A Survey Study on the Potential Educational Value of WhatsApp in the Iranian EFL Settings

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Abstract

This study investigated the main motives of using WhatsApp and the potential educational value of it in the Iranian EFL contexts in comparison with institutional e-learning platforms, Big Blue Button, and Google Meet since there was no studies in the literature of Iranian EFL contexts to investigate the various motives of WhatsApp in general and its diverse educational value in particular. A total of 301 male and female advanced EFL learners answered a questionnaire which was a combination of Sheldon's (2008) and Jong, Lai, Hsia, Lin, and Liao's (2014) questionnaires. Several one-way ANOVA and Post Hoc Test performed on the respondents' ranking scores revealed that WhatsApp was the first preferred platform for the facilities of a) being immediately informed on the educational materials b) educational online group discussion, and c) convenience of sharing and reviewing educational materials. The institutional e-learning platform was the second favorite and Google Meet and Big Blue Botton were the least popular platforms. The highest motives for using WhatsApp included relationship maintenance and educational peer discussions. These results illustrated WhatsApp as a high-valued popular educational medium, especially for extrovert and low-motivated EFL learners, which should be considered as a treasured platform in the Iranian EFL contexts.

Keywords: educational value of WhatsApp, WhatsApp group peer discussion, extrovert e-learners, low-motivated e-learners

INTRODUCTION

Technology is an inseparable part of people's lives with its nonstop rapid growing rate and its versatility in all aspects of life. Smart phones are widely used communicative devices these days with their ability to operate many social networking apps among which WhatsApp (a Facebook-owned social media app), by providing facilities of communication through text, voice, video messages, and voice and video calls, has become universally widespread and popular among people of various social status in different countries (Han & Keskin, 2016). Since WhatsApp can easily be installed on iPhone, Android, Blackberry, and Nokia, with a wide range of functionality, it has become

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one of the most commonly used social-networking applications on mobile phones and computers (Yeboah & Ewur, 2014).

WhatsApp is also popular in pedagogical settings as it is used for exchange of views, beliefs, and research data among lecturers and their pupils on the one hand, and motivating students through collaborative learning by inspiring learner-to-learner communications on the other hand in the research-pedagogical environments (Moreira, Ferreira, Pereira, & Durão, 2016).

Most learner-centered approaches to language learning is aligned with WhatsApp or other mobile- assisted learning techniques since they promote autonomous language learning by making learners independent knowledge seekers and communicative language learners (Karpisek, Baggili, & Breitinger, 2015). This fact goes to the point that making online social networking has become very popular among various language learners as a means of boosting communicative abilities in their target language (Moreira, Ferreira, Pereira, & Durão, 2016). In this sense, WhatsApp helps teachers save time (Lauricella & Kay, 2013) and manage their classrooms more effectively as well as keeping their students up-to-date with classroom activities (Awada, 2016). Encouraging active language learning through high communicative potentials of WhatsApp has made this app be extensively used in the area of language teaching in the world (Andújar-Vaca &Cruz-Martínez, 2017). Iran is one of the countries in which WhatsApp is quite popular and widely used for various purposes including education especially during the Covid-19 pandemic; therefore, the main purpose of this study is to investigate the potential educational value of WhatsApp among other e-learning platforms used by different Iranian EFL institutions in 2021.

In the next session, first, the relevant literature on the effectiveness of WhatsApp assisted-language learning programs is reviewed, then some attitudinal studies on e-learning platforms in the literature is discussed.

REVIEW OF THE RELATED LITERATURE

As a free messenger, WhatsApp is widely used among L2 learners in language learning programs since it provides the conveniences of multimedia collaborative exchange, group chat, and unlimited free messaging on mobile phones, tablets, and PCs (Chan & Holosko, 2017). Therefore, this app has a noteworthy potential of supporting communicative language learning procedures by allowing users to directly access lots of online sources, empowering learners' creativity, autonomy, and responsibility for their own learning (Ifenthaler & Schweinbenz, 2016).

Investigating the effect of WhatsApp on improving language learners' speaking skill, Jafari & Chalak (2016) studied on 60 men and women participants who had benefitted mobile assisted language learning and realized that the learners who were influenced by WhatsApp training pragmas showed significantly greater improvement in their speaking skill. The WhatsApp speaking training program involved asking learners to record a piece of reading out load or talking about a topic and share their recordings with their colleagues through WhatsApp and receiving feedback from the teacher. Using WhatsApp in improving reading skill and motivation of students was studied by Muthaiyan and

Kanchana (2016) on first year students of the College of Engineering in Coimbatore. Their results verified the noticeable positive effect of WhatsApp on learners' motivation toward working on reading messages on WhatsApp and learners' remarkable improvement in reading proficiency through this app. Comparing the traditional face to face teaching reading programs with a combination of face to face and WhatsApp-assisted teaching programs, Ta'amneh (2017) illustrated that the combination "mixed method" made a remarkable significant difference in reading proficiency of the language learners. Active participation in EFL classrooms through WhatsApp is what makes the significant improvement in comparison with traditional methods since the students used the target language in WhatsApp groups to learn the language instead of learning the target language to use it (Fattah, 2015).

Susanti and Tarmuji (2016) suggested an online WhatsApp-assisted writing skill program with focusing on three steps to teaching writing skills including pre-writing activity, writing activity, and post writing activity. For the pre-writing stage they suggested sharing pictures/videos about the topic of writing with the L2 learners consecutively inviting them to comment and express their feeling toward the shared files in a WhatsApp chat group as the main writing activity. For the post-writing activity, the teacher was to provide feedbacks on writings of the learners either by text messaging or voice messages in the chat group. The whole program was confirmed to be quite successful. Similarly, Alsaleem (2014) proposed a WhatsApp writing program to Arab EFL students and revealed a significant constructive effect of employing WhatsApp on Saudi EFL learners' vocabulary choices and overall writing development.

Retaining idiom expressions in EFL learners during a WhatsApp-assisted teaching program in Iran has been investigated by Akhavan (2015) whose results strongly confirmed a great positive effect of WhatsApp on EFL learners' achievement procedure. Similarly, Basal, Yilmaz, Tanrıverdi and Sari (2016) studied the effectiveness of using WhatsApp in learning idiom expressions among Turkish EFL learners in comparison with traditional classroom activities and revealed that participants in WhatsApp-assisted learning group achieved higher scores than the control group with the traditional method. Comparing traditional methods of language learning with WhatsApp-assisted language learning programs, Bensalem (2018) revealed a remarkable positive influence of WhatsApp on vocabulary development of Arab EFL students in academic contexts. He also illustrated the positive attitude of the learners toward using WhatsApp compared to the face to face traditional methods.

Mobile-assisted teaching programs in the African EFL contexts also revealed the positive influence of WhatsApp on learning vocabulary as an effective tool by providing outside-the-classroom opportunities to practice vocabulary especially for weak students (Lawrence ,2014). The positive role of WhatsApp and Facebook for English learning in higher education has been demonstrated in the survey research of Susilo (2014) which was focused on the learners' presentation in online debates and their feedback on the usage of Facebook and WhatsApp classifications as the platform for their learning activities.

There are also studies in the literature of Iranian EFL mobile-assisted teaching programs in which the main focus is on using Telegram App which is very similar to WhatsApp in terms of communicative facilities it provides for the users. Heidari-Shahreza and Khodarahmai (2018) investigated the role of telegram in mastering word stress patterns by EFL learners and realized that there is significant difference between the achievements of learners who were instructed through Telegram-assisted teaching program in comparison with those who were in traditional classrooms. Similarly, Xodabande (2017) examined the effectiveness of using Telegram app in teaching English language pronunciation to Iranian EFL learners and demonstrated a significant pronunciation improvement in the participants who were instructed through Telegram. Similar results are also shown by Mashhadi, Heidari and Kaviani (2016) who confirmed the positive and influential effect of Telegram on language improvement of intermediate Iranian EFL learners.

Furthermore, motivation and autonomous learning skills in the Iranian EFL contexts have been illustrated to be positively influenced by using WhatsApp in English teaching programs (Khaleghi, 2015). In general, survey research on the attitude of Iranian EFL learners toward mobile-assisted language learning programs clearly unraveled the positive attitude of the majority of them toward employing mobile apps, especially Telegram, in L2 learning programs. (Zarei, Heidari , Darani ,& Ameri-Golestan, 2017). A clear example of confirming the positive attitude of Iranian EFL learners toward WhatsApp-assisted language learning programs is the results of Noorani and Salehi (2019) who investigated the effect of WhatsApp on learners' vocabulary achievement of compound nouns and their motivation toward the e-learning method.

Positive attitude toward employing WhatsApp is also confirmed in Saudi Arabian EFL contexts in the study of Alghamdy (2019) which performed a quasi-experimental research on the effect of WhatsApp on EFL general English development of university students in Saudi Arabia. His results showed that WhatsApp made a significant difference in the general proficiency level of the experimental group; besides the majority of the participants in the experimental group were found to be more enthusiastic to join the WhatsApp-assisted EFL program in comparison to the control group which were instructed under traditional face to face teaching methods.

Performing a case study on 21 tertiary EFL learners in Indonesia, Sari (2019) investigated the students' attitude toward using WhatsApp groups in teaching English. The results of the questionnaire, observation, and interview revealed a strong positive attitude of the students toward the implementation of WhatsApp groups in their language learning programs. Similarly, Warman (2018) investigated the Indonesian university students' perception toward WhatsApp-assisted blended learning programs which is a combination of online learning and traditional learning methods. Her results derived from a questionnaire and interviews showed that the majority of the participants had positive perception toward using WhatsApp and most of them clearly stated that WhatsApp made a notable contribution to their reading comprehension development. Similarly, Widodo (2019) administered a questionnaire on attitude toward WhatsApp to 175 men and women Indonesians of various ages and professions. The results showed

that the majority of the participants perceived of WhatsApp as a useful educational device which is easy to use in the educational settings which makes group discussions and collaborative learning convenient. Emphasizing the prominent consequence of teamwork in the learning process, Urien, Erro-Garcés, and Osca (2019) analyzed the usefulness of employing WhatsApp in improving college students' cognitive abilities in teamwork such as specialization and coordination. They demonstrated that positive attitude toward WhatsApp among students had a significant constructive effect on students' cognition in decision making, coordination, and team work efficacy.

Since WhatsApp is a Facebook -owned app with similar communicative facilities, focusing on the six main motives of the Facebook users introduced by Sheldon (2008) could be a huge help in classifying the motives of Iranian WhatsApp users in the EFL contexts as such survey has not been performed in the literature of Iranian EFL mobile-assisted teaching programs. Jong, Lai, Hsia, Lin, and Liao (2014) employed Sheldon's (2008) classification of Facebook users' motives in a survey study in Taiwan to realize whether they could add a motive named educational value to these categories. Their results confirmed the potential of adding the educational motive to this classification with considering the fact that peer discussion of educational matters was the fourth most important motive in their survey.

Since most academic institutions in Iran provide their own e-learning platforms and a lot of students use other academic/social media such as Big Blue Button and Google meet for their group work and educational peer discussions, there is no survey study in the context of Iranian EFL teaching/learning to clarify the educational value of WhatsApp in comparison with other available e-learning platforms. Therefore, this study is an attempt to answer to the following research questions

- Where is the place of potential educational value of WhatsApp in the defined categories of Sheldon (2008) usage of Facebook-based communication media?

- How does the educational value of WhatsApp compare with that of other social media available on the Internet, such as the Big Blue Button or Google meet?

METHOD

This study was an online survey research in which a questionnaire, which was a combination of Jong et al (2014) and Sheldon (2008) questionnaires, was administered to the respondents. Since the main purpose of using WhatsApp is not defined for educational objectives, this survey was to indicate how participants identify WhatsApp as an educational medium in the Iranian EFL contexts.

Participants

The questionnaires were emailed to 359 male and female EFL advanced learners who were IELTS / TOEFL test takers in Zabansara, Kish , Omidan, Iran IELTS, and Goldis language institutions in Tehran, Kermanshah, and Yazd in February 2021 of which 301 respondents returned the completed questionnaires in time.

They were of different social status and educational degrees majoring in nursing, electrical engineering, civil engineering, natural resource conservation, visual arts and performing, computer sciences, genetics, agricultural engineering, accounting, and midwifery. Their age range was between 19- 41. All the participants had sat the online British Council Placement Test or Cambridge Assessment General English Test prior to their enrolment in IELTS and TOEFL preparation courses in the aforementioned language institutions and they were all at the advanced level of English language proficiency.

Participants were informed of the overall purpose of the study without any detailed information about the research hypotheses or potential predictions in order to prevent them from responding the questionnaire with any probable bias with regard to the desired outcome of the study. All of the participants emailed me their letters of consent to participate in this research under the conditions of confidentiality and anonymity of their contribution simultaneously with the completed questionnaires.

Questionnaire

For the purpose of this survey a combination of Jong et al. (2014) and Sheldon's (2008) questionnaires was designed and employed with some modifications as is shown in Table1. The items of the questionnaire are mainly related to convenience of sharing academic resources (items 2,12,13,14,15,16,) , degree of functionality of reading and browsing past articles (items 17,18,19,20,21), the time expectation for accessibility to the educational information and the teachers' notes (items 7, 8, 9,10,11), personal attitude toward teamwork and group learning via WhatsApp (items 22,23,24,25,26), and maintaining a constructive learner-teacher relationship via WhatsApp (items 27,28,29,30). Items 3,4,5,6, 31 on the questionnaire explored the degree of popularity of the aforementioned e-learning platforms. The last item of the questionnaire explored the participants' motives for using WhatsApp in general for which participants were allowed to choose more than one option. The options for the last item of the questionnaire explored the six main motives for using WhatsApp including relationship maintenance, passing time, virtual/romantic community, entertainment, coolness, and companionship.

Table 1

Content of the e-learning platform questionnaire

This is the survey of experiences of using educational platforms. The purpose is to acquire a better understanding of how students use e-learning platforms so as make better use of the most potential platform in online schooling.

- E-learning system of the institution or universities: the platform which is necessarily used for educational purposes set up by academic institutions.
- Big Blue Button (abbreviated as BBB in this survey): the platform used for online dissections
- Google Meet**:** the platform used for online dissections
- WhatsApp: a Facebook-owned social media platform

1. What is your current educational situation?

- ✓ High school diploma or below
- ✓ Associate student
- ✓ Associate graduate
- ✓ Bachelor student
- ✓ Bachelor graduate
- ✓ Master student
- ✓ Master graduate
- ✓ PhD candidate
- ✓ PhD

2. What is/are your favorite online social network for academic information interchange?

- ✓ WhatsApp
- ✓ Google Meet
- ✓ BBB
- ✓ E-learning platform of the university or institution
- ✓ None of the above

3. Among all the lesson you had in English teaching programs was there any course that used WhatsApp?   Yes   No

4. Among all the lesson you had in English teaching programs was there any course that used Google Meet?   Yes   No

5. Among all the lesson you had in English teaching programs was there any course that used BBB?   Yes   No

6. Among all the lesson you had in English teaching programs was there any course that used institutional e-learning platform?   Yes   No

7. Which platform do you prefer the instructor to use if you consider it most important to quickly learn about what the instructor wants to teach and keep you informed on the topic of instruction?

- ✓ WhatsApp
- ✓ Google Meet
- ✓ BBB
- ✓ E-learning platform of the university or institution

8. Suppose that instructor chose to use WhatsApp to send information to you how would you rank WhatsApp on a scale of 1 to 5 with regard to the issue of quickly learning about what the instructor posts on a network to keep you informed?

    Low   1   2   3   4   5   high

9. Suppose that instructor chose to use BBB to send information to you how would you rank BBB on a scale of 1 to 5 with regard to the issue of quickly learning about what the instructor posts on a network to keep you informed?

    Low   1   2   3   4   5   high

10. Suppose that instructor chose to use Google Meet to send information to you how would you rank Google meet on a scale of 1 to 5 with regard to the issue of quickly learning about what the instructor posts on a network to keep you informed?

    Low   1   2   3   4   5   high

11. Suppose that instructor chose to use the institutional e-learning platform to send information to you how would you rank it on a scale of 1 to 5 with regard to the issue of quickly learning about what the instructor posts on a network to keep you informed?

    Low   1   2   3   4   5   high

12. Which one of these platforms is better if the need is to share multimedia or textual educational resources of a course?

    ✓ WhatsApp
    ✓ Google Meet
    ✓ BBB
    ✓ E-learning platform of the university or institution

13. How would you rank WhatsApp on a scale of 1 to 5 for sharing, acquiring and watching educational resources?

    Low   1   2   3   4   5   high

14. How would you rank BBB on a scale of 1 to 5 for sharing, acquiring and watching educational resources?

    Low   1   2   3   4   5   high

15. How would you rank Google Meet on a scale of 1 to 5 for sharing, acquiring and watching educational resources?

    Low   1   2   3   4   5   high

16. How would you rank institutional e-learning platforms on a scale of 1 to 5 for sharing, acquiring and watching educational resources?

    Low   1   2   3   4   5   high

17. Suppose you do not remember where an article is located or you just want to find an article on a specific topic that has been introduced by the instructor priorly. Which one of the platforms is better for reviewing through past instructional materials?

    ✓ WhatsApp
    ✓ Google Meet
    ✓ BBB
    ✓ E-learning platform of the university or institution

18. How would you rank the convenience of WhatsApp on a scale of 1 to 5 for reviewing through past articles on a certain topic?

Low   1   2   3   4   5   high

19. How would you rank the convenience of Google Meet on a scale of 1 to 5 for reviewing through past articles on a certain topic?

Low   1   2   3   4   5   high

20. How would you rank the convenience of BBB on a scale of 1 to 5 for reviewing through past articles on a certain topic?

Low   1   2   3   4   5   high

21. How would you rank the convenience of the institutional e-learning platforms on a scale of 1 to 5 for reviewing through past articles on a certain topic?

Low   1   2   3   4   5   high

22. Which one of the platforms is better for course interaction such as chatting and online discussion?

✓ WhatsApp
✓ Google Meet
✓ BBB
✓ E-learning platform of the university or institution

23. How would you rank the convenience of WhatsApp on a scale of 1 to 5 for interacting, chatting, and online discussions?

Low   1   2   3   4   5   high

24. How would you rank the convenience of Google Meet on a scale of 1 to 5 for interacting, chatting, and online discussions?

Low   1   2   3   4   5   high

25. How would you rank the convenience of BBB on a scale of 1 to 5 for interacting, chatting, and online discussions?

Low   1   2   3   4   5   high

26. How would you rank the convenience of the institutional e-learning platform on a scale of 1 to 5 for interacting, chatting, and online discussions?

Low   1   2   3   4   5   high

27. Have you added your instructors to your WhatsApp groups or WhatsApp account?

Yes   No

28. Have you used WhatsApp to ask your instructor education related questions?

Yes   No

29. Do you feel adding the instructor to the WhatsApp groups hinders you from expressing yourself?

Yes   No

30. Do you regret using WhatsApp by adding the instructor to the discussion groups?

Yes   No

31. Have you used WhatsApp to communicate with your classmate about educational issues and instructional materials?

Yes   No

32. I generally use WhatsApp : (you may choose more than one option)

✓ To send a message to a friend
✓ To stay in touch with friends and family who are away
✓ To get in touch with people I know
✓ To get through to someone who is hard to reach
✓ To pass time when bored
✓ To check my WhatsApp account as a daily routine when I am online
✓ To develop a romantic relationship
✓ To feel less lonely
✓ To see other people's pictures
✓ To entertain myself
✓ To look cool among my peers

RESULTS AND DISCUSSION

Educational levels of the participants

As Fig. 1 illustrates the number of respondents in each educational level in this survey. As clear, the majority of the subjects were bachelor students in this study and master students and bachelor graduates were the second and third most populated groups respectively.

Figure1. Educational levels of the participants
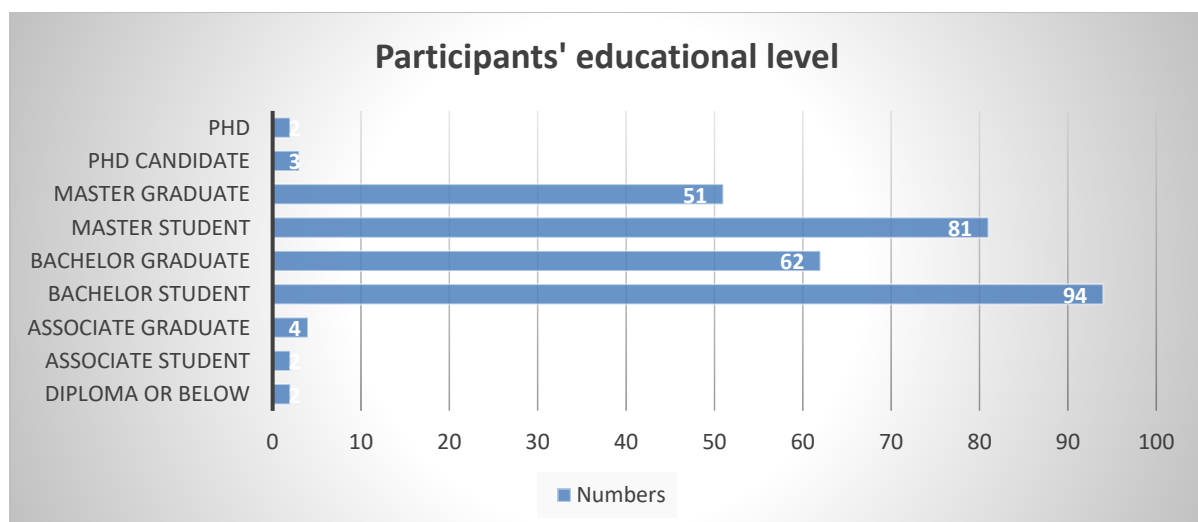
Respondents favorite online social networks for the academic information interchange

As figure 2 depicts, WhatsApp is the most popular platform for educational exchange of information among the participants in this survey (64%) which is by far higher than the other platforms. The second popular platform is the e-learning institutional systems (29%) and the least favorite platforms were Google Meet (4%) and Big Blue Botton (3%) respectively. The further analyses in this study show the extent to which WhatsApp and other platforms are used for various aspects of educational objectives.

Figure2. Popularity of the platforms for educational purposes
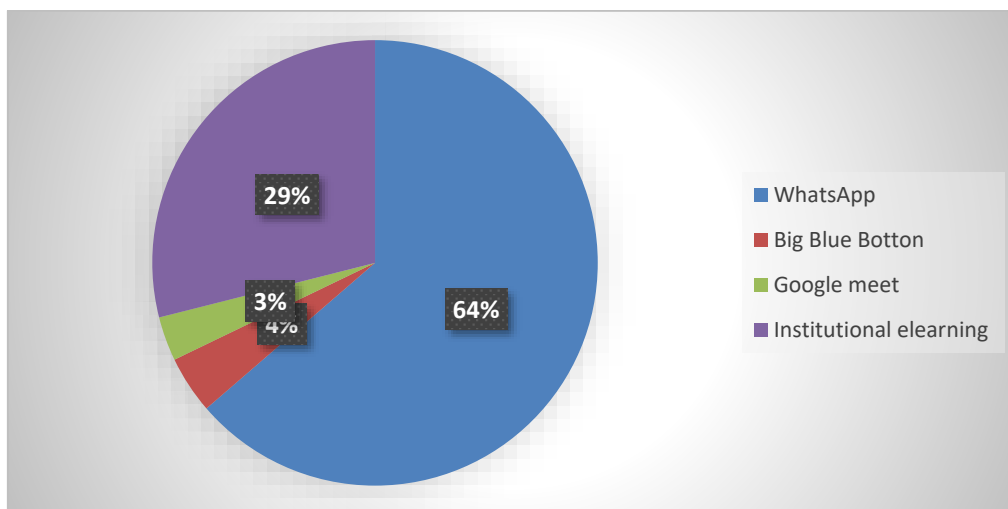
Immediacy of learning what teachers post on the Internet

Figure 3 illustrates that the majority of the respondents (76%) voted for WhatsApp as the most preferred platform for the facility of being immediately informed by on the educational materials posted by the instructor. The second most preferred platform is institutional e-learning systems (earning the 15% of the votes). Google Meet (6%) and Big Blue Botton (3%) were the least preferred platforms for this facility respectively.

As Table 2 and Table 3 show, the one-way ANOVA and Post Hoc HSD analysis also confirmed a significant difference between the means of the participants' average ranking scores on WhatsApp as the most preferred platform compared to the other e-learning platforms in terms of educational notifications and timeliness.

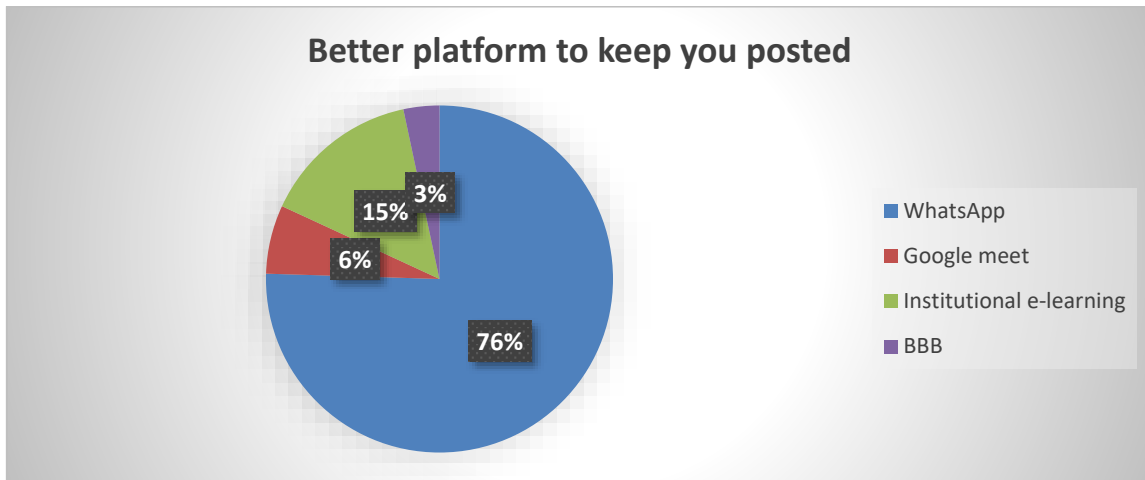**Figure 3.** Immediacy of learning what teachers post on the Internet

Table 2. ANOVA rankings of immediacy of learning teachers' posts

Sources	SS	df	MS	F-value
Between treatments	2324.5291	3	774.843	
Within treatments	278.9963	1136	0.2456	3155.95838
Total	2603.5254	1139		

The f-ratio value is 3154.95838. The p-value is <.00001. The result is significant at p<.05

Table 3. Post Hoc HSD test on *rankings of immediacy of learning teachers' posts*

Pairwise Comparisons		HSD$_{.05}$ = 0.1070 HSD$_{.01}$ = 0.1297	Q$_{.05}$ = 3.6385 Q$_{.01}$ = 4.4126
T_1:T_2	M_1 = 4.89 M_2 = 1.34	3.55	Q = 120.83 (*p* = .00000)
T_1:T_3	M_1 = 4.89 M_3 = 1.40	3.49	Q = 118.69 (*p* = .00000)
T_1:T_4	M_1 = 4.89 M_4 = 2.00	2.89	Q = 98.27 (*p* = .00000)
T_2:T_3	M_2 = 1.34 M_3 = 1.40	0.06	Q = 2.14 (*p* = .42851)
T_2:T_4	M_2 = 1.34 M_4 = 2.00	0.66	Q = 22.55 (*p* = .00000)
T_3:T_4	M_3 = 1.40 M_4 = 2.00	0.60	Q = 20.41 (*p* = .00000)

Convenience in interacting with classmates and group work

Figure 4 and Figure 5demonstrate the extent to which each e-learning platform is used by the EFL learners for online educational discussions and group works. As is clear, WhatsApp has the highest place for being used by the respondents in educational online

discussions and group works. The institutional e-learning platform is shown to have the second place among the other platforms in this survey. Google Meet is used as the third popular platform and BBB is the least frequently used by the EFL learners as the medium of online group works and group discussions.

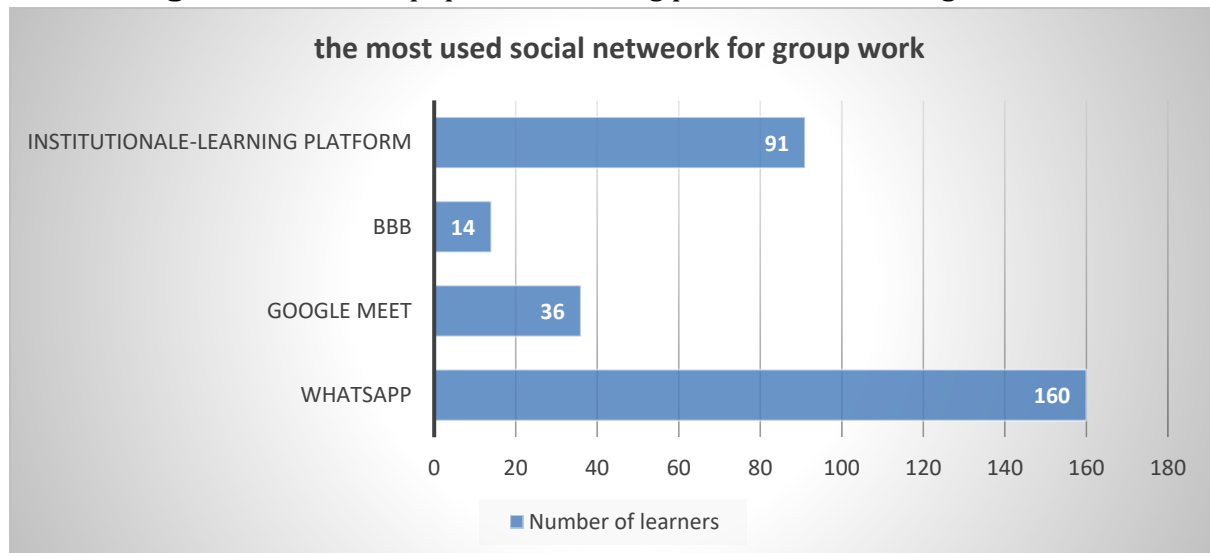**Figure 4.** The most popular e-learning platform for chatting online discussions

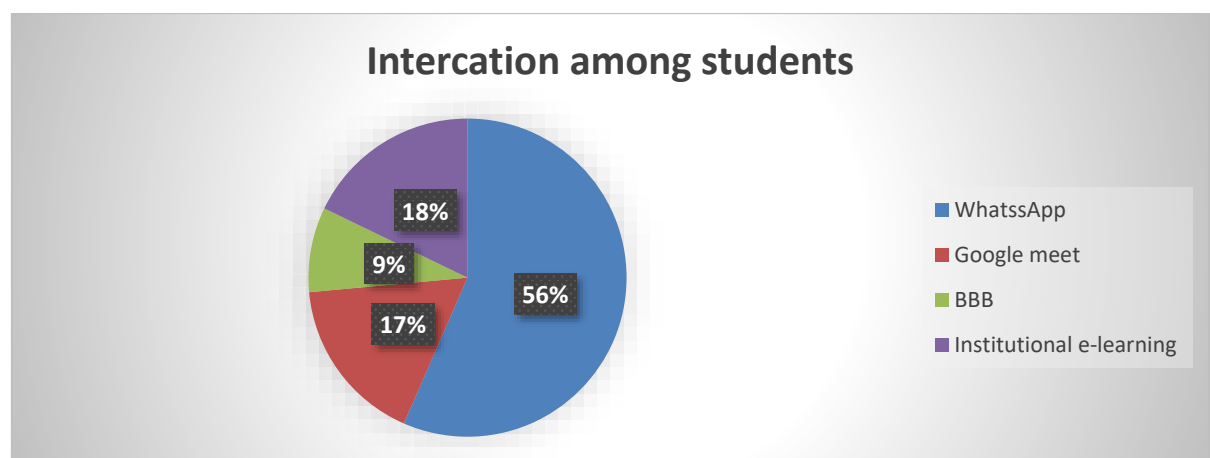**Figure 5.** The most popular e-learning platform for chatting online discussions

Table 4 and Table 5 demonstrate the significant difference between the means of the respondents' ranking scores on the degree of each platform's convenience in interacting among students through one-way ANOVA analysis and Post Hoc HSD test. The results show a higher rank of WhatsApp among the other platforms.

Table 4. ANOVA of ranking for Convenience of the platforms for interacting

Source	SS	df	MS	F-value
Between treatments	2032.3209	3	677.4403	
Within treatments	594.4289	1191	0.4991	F= 1357.32188
Total	2626.7498	1194		

The f-ratio value is 1357.32188. The p-value is <.00001. The result is significant at p<.05

Table 5. Post Hoc HSD test on ranking for convenience of the platforms for interacting

Pairwise Comparisons		$HSD_{.05} = 0.1487$ $HSD_{.01} = 0.1803$	$Q_{.05} = 3.6383$ $Q_{.01} = 4.4122$
$T_1{:}T_2$	$M_1 = 4.67$ $M_2 = 1.22$	3.45	$Q = 84.38$ ($p = .00000$)
$T_1{:}T_3$	$M_1 = 4.67$ $M_3 = 1.89$	2.78	$Q = 68.00$ ($p = .00000$)
$T_1{:}T_4$	$M_1 = 4.67$ $M_4 = 2.22$	2.45	$Q = 59.88$ ($p = .00000$)
$T_2{:}T_3$	$M_2 = 1.22$ $M_3 = 1.89$	0.67	$Q = 16.37$ ($p = .00000$)
$T_2{:}T_4$	$M_2 = 1.22$ $M_4 = 2.22$	1.00	$Q = 24.50$ ($p = .00000$)
$T_3{:}T_4$	$M_3 = 1.89$ $M_4 = 2.22$	0.33	$Q = 8.13$ ($p = .00000$)

Convenience in sharing educational resources

In terms of convenience in sharing educational resources the survey showed that 37% of the learners chose WhatsApp as the most convenient one and 28% of them believed that institutional e-learning platforms were the most convenient platform. 21% of the participants voted for Google Meet and the rest of 14% voted for Big Blue Botton. Since the respondents were asked to rank any of these platforms for the convenience of sharing educational materials on a scale of 1 to 5, Table 6 and Table 7 illuminate how differently they are ranked through a one-way ANOVA analysis and Post Hoc HSD test. As the results show, the average mean scores of ranking of the respondents for WhatsApp is significantly higher than the others. The average mean scores of institutional e-learning platforms and Google Meet were the second and third highly ranked respectively. Big Blue Botton received the least ranking scores.
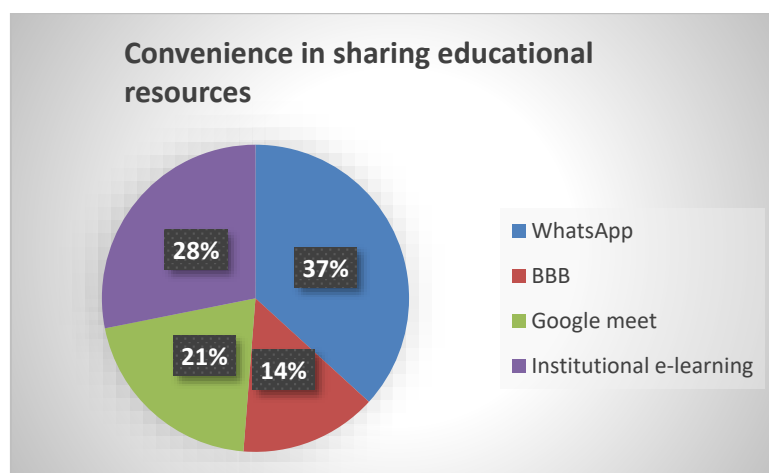
Figure 6. Convenience in sharing educational resources

Table 6. ANOVA of ranking for sharing educational resources

Source	SS	df	MS	F-value
Between treatments	1151.5887	3	383.8629	
Within treatments	521.403	1076	0.4846	F= 792.16358
Total	1672.9917	1079		

The f-ratio value is 792.16358. The p-value is <.00001. The result is significant at p<.05

Table 7. Post Hoc HSD test on ranking for sharing educational resources

Pairwise Comparisons		$HSD_{.05} = 0.1542$ $HSD_{.01} = 0.1870$	$Q_{.05} = 3.6388$ $Q_{.01} = 4.4132$
$T_1:T_2$	$M_1 = 4.56$ $M_2 = 1.67$	2.89	Q = 68.31 (p = .00000)
$T_1:T_3$	$M_1 = 4.56$ $M_3 = 3.11$	1.45	Q = 34.27 (p = .00000)
$T_1:T_4$	$M_1 = 4.56$ $M_4 = 3.45$	1.11	Q = 26.18 (p = .00000)
$T_2:T_3$	$M_2 = 1.67$ $M_3 = 3.11$	1.44	Q = 34.04 (p = .00000)
$T_2:T_4$	$M_2 = 1.67$ $M_4 = 3.45$	1.78	Q = 42.13 (p = .00000)
$T_3:T_4$	$M_3 = 3.11$ $M_4 = 3.45$	0.34	Q = 8.09 (p = .00000)

Convenience in reviewing past articles and instructional materials

For browsing and reviewing past articles and instructional materials 46% of the participants believed that WhatsApp was the best platform and 44% stated that institutional e-learning services are the best options. Minority of the participants voted for Google meet (6%) and Big Blue Botton (4%) as shown in Figure 7.

In terms of ranking scores of the participants for the functionality of each of these platforms on reviewing past educational materials, as shown in Table 8 and Table 9, a one-way ANOVA and Post Hoc HSD test revealed that that there was a significant difference between the average mean ranking scores for WhatsApp and institutional e-learning platforms with the other e-learning platforms.

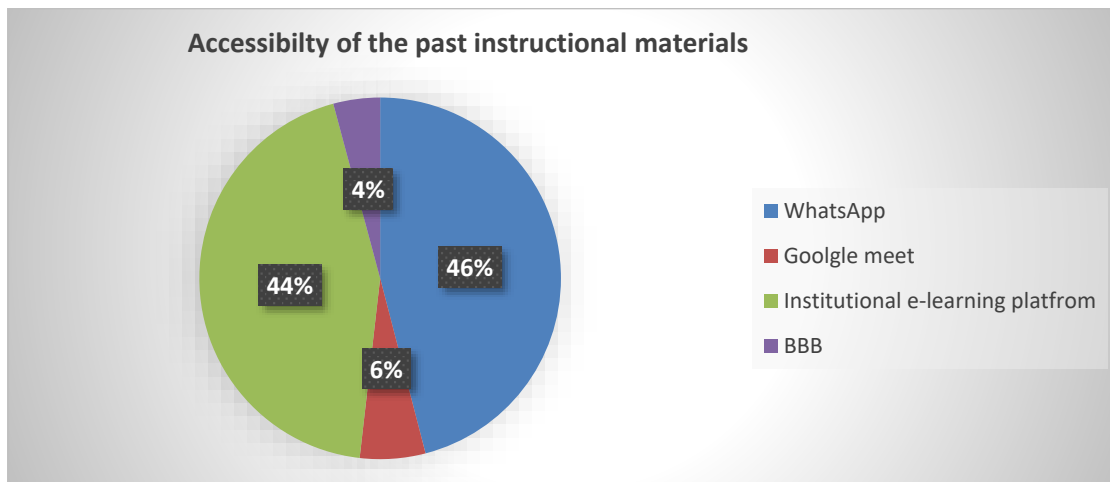**Figure7.** Preferred platform for reviewing past instructional materials

Accessibilty of the past instructional materials

- WhatsApp
- Goolgle meet
- Institutional e-learning platfrom
- BBB

Table 8. ANOVA of ranking for Accessibility of past articles

Source	SS	df	MS	F-value
Between treatments	2975.274	3	991.758	
Within treatments	313.1393	1184	0.2645	F= 3749.90126
Total	3288.4133	1187		

The f-ratio value is 3749.90126. The p-value is <.00001. The result is significant at p<.05

Table 9. Post Hoc HSD test on ranking for Accessibility of past articles

Pairwise Comparisons		$HSD_{.05} = 0.1086$ $HSD_{.01} = 0.1317$	$Q_{.05} = 3.6383$ $Q_{.01} = 4.4122$
$T_1:T_2$	$M_1 = 4.67$ $M_2 = 1.22$	3.44	Q = 115.38 (p = .00000)
$T_1:T_3$	$M_1 = 4.67$ $M_3 = 1.44$	3.23	Q = 108.15 (p = .00000)
$T_1:T_4$	$M_1 = 4.67$ $M_4 = 4.30$	0.37	Q = 12.29 (p = .00000)
$T_2:T_3$	$M_2 = 1.22$ $M_3 = 1.44$	0.22	Q = 7.22 (p = .00000)
$T_2:T_4$	$M_2 = 1.22$ $M_4 = 4.30$	3.08	Q = 103.09 (p = .00000)
$T_3:T_4$	$M_3 = 1.44$ $M_4 = 4.30$	2.86	Q = 95.87 (p = .00000)

Influence of having instructors added in the WhatsApp groups

In this section of the survey 4 questions of the questionnaire (items 33, 34, 35, 36) are analyzed separately which are exploring the effect of adding the instructor to the educational WhatsApp groups of the EFL learners. As Figure 8 illustrates, the majority of the respondents (263 out of 301= 87.3%) expressed that they have added their instructor to one of their WhatsApp groups among which 156 (59.3%) individuals stated that they regretted adding the instructor to the group and 139 (52.8%) respondents felt hindered in expressing themselves in the presence of the instructor in the group. This part of survey reveals the important role of cultural issues in the Iranian EFL contexts since in Iran instructors are noticeably of a higher position of power and social status compared to their learners and this social inequality is revealed to act as a hindrance for 52.8% of the EFL learners to freely expressing themselves in the WhatsApp educational group communications.

Among the respondents who had added an instructor to their WhatsApp groups (263 in total), 212 (80.6%) of them asked educational questions of the teachers in the group chats. This fact shows a positive effectual educational use of WhatsApp in the educational group communications.

Figure 8. Number of participants voted for each item
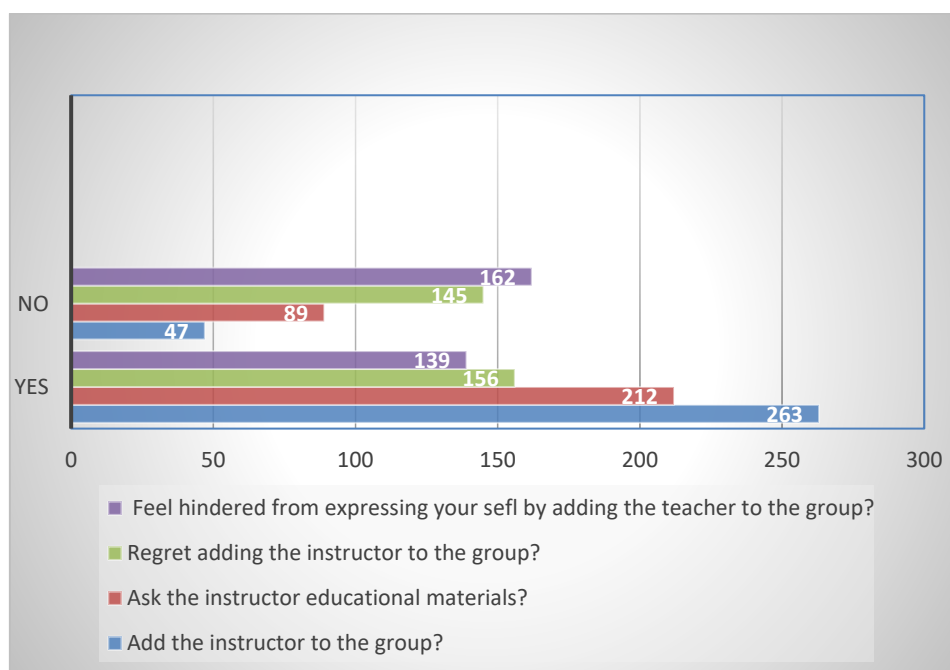
The motives of respondents for using WhatsApp

Among the six main categories of users' motives for Facebook introduced by Sheldon (2008) and the educational motive added by Jong et al. (2014) which were explored for the use of WhatsApp in this study, as Figure 9 depicts, the highest motives of the respondents for using WhatsApp included relationship maintenance and peer discussions of educational materials. Successively, pass time, companionship, entertainment, and romantic communications were chosen as less important motives for

using WhatsApp by the participants. The least important motive for WhatsApp users in this survey was related to look cool among other users and friends.

Table 10 is the correlation matrix of the seven motives for using WhatsApp. The most correlated motives were relationship maintenance with peer educational discussions, pass time with peer educational discussions, entertainment with peer educational discussions, coolness with pass time and coolness with companionship.

The positive high degree of correlation between pastime and peer educational discussions and also entertainment with peer educational discussion showed that for learners whose main motives were to pass time and entertain themselves, peer educational discussion seemed as a way of having fun and entertainment. This result showed that WhatsApp could be employed as a motivating language learning device in the EFL programs with less motivated language learners which is in agreement with the previous findings in the literature on the positive motivational role of mobile-assisted language learning programs in various EFL contexts(Muthaiyan & Kanchana's, 2016; Zarei et al. 2017; Bensalem ,2018; Sari ,2018; Warman ,2018; Alghamdy ,2019; Noorani & Salehi's ,2019; Widodo ,2019).

Furthermore, the motive of peer educational discussion demonstrates a high positive correlation with companionship and relationship maintenance of the learners. This result could be interpreted as the greater effectiveness of WhatsApp-assisted learning programs for extrovert language learners who look for companionship and communications in the process of language learning. This finding could also be in agreement with the results of the previous studies in the literature which place an emphasis on the positive influence of mobile-assisted language learning programs on the learning motivation of the EFL learners through online team works and peer group discussions (Susilo ,2014; Basal et al .2016; Urien, Erro-Garcés, & Osca 2019).

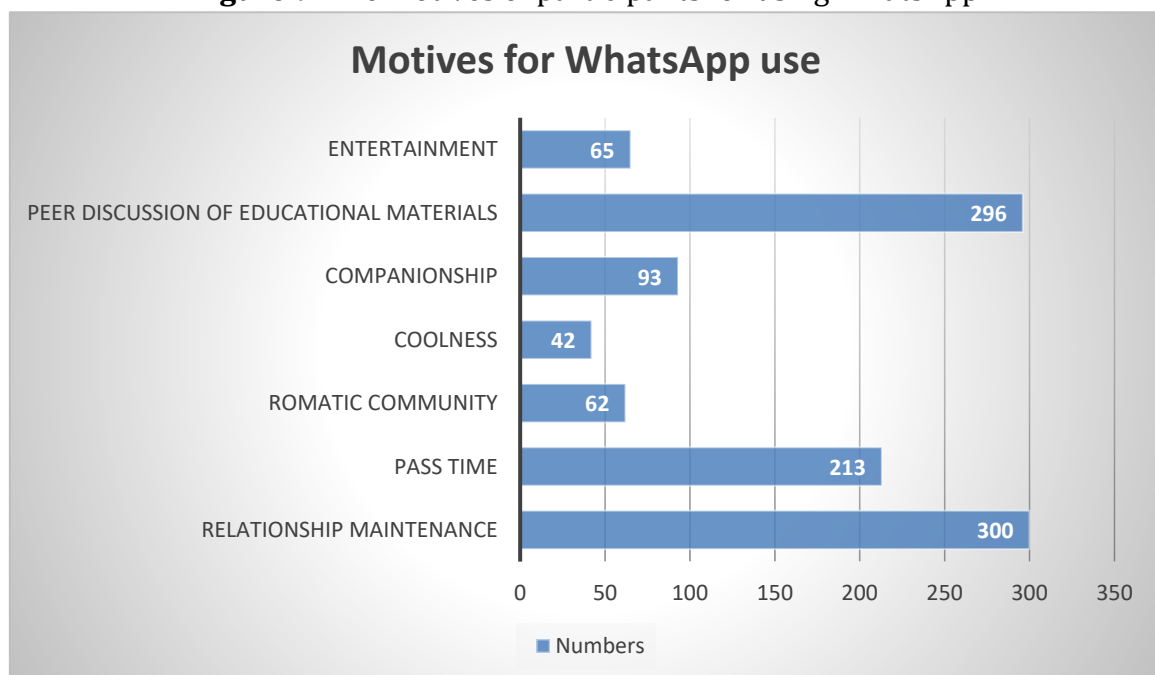**Figure 9.** The motives of participants for using WhatsApp

Table10*. Correlation between e-learning aspects and motives for using WhatsApp

Pearson correlation sig. (two-tailed) n=301	Relationship maintenance	Pass time	Virtual community	Entertainment	Coolness	Companionship	Peer discussion
Relationship maintenance	1	.072	.078	.178	.054	.124	.398*
Pass time	.072	1	.027	.003	.421*	.072	.486**
Virtual community	.078	.027	1	.373**	302**	.227**	.124*
Entertainment	0.178	.003	373**	1	.172*	.072	.292**
Coolness	-.057	.421	.302*	.172*	1	.431**	.124*
Companionship	.0124	.072	.277**	.072	431**	1	.376**
Peer discussion	0.398*	.486**	.124*	.292**	.124*	.378**	1

*Correlation with levels of significance 0.05(two-tailed)

** Correlation with levels of significance 0.01(two-tailed)

CONCLUSION

WhatsApp was found to be the first favorite platform among the respondents for the facilities of a) being immediately informed on the educational materials by the instructor b) educational chatting online discussions and group work, c) convenience of sharing educational materials. Institutional e-learning platform was the second favorite platform for these purposes and Google Meet and Big Blue Botton were found to be the least favorite ones in this study. WhatsApp also was ranked the highest by the respondents for these facilities. The institutional e-learning platform was ranked the next best after WhatsApp. Therefore, WhatsApp was revealed to be the most popular and most effective e-learning platform in the EFL contexts in Iran.

Having the instructors available on WhatsApp, 80.6% of the EFL learners declared to have asked the teachers educational questions directly and conveniently which this fact could add to the educational value of WhatsApp. Furthermore, since the highest motives of the respondents for using WhatsApp included relationship maintenance and peer discussions of educational materials, WhatsApp was revealed to be of a high educational value in the Iranian EFL contexts.

WhatsApp was found to be a good educational medium for low-motivated EFL learners in that there found to be a great positive correlation between the motives of pass time and educational peer discussions and between the motives of entertainment with educational peer discussion. Also, WhatsApp was found to be a good device for more extrovert EFL learners since there found to be a great positive correlation between the motives of relationship maintenance and educational peer discussion and also between companionship and educational peer discussion.

The effect of cultural issues was found to be an obvious concern in this survey in that for 52.8% of the EFL learners adding the instructor to the WhatsApp group acted as a hindrance to spontaneously expressing themselves. This result roots in the fact that in the Iranian culture instructors have a noticeably higher social status than their learners and this inequality was the main limitation in the group discussions. This issue could be confined to the Persian culture and further studies are required to investigate this concern in a counter-culture context such as the western culture.

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