the participants in online speaking classes through mobile rather than face-to-face classes. Accordingly, we name the third factor (satisfaction in mobile learning classes). Also, in the fourth factor, five items were loaded (4, 3, 29, 18, and 20). These items state the learners' anxiety about responding to the teacher and their satisfaction and dissatisfaction with face-to-face and online classes. Based on these results, we can name this factor (anxiety of responding to the teacher's questions and their satisfaction based on the advantages and disadvantages of both classes).

Table 6. Pattern matrix of the questionnaire

| | Component | | | |
|-----|-----------|-------|---|---|
| | 1 | 2 | 3 | 4 |
| Q13 | .870 | | | |
| Q11 | .840 | | | |
| Q14 | .821 | | | |
| Q5 | .807 | | | |
| Q7 | .756 | | | |
| Q9 | .671 | | | |
| Q10 | .637 | | | |
| Q6 | .589 | | | |
| Q19 | .381 | | | |
| Q2 | | -.859 | | |
| Q8 | | .723 | | |
| Q1 | | -.681 | | |

| | | |
|-----|-------|-------|
| Q15 | -.587 | |
| Q28 | -.534 | |
| Q21 | .483 | |
| Q12 | -.468 | |
| Q26 | -.394 | |
| Q23 | .374 | |
| Q25 | -.358 | |
| Q30 | | .791 |
| Q16 | | .720 |
| Q24 | | .713 |
| Q27 | | -.492 |
| Q22 | | .457 |
| Q17 | | .348 |
| Q4 | | .706 |
| Q3 | | .628 |
| Q29 | | -.487 |
| Q18 | | .446 |
| Q20 | | -.319 |

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 30 iterations.

5. Discussion

5.1 Discussion of the Results of the First Research Question

The first research question demands an analysis of whether there is a significant difference between males and females regarding the development of their speaking skills through WAA. According to the findings, there is a significant difference between the performance of the female and male participants in the pre-speaking and post-speaking of this study. Nevertheless, the results indicate that this difference is not so noticeable which means that the females' implementation in both pre and post-tests was slightly better than the males' implementation. Even though the number of students was not the same (males= 13 and females= 17) it can be concluded that gender can have an impression on speaking of foreign language. Results related to this study revealed that females made progress more than males and the speaking course on WAA impressed them more than males. This finding is in contrast with the findings of [Noorani and Salehi \(2019\)](#) who advocated that gender does not lead to any change in the implementation of both experimental and control group students; in other words, gender has indicated that has no function in the enrichment of the attainment of collocations of EFL students.

Studies in learning yield powerful gender-biased findings in the improvement of oral proficiencies. Masterly foreign language skills, which are improved in higher learning in English in favor of special purposes courses, are according to learners' verbal proficiencies. It was ultimately proved that females, despite age, have better progressed oral skills than males. This finding is similar to that of [Rudzinska \(2013\)](#). In level 1, females sound to be better than males at identifying written notes, deriving their meaning from the text ([Denton & West, 2002](#)). Our results are supported by [Koivula \(2001\)](#) and [Rudzinska \(2013\)](#) who stated that clarifications for women's oral excellence have been detected in biological and general factors, comprising stereotyping.

Researchers have seen that females do better than males in, for example, recalling series of words or sections of text; stating empathy; promoting interpersonal relations; and passionate and artistic expression. The whole of these perspectives can conclude in women higher general and oral proficiency. Females adopt an educational style according to self-reflection, whereas the educational style of males might be expressed as spontaneous. In the process of foreign language acquisition, men would rather take actions that require them to utilize their rational and mathematical proficiencies, while women approve activities that demand intrapersonal cleverness (Loori, 2005; Rudzinska, 2013).

Nevertheless, several researchers question the belief about the superiority of females in oral skill (Cameron, 2007; Mathuranath et al., 2003). Investigators have displayed that the diversities between males and females with the honor of some capacities and proficiencies (spatial ability, oral skills, and mathematical method of thinking) continuously reduce and even vanish. Besides, diversities in the improvement of oral skills between athletes and non-athletes may be regarded in females because through encouraging sports and actions, they may not have enough time for promoting and socializing oral proficiencies. Also, speaking skills may develop the cause of physiological items.

5.2 Discussion of the Results of the Second Research Question

The second research question demands an analysis of what the students' views are about motivation, satisfaction, and anxiety by using WAA to interact. The qualitative data was gathered via a questionnaire and based on the investigations and outcomes, four effective factors appeared in the questionnaire and the questions were loaded in each factor according to the participants' opinions. The factors were named in terms of the type of the items of the questionnaire and the findings present that the first impressive factor states the level of anxiety in face-to-face English classes against the mobile speaking classes. It can be concluded that the learners felt less anxiety in the online class than in the face-to-face class and their preference mobile speaking classes. Therefore, WAA caused the students to discover their low anxiety in speaking learning and their enthusiasm for mobile education.

The second efficient factor displays the level of anxiety about foreign languages in face-to-face classes and the motivation of the learners in both classes. On the one hand, it is realized that there is always anxiety about foreign languages in face-to-face classes and the majority of the students claimed this fact even though a few students did not feel any anxiety in both classes. On the other hand, their motivation in face-to-face and online classes was interestingly identical. In conclusion according to the results of the second factor, anxiety can be reduced in online classes, but motivation can be found in both kinds of learning due to their advantages and disadvantages.

The third effective factor reveals the level of satisfaction of the students in online speaking classes via mobile learning rather than face-to-face classes. Concerning the previous factor about created motivation in both classes, the exploration of this factor identifies an inclusive satisfaction in line with the online speaking class on the WAA. Finally, the last main factor asserts the participants' anxiety about responding to the teacher and their satisfaction and dissatisfaction with face-to-face and online classes. Not only the learners were generally pleased with mobile learning in the third factor, but also it was found that in both classes, there was satisfaction somehow according to their benefits and drawbacks. Furthermore, the study noted that learners of a foreign language are afraid of answering teachers' questions and other students' reactions cause of their mistakes and it does not relate to the kind of classes (face-to-face or online).

Regarding language anxiety, Alamer et al. (2020) found that learners became importantly less anxious in training a language gradually while they got engaged in extra instant messaging apps and training activities with their language teachers. Instant messaging improves motivation and achievement and reduces anxiety. Language anxiety is the kind of emotion that was widely evaluated in the extent of second language education (Alamer & Almulhim, 2021), that has a significant role in students' motivation and interest during the procedure of learning. Motivation is the crucial element for learner engagement in every kind of learning task; how and what efficiently learners learn can be influenced by their level of motivation.

Ushioda (2013) affirms that whatever the belongings or affordances of applications for language education and mobile technologies, a main point is the motivation that learners conduct to the education, and how it is promoted and supported. However, most educators look for practical ways to combine mobile technology in language classes, educational designs that pursue motivational procedures and help educational motivation in mobile language learning tasks are rare. Some researchers have revealed that mobile-based learning tasks for various educational contexts have a large potential for increasing learner involvement, active learning perspective, motivation, and course conservation.

6. Conclusion

The study confirms that female learners had more advancement than male learners and it is clear that WAA affected on female students' speaking proficiencies more than males. On that account, gender can impact EFL learners speaking skills through WAA. This fact does not mean that the use of WAA was not efficient for male learners as the results showed that male learners have progressed after interacting on WAA but it was less considerable rather than females. It can be concluded that female students have gotten along well with WAA as a tool that can contribute to improving their speaking proficiencies outside the classroom.

According to the findings of the questionnaire, it can be inferred that the level of anxiety in face-to-face classes was seen more than in online classes, therefore, the participants confirmed that they feel less anxiety about being in online classes and their fear of learning foreign language and responding to teachers' questions and their tendency to the mobile speaking classes. Although the level of anxiety decreases in an online class, we found the same level of motivation in both classes due to the special features that each one has. Instant messaging improves motivation and achievement and reduces anxiety. Language anxiety is the kind of emotion that was widely evaluated in the extent of second language education (Alamer & Almulhim, 2021), that has a significant role in students' motivation and interest during the procedure of learning. Research explores that autonomous motivation provides lower levels of anxiety, horror, and embarrassment through education procedures (Alamer & Lee, 2021).

The other result revealed that the level of satisfaction in online classes can be seen evidently and the learners had positive views about online classes on WAA. In the light of, students' satisfaction with mobile learning, the findings claim that because of some advantages and disadvantages of both educational learning classes, some learners had satisfactory views of both classes. Consequently, we can find out that similarly, Iranian EFL learners' motivation and satisfaction with face-to-face and online classes are at the same level. Our results support Aliakbari and Mardani (2022) who certify that whereas face-to-face classes have their approval among EFL students and their positive effect on inspiring students to take the lessons seriously, it is inferred that there is a major satisfaction of mobile learning based on its nature that learners can study the materials wherever and whenever they require. In summary, the use of WAA on mobile devices can enhance speaking proficiency among EFL learners.

6.1 Pedagogical Implications

Although the utilization of WAA is most widely in favor of personal and social conversations, it has recently gained considerable acceptance as an efficient equipment in education to promote universal learning which can provide teaching and educational insights. Therefore, instructors are suggested to consider the crucial impact of applications like WAA that supply a space for them to adapt students to realize special education outside the classroom. Although MALL played a significant and useful role for EFL learners in emergency learning times by their teachers, they can also create positive affection. They are also advised to help EFL learners select and modify appropriate MALL devices and provide useful oral materials based on their demands. The EFL learners are persuaded to use applications like WAA to try the different environments without any anxiety and foster their motivation due to some special features that they have and get high satisfaction by learning language online. It is highly recommended that students, teachers, and academic caretakers take a deep look at the pedagogical applications in the field of learning and search for other facilities that make better learning.

6.2 Limitations of the Study and Suggestions for Further Research

Some limitations are stated in the present study. First, the research was distracted by the functioning period of about six weeks. Additionally, the small size of participants was the other limitation comprising only 30 students (13 males and 17 females). Accordingly, further studies can be fulfilled with a considerable group of learners with an equal number of genders. Second, cause of the period of quizzes in schools, the students faced extreme pressure and did not have plenty of time to attend the online class through WAA with comfort then, the learner's wellbeing should be estimated in other studies. Finally, WAA filtering which was caused by the government was another problem for the participants which made them use various Virtual Private Networks (VPN) to access the online class.

The current study seeks the speaking enhancement by the difference between males and females in chat or voice notes with WAA and their views about increasing or decreasing motivation, satisfaction, and anxiety utilizing mobile phones to enhance oral skills. Other researchers are recommended to explore other skills of language between males and females and seek whether gender impacts their language learning. Furthermore, the study focused on the affection

such as motivation, satisfaction, and anxiety of the learners in learning English online, however, future studies can concentrate on other abstract feelings.

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