EFL STUDENTS' PERCEPTIONS ON THE INTEGRATION OF WHATSAPP IN A LOW-TECH LEARNING ENVIRONMENT

Novalita Fransisca Tungka, Olviani Cipta Ningsi Tarinje
Universitas Sintuwu Maroso Poso
novalita@unsimar.ac.id, olviani.c.n@gmail.com

Abstract:
This paper explores how WhatsApp as social media is embedded into the educational practices of university students. The paper draws on an analysis of 79 questionnaires and 10 online interviews. The questionnaire survey was administered online and collected from students majoring in English Education at Universitas Sintuwu Maroso, Poso, Sulawesi Tengah. The survey was followed up by online interviews, which were meant to provide deeper understanding of the students' experiences on the integration of WhatsApp to aid their learning practices. The discussion in this paper focuses on how students make meaning of WhatsApp integration in their formal study. The results indicate that although WhatsApp has the potential as a space for learning, the students simply valued WhatsApp as a channel for exchanging information of the courses and other practical information. Based on these results, some models of social media integration in educational practices are suggested to be applied in the context of low-tech environment.

Keywords: *WhatsApp, Social media integration, English educational practices, Low-tech learning environment*

INTRODUCTION

We are the witness of how the COVID-19 affects education. Once an alternative, online learning has now become the standard of delivering course materials to minimize the spread of this virus. Hence, equity in access to technology and skills needed is one of the concerns that must be addressed, especially for those with least access to technology integrated learning environment. The presence of social media and messaging applications, especially WhatsApp, is an alternative to digital platforms created for educational purposes to compensate this equity issue.

One of the trends in the field of online learning is the exploration of digital technologies and tools in low-tech learning environments. With digital tools and mobile technologies, geographical and national boundaries in learning are becoming irrelevant, and the focus of learning is now on immediacy, instant outcomes, and impact (Trede et al., 2019), and thus teaching practices must be readjusted to adapt with these changes (Salmon, 2002, 2013). According to research on this field (Campana & Agarwal, 2019; Nicol, Owens, Le Coze, MacIntyre & Eastwood, 2017), the combined use of digital tools such as WhatsApp, mobile technologies, and LMSs, is commonly added to the learning practices in developing countries and rural areas to support and extend students' learning experiences in those areas.

Due to the COVID-19, educational practice in English Education Department of Universitas Sintuwu Maroso, one of the private universities in Central Sulawesi, Indonesia, has applied the studying-from-home policy since March 2020. Digital tools have completely facilitated the learning process. Communication or interaction between faculty, lecturers and students is done through WhatsApp. Zoom Meetings or Google Meet is used for synchronous classroom sessions, but the preference is negotiated first with students since not all of them have access to adequate internet service. NEO LMS is used for asynchronous sessions, where students can access materials in form of PowerPoint slides, PDFs, and YouTube videos embedded in the LMS page. Assignments, lecturers' feedbacks, and discussion forum are

available on NEO LMS. For exams, the lecturers can choose to conduct them asynchronously or synchronously. Based on the researchers' longitudinal survey conducted in 2020, although NEO LMS has been provided to give students access to learning, WhatsApp is still the tool most frequently used by the students to get information on their course (Tarinje & Tungka, 2021). Therefore, the environment of online learning in English Education Department of Universitas Sintuwu Maroso can be categorized as low-tech learning environment.

Before this pandemic era, there has been an emerging evidence that WhatsApp can be used to facilitate online learning in higher education (Alqahtani et al., 2018; Barhoumi, 2015; Madge et al., 2019; Saiful, 2018). Research conducted in Saudi Arabian context revealed that for Saudi EFL university students, WhatsApp is favored as an online platform that provides opportunities for them to learn inside and outside the classroom since this app promotes social and academic interaction among students, as well as between students and their professors (Alqahtani et al., 2018; Alubthane & Alyoussef, 2021). The features of WhatsApp have also been proven to be useful in motivating Saudi EFL students to practice their language skills without much concern of their mistakes (Alqahtani et al., 2018), to overcome their mental block during learning activities, and to improve their vocabulary size needed to engage in English speaking practices (Khan et al., 2021). Thus, these findings suggest WhatsApp to be integrated in language teaching practice.

Another research conducted in Mexican blended learning environments shows that preservice EFL teacher students use WhatsApp to communicate and discuss with each other (Sandoval-Cruz et al., 2020) since they are reluctant to express disagreements during online discussion forum available on Moodle LMS as their online learning platform. Their reluctance and preference of using WhatsApp as online discussion forum can be for the reason of their cultural politeness norms.

In Malaysian context, WhatsApp is a more popular social messaging

tool used in learning than other tools and platforms such as Facebook, Google Docs, and LMS offered by university, used not only by students (Annamalai, 2018, 2019) but also by academicians like university professors and faculty staff (Ali et al., 2019). For students, this tool enables them to access relevant materials anytime and anywhere and improve interactions with peers and lecturers, thus expanding their learning experiences (Annamalai, 2018, 2019). Meanwhile, Malaysian academicians only agree to use WhatsApp in an official conversation with their colleagues and subordinates but not with their supervisors (Ali et al., 2019).

As in Indonesia, responses to the use of WhatsApp varied. EFL Indonesian learners regard WhatsApp as a platform for an online learning process, a tool to assess and evaluate students' learning achievement, and a facility to share information and course materials (Munir et al., 2021; Nuraenih & Nurmalia, 2020; Silalahi & Pariyanto, 2021). By contrast, pre-service English language teachers who conduct their online teaching practicum admit that they use WhatsApp to strengthen the academic relationship with their students but not as an assessment tool (Damayanti & Sibarani, 2020). Regarding these mix findings, this present study was carried out to provide more information on pre-service EFL teachers' perspectives on WhatsApp integration in their online learning, by providing the context of their environment as a low-tech learning environment, which can give insights on what is really experienced by the students in such specific context.

METHOD

Participants

The population of this research includes undergraduate students in their first, second, and third year at Universitas Sintuwu Maroso, Poso, Sulawesi Tengah during the 2020-2021 academic year, majoring in English Language Education. The samples were 79 students, showing 79.9% response rate to the online questionnaire distributed as the research instrument which is considered healthy (Nulty, 2008; Saleh & Bista, 2017). Female students

dominated the participants since the gender ratio was 4:1. Their ages ranged from 17 to 24. Almost all participants had smartphone and laptop to support their learning experiences (n=79, 97.5%) while the rest of them (n=79, 2.5%) did not own smartphone at that time and used their friends' laptop to access the learning portal.

Instruments and Procedure

Before conducting a survey, a 19-item questionnaire was developed and tried out to 30 students who were excluded from the respondents for testing its validity and reliability. The final version of the questionnaire consisted of 16 valid items in two subscales: the first sub-scale was self-reported agreement for "utilizing the features of WhatsApp to aid learning activities" (9 items) and the second sub-scale was self-reported frequency of actions for "integrating WhatsApp as digital tool in online learning" (8 items). The responses were measured with four-point Likert scale, where 4 = strongly agree/always and 1 = strongly disagree/never for 14 positive items and reversely for 3 negative items. The questionnaire had a reliability at 0.737 that was satisfactorily, with 0.798 for the first subscale and 0.743 for second subscale. Ultimately, it was administered to 79 EFL students. The reliability of this questionnaire was .733 or satisfactorily.

The survey was followed up by online interviews to ten respondents, which were meant to provide deeper understanding of their experiences on the integration of WhatsApp to aid their learning practices. The interviews lasted between 30 and 60 minutes via Zoom Meetings. During the interviews, the researchers encouraged students to show honest reflection on their experiences on the practical (or impractical) use of WhatsApp when online learning, especially on their unfavourable perceptions.

Data Analysis

After testing the reliability of the questionnaire, statistical procedure was employed to process the results and present them descriptively. Meanwhile, the interviews results were transcribed verbatim. The results were transcribed and read through for overal comprehension. Next, coding

and connecting were conducted by identifying words, phrases, clauses and sentences that reflected feelings, state, experiences, and making connections of them with the results of questionnaires (Richards, 2003). All the codes were then categorized into similar themes. The next step was reviewing the themes based on the theoretical framework, results of previous research, and questionnaire findings. The data were then organized and presented based on the reviewed themes.

FINDINGS AND DISCUSSION

Findings

Students' perceptions on the use of WhatsApp in learning are displayed in Table 1 and Table 2.

Table 1. EFL Students' Perceptions on Utilizing the Features of WhatsApp to Aid Learning Activities

Statements	Mean	Highest Perception
Joining Cohort Group Chat helped me understand course materials.	3.1	Agree (77.2%)
Joining Course Group Chat supported my learning process	3.3	Agree (72.7%)
Accessing materials shared on WhatsApp or WhatsApp Group helped me understand the course materials	3.1	Agree (69.6%)
I know how to send pictures on WhatsApp or WhatsApp Group without losing original quality	3.3	Agree (68.4%)
I know how to send audios or voice notes on WhatsApp or WhatsApp Group without original quality	3.3	Agree (68.4%)
I know how to send videos on WhatsApp or WhatsApp Group without original quality	3.2	Agree (68.4%)
Course information shared on WhatsApp or WhatsApp Group helped me get information quicker and easier	3.1	Agree (59.5%)
All lecturers are skilled in using WhatsApp features to support learning process	2.9	Agree (57%)

WhatsApp can become the only online course platform	2.4	Disagree (46.8%)

Based on the data displayed on Table 1, more than half of respondents agreed that they could maximize the features of WhatsApp to send various documents (pictures, videos, and audios or voice notes, n=54, 68.4%) without losing their original quality. The students agreed that WhatsApp Group created by their lecturers supported their learning process (n=57, 72.2%). Similarly, students (n=61, 77.7%) agreed that they also joined their Cohort Group Chat for communal learning purpose. Furthermore, they felt that the materials could easily be understood if the materials are distributed via WhatsApp. Another factors that contribute to their positive response in utilizing WhatsApp in online learning is that materials can be accessed quicker and easier if distributed using WhatsApp than other digital tools or learning platform (n=47, 59.5%). Surprisingly, not all students agreed that lecturers can effectively maximize WhatsApp during learning (n=45, 57%) and that WhatsApp can be used as the main learning platform or digital tool in learning (n=37, 46.8%).

Table 2. EFL Students' Perceptions on Integrating WhatsApp as a Digital Tool in Online Learning

Statements	Mean	Highest Frequency
Discussing course materials with classmates in Cohort Group Chat	3.3	Often (77.2%)
Exchanging important information related to the courses I enrolled in through Course Group Chat	3.2	Often (74.7%)
Discussing course materials in Course Group Chat with lecturers and classmates	3.2	Often (69.6%)
Exchanging information related to this semester through WhatsApp or WhatsApp Group	3.3	Often (69.6%)
Interacting with lecturers and classmates through WhatsApp or WhatsApp Group	3.3	Often (68.4%)
Exchanging news and updates on campus life through WhatsApp or WhatsApp Group	3.2	Often (60.8%)
Sending course materials through WhatsApp or WhatsApp Group	1.5	Seldom (51.9%)

Distributing and submitting course assignments through WhatsApp or WhatsApp Group	1.4	Seldom (50.6%)

Table 2 shows findings on students' self-reported frequency of actions on integrating WhatsApp as digital tool in online learning. More than half of respondents often communicated using WhatsApp or WhatsApp Group with their lecturers and classmates (n=54, 68.4%). The topics varied from sharing information regarding the courses they were enrolled in (n=59, 74.7%), practical university experience (n=48, 60.8%), to other information that support their learning efforts during the semester (n=55, 69.6%). The findings also shows that students preferred discussing course materials with their classmates on Cohort Group Chat (n=61, 77.2%) to Course Group Chat (n=55, 69.6%). However, more than half of students confirmed that WhatsApp was seldom used to send course materials (n=41, 51.9%), distribute and submit course assignments (n=40, 50.6%).

Next, Table 3 presents the summary of the respondents' interview results on the least favoured responses.

Table 3. Summary of the Interviews

Student's Initial	Using WhatsApp features to support learning process (i.e. materials sharing)	Using WhatsApp as the only online learning platform
Sev, 1st year student	Most lecturers did not allow assignment to be sent through WhatsApp.	Actually, I do not agree on that. For me it is weird to use WhatsApp as online learning platform. WhatsApp is for chatting, not for study tool.
Fa, 2nd year student	Assignments could be sent through WhatsApp after getting lecturers' permission.	Maybe, I am not sure of it.
Del, 3rd year student	Assignments had to be submitted on the faculty's online learning portal.	I do not think WhatsApp is suitable for learning platform. I do not want to read my WhatsApp all the time. It is exhausting.

	Questions had to be asked on the Course Group Chat, never on private chat (causing uncomfortable feelings)	
Tr, 1st year student	One course was run on Course Group Chat, including materials sharing, interaction, and assessment.	We can use the online learning portal to download the materials and submitting the assignments, and use WhatsApp to discuss the course topics only. However, I will not choose WhatsApp as the only learning platform. My phone will be full of Course WhatsApp Groups and I will be troubled by that.
Fit, 2nd year student	Lecturers gave instruction to log in to the faculty's portal to access course materials, participate in discussion, do the assignment, and read the feedback. Did not mind that because materials sharing on WhatsApp made phone storage full.	It was not cool. I have friends from other universities and we often share our learning activities on our social media to show off, including on WhatsApp status. If WhatsApp is my faculty's only learning platform, my friends will laugh at me.
Mey, 3rd student	Submitting assignment through WhatsApp was not allowed, so always submitted the assignment on the portal.	If learning is conducted on WhatsApp, that probably means I have to save my lecturers' contacts to interact with them. I am not comfortable with that.
Chr, 3rd year student	WhatsApp used to share materials would have eased student with connection trouble while accessing the portal.	Probably, if the Faculty prepared about it thoroughly.

Ok, 2nd year student	WhatsApp was used as a channel of information on academic life, news and updates. Cohort Group Chat was used to discuss assignments. Not confident to discuss the assignment on Course Group Chat.	Probably, I am not sure. My little sister in Junior High School used Google Classroom for her online learning activities, and I guess it will be better if my faculty still uses the portal for our learning platform.
Enj, 3rd year student	Since experiencing connection trouble when accessing the learning portal. WhatsApp as a tool of materials sharing was convenient and made learning easier.	I experienced poor connection because I was back home for financial reason. Now I am back to my boarding house and no connection issue so far. So no, I do not agree if WhatsApp is used as the only one learning platform.
Mar, 3rd year student	Experienced assignment lost due to storage issue and clear chat history trouble.	I do not agree if on that because that means I will store all the assignments on my phone. I have no laptop on my own and store all the assignments on my phone is too risky for me.

DISCUSSION

WhatsApp Integration in Online Learning Activities: Prospects and Issues

Although most related research describe the promising use of WhatsApp to be integrated in learning, WhatsApp cannot be used immediately to replace the online learning portal. This section focuses on WhatsApp's prospects and issues when being integrated as a tool of learning in a low-tech learning environment by presenting the excerpts from transcription.

Prospects of Integrating WhatsApp in Online Learning

From the results of questionnaires and interviews, most of WhatsApp features are beneficial for students' learning activities in a low-tech learning

environment. Firstly, WhatsApp is a tool of sharing pictures, videos, and audio documents without losing their original quality. Secondly, WhatsApp is easier and quicker to use because students do not have to spend more browser time to follow some steps in order to access course materials or send assignments. For instance, Enj, a 2nd year student explained,

I seldom accessed the portal because the connection was poor in my home. It would have been easier and more convenient for me to send assignments on WhatsApp.

As seen in the response, with just one click, they can get the materials and even submit the assignments as they wish. This finding supports previous research (Annamalai, 2018, 2019) which emphasizes WhatsApp as a quicker and easier tool to access relevant materials anytime and anytime compared to other digital tools.

Thirdly, WhatsApp Group Chat is a tool for online discussion forum for students and their lecturers, which is told by Ok, a 2nd year student,

As far as I know, I used WhatsApp to get information about assignment deadlines, course topics, references to read, and other information like webinars for students, Kampus Merdeka, and news on Covid-19.

This finding is also consistent with the previous research (Alqahtani et al., 2018; Alubthane & Alyoussef, 2021; Annamalai, 2018, 2019; Munir et al., 2021; Nuraenih & Nurmalia, 2020; Silalahi & Pariyanto, 2021) on WhatsApp as a platform for online discussion forum since it promotes social and academic interaction among the users.

Issues of Integrating WhatsApp in Online Learning

Although WhatsApp's features were proven beneficial for online learning activities, there were two main issues emerged regarding students' experiences. First, WhatsApp could arise inconvenience for students as it consumes phone storage. Fit, a 2nd year student, expressed her reason,

Most of the lecturers instructed us to log in to the faculty's portal to access course materials, participate in discussion, do the assignment, and read the feedback. I did not mind that because sending

materials and assignments on WhatsApp made my phone storage full.

Similar inconvenience was also experienced by Mar, a student in her third year,

Once I sent my assignment on WhatsApp, my lecturer replied that I had to send it on the portal because he regularly cleaned his chat history and did not save my assignment. Unfortunately, neither did I. I had to do it once again and missed the deadline. My mark was deduced because of that.

Furthermore, she showed her reluctance related to the possibility of using WhatsApp as the only learning platform,

I do not agree if on that because that means I will store all the assignments on my phone. I have no laptop on my own and store all the assignments on my smartphone is too risky for me.

Furthermore, Enj, a 2nd year student, who at first admitted that materials sharing through WhatsApp was easier and more convenient for her (compared to accessing portal), also showed similar response as follows,

My connection was bad because I was at home for financial reason. Now I am back to my boarding house and no connection issue so far. So no, I do not agree if WhatsApp is used as the only one learning platform.

These responses reveal that the students seldom received course materials and assignments through WhatsApp, hence submitted their completed assignments through WhatsApp to their lecturers. One reason that appeared repeatedly was the storage issue. Since WhatsApp does not have its storage like LMSs, the information flows through WhatsApp could clog up students' smartphone storage. In addition to this, the features of WhatsApp being able to share documents without losing its original quality also uses up the storage, hence causing inconvenience for students who only depended on their smartphones for their online learning facility. These findings oppose those of previous study (Alubthane & Alyoussef, 2021; Annamalai, 2018, 2019; Silalahi & Pariyanto, 2021) who claim that WhatsApp can be used as

a tool for material sharing.

Another issue that arose was students' uncomfortable experiences when using WhatsApp as a platform of interaction to learn due to their privacy and convenience, which are shown below,

If learning is conducted on WhatsApp, that probably means I have to save my lecturers' contacts to interact with them on daily basis. I am not comfortable with that. (Mey, 3rd year student)

For me it is weird to use WhatsApp as online learning platform. WhatsApp is for chatting, not for study tool. (Sev, 2nd year student)

I do not think WhatsApp is suitable for learning platform. I do not want to read my WhatsApp all the time. It is exhausting (Del, 3rd year student)

As shown in the excerpts, students used adjectives "not comfortable", "weird", and "exhausting" to describe the experiences. When the researchers invited them to identify why they experienced such state, they listed some reasons,

One lecturer invited us to ask questions on Course Group Chat, but she never replied when I asked her questions on her private chat. I was not comfortable asking questions on the group. (Del, 3rd year student)

My friends and I discussed our assignments on our Cohort Group Chat, rarely on the Course Group Chat. I guess we were just not confident to discuss the assignment or ask questions to our lecturers on WhatsApp. (Ok, 2nd year student)

It was not cool. I have friends from other universities and we often share our learning activities on our social media to show off, including on WhatsApp status. If WhatsApp is my faculty's only learning platform, my friends will laugh at me. (Fit, 2nd year student).

I will not choose WhatsApp as the only learning platform. My phone will be full of Course Group Chats and I will be troubled by that. (Tr, 1st year student)

From those responses, the researchers assumed that students did not favour WhatsApp as a platform for academic interaction due to three causes; reluctance in asking and answering questions, students' sense of belonging to their campus which is reflected through capturing and sharing their online learning activities on their social media account, and unstructured information on WhatsApp. The first and second cause probably tell us that despite this learning environment has changed from brick-and-mortar classroom to online learning, students still want to have some "online privacy" on their WhatsApp. The integration of WhatsApp in their online learning activities, for some students, has breached their social life that first seems to be "save and private" from their lecturers, and seems to be in line with the previous study (Ali et al., 2019) on the inconvenience felt by academicians to use WhatsApp as an official communication platform with their superiors. In this recent study, students might have found lecturers as their superiors and felt uncomfortable interacting with them in daily basis due to socio-cultural norms. It is true then, that although social networks used on mobile devices and integrated into learning activities can add location data to messages, images, or photographs sent by their users, it can create challenges for maintaining users' privacy and confidentiality (Trede et al., 2019). Students in low-tech learning environment probably are not aware of this risk and may unintentionally share information they want to keep it for themselves.

Regarding the third cause, as viewed from the theoretical perspective of mobile learning, any technology that presents everywhere, which functions both personally and collectively, can shape any environment into a learning environment (Trede et al., 2019). WhatsApp is a technology that fits the requirements, since it can be used in all mobile operating systems and has supported by WhatsApp Desktop Client that runs in PC operating systems commonly used in Indonesia such as Windows and Macintosh, or simply use WhatsApp Web. That means the users can also use WhatsApp on their PC for better experience, such as receiving materials and storing the materials on their PC drive. Unfortunately, this experience means nothing for students

who do not own laptop and only rely on their smartphones for online learning activities since it does not resolve their issue with phone storage. Still, these assumptions need more validation for satisfying explanation.

Models of Integrating WhatsApp in Online Learning Activities

The researchers try to offer three models to deal with two issues discussed in the preceding paragraphs. These models are adopted from Salmon's five-stage e-tivity (Salmon, 2002, 2013) and will be really beneficial for lecturers who are still adapting their classroom to online learning needs.

Model 1: WhatsApp to familiarize and motivate. In this model, lecturers create WhatsApp Group Chat only to provide information related to the access to the official learning portal and to provide motivation for students. This is important since we cannot always assume that our students are tech-savvy and can navigate the learning portal without instruction or guidelines. Also, to make sure that students progressively familiarize themselves to the portal and to their new learning environment. In this stage, the amount of interactivity is low to moderate (Salmon, 2002, 2013). To avoid spam and irrelevant information, lecturers can choose who can share information in the group whether all group participants or admins only.

Model 2: WhatsApp to interact before collaborate. In this model, WhatsApp Group Chat can be created and used to encourage students getting to know each other, to "interact before collaborate". This is vital for students in their first and second year to socialize with their cohorts. Once the cross-cultural, social, and learning environments have been bridged through WhatsApp, students will feel emotionally connected to each other and feel they are ready enough to collaborate with their friends (Salmon, 2002, 2013). Lecturers just have to set clear rules on Group Description about what can and cannot be shared on the Group Chat (i.e., improper jokes, memes, or gifs) since the amount of interaction in this model is moderate to high.

Model 3: WhatsApp to learn communally. In this model, WhatsApp is used intensely for information exchange, knowledge construction and development, as a platform for communal learning. Lecturers can create a

Course Group Chat intentionally as an alternative to the learning portal, and the information exchanged in the group must be similar with information provided in the portal. The amount of interaction is high in this model (Salmon, 2002, 2013), so lecturers must organize the information very carefully to make sure that students do not skip important things due to information bombardment. For example, the Group Description feature on WhatsApp Group can be used to store information related to the classroom rules and active hours, while the Group Icon feature can act as a banner containing course code, course important dates, and link to the portal. Besides that, the Starred Messages feature allows lecturers and students to bookmark the most relevant information or explanation on course materials so they can access it whenever they want without having to scroll up and down or to search for it. Also, the Group Media feature provides access for lecturers and students to information shared before by categorizing them into three: pictures, documents, and links. In addition to that, to anticipate the storage issue experienced by students who only rely on their smart phones, lecturers can distribute Google Form link on WhatsApp Group Chat as a platform to submit their assignments, therefore their assignments will be stored safely and securely on Google Drive.

CONCLUSION

The present research investigated EFL students' perceptions on the WhatsApp integration in their online learning activities. Although WhatsApp integration is promising as a space for learning in their low-tech environment and a platform for academic interaction, it was found that they simply valued WhatsApp as a channel for exchanging information of the course and other practical information due to the issues of phone storage and the possibility of high academic interaction that causes inconvenience for students. Regarding its promising integration which also comes with some issues, lecturers that are interested in integrating WhatsApp in their teaching practices can consider implementing three models suggested in this research: WhatsApp to

familiarize and motivate (low-to-moderate interaction), WhatsApp to interact before collaborate (moderate-to-high interaction), and WhatsApp to learn communally (high interaction). Furthermore, future research investigating the effectiveness of WhatsApp integration in online learning activities in various amount of interaction is required to provide more information needed by research in this area.

ACKNOWLEDGEMENTS

REFERENCES

Ali, R. M., Mahomed, A. S. B., Yusof, R. N. R., Khalid, H., & Afzal, M. I. (2019). Hey there! I am using WhatsApp: A study on the levels and patterns of WhatsApp's official usage among Malaysian university academicians. International Journal of Asian Social Sciences, 9(12), 657–671. https://doi.org/10.18488/journal.1.2019.912.657.671

Alqahtani, M. S. M., Bhaskar, C. V., Elumalai, K. V., & Abumelha, M. (2018). WhatsApp: An Online Platform for University-Level English Language Education. Arab World English Journal, 9(4), 108–121. https://doi.org/https://dx.doi.org/10.24093/awej/vol9no4.7

Alubthane, F., & Alyoussef, I. (2021). Pre-service teachers' views about effective use of the Whatsapp application in online classrooms. The Turkish Online Journal of Educational Technology, 20(44–52). https://eric.ed.gov/?id=EJ1290794

Annamalai, N. (2018). How do we know what is happening in WhatsApp: A case study investigating pre-service teachers' online activity. Malaysian Journal of Learning and Instruction, 15(2), 207–225. https://eric.ed.gov/?id=EJ1201730

Annamalai, N. (2019). Using WhatsApp to extend learning in a blended classroom environment. Teaching English with Technology, 19(1), 3–20. https://eric.ed.gov/?id=EJ1204549

Barhoumi, C. (2015). The effectiveness of WhatsApp mobile learning activities guided by activity theory on students' knowledge management. Contemporary Educational Technology, 6(3), 221–238. https://eric.ed.gov/?id=EJ1105764

Campana, K., & Agarwal, N. K. (2019). The landscape of research on learning in low-tech environments. Information and Learning Sciences, 120(11/12), 687–703. https://doi.org/10.1108/ILS-2019-0103

Damayanti, I. L., & Sibarani, B. L. (2020). WhatsApp with preservice teacher learning experiences in the midst of COVID-19 pandemic. In D. S. Anshori, P. Purnamasari, W. Gunawan, & Y. Wirza (Eds.), Language, education, and policy for the changing society: Contemporary theory and research (pp. 412–429). UPI Press.

Khan, R. M. I., Radzuan, N. R. M., Farooqi, S.-H., Shahbaz, M., & Khan,

M. S. (2021). Learners' perceptions on WhatsApp integration as a learning tool to develop EFL vocabulary for speaking skill. International Journal of Language Education, 5(2), 1–14. https://doi.org/https://doi.org/10.26858/ijole.v5i2.15787

Madge, C., Breines, M. R., Dalu, M. T. B., Gunther, A., Mittelmeier, J., Prinsloo, P., & Raghuram, P. (2019). WhatsApp use among African international distance education (IDE) students: transferring, translating and transforming educational experiences. Learning, Media and Technology, 44(3), 267–282. https://doi.org/10.1080/17439884.2019.1628048

Munir, S., Erlinda, R., & Afrinursalam, H. (2021). Students' views on the use of WhatsApp during Covid-19 pandemic: A Study at IAIN Batusangkar. Indonesian Journal of English Language Teaching and Applied Linguistics, 52(2), 323–334. https://doi.org/10.21093/ijeltal.v5i2.740

Nicol, A. A. ., Owens, S. M., Le Coze, S. S., MacIntyre, A., & Eastwood, C. (2017). Comparison of high-technology active learning and low-technology active learning classrooms. Active Learning in Higher Education, 00(0), 1–13. https://doi.org/https://doi.org/10.1177/1469787417731176

Nulty, D. D. (2008). The adequacy of response rates to online and paper surveys: what can be done? Assessment & Evaluation in Higher Education, 33(3), 301–314. https://doi.org/https://doi.org/10.1080/02602930701293231

Nuraenih, C., & Nurmalia, L. (2020). Utilizing WhatsApp application in English language learning classroom. Metathesis: Journal of English Language Literature and Teaching, 4(1), 89–94. https://doi.org/10.31002/metathesis.v4i1.2289

Richards, K. (2003). Qualitative inquiry in TESOL. Palgrave Macmillan.

Saiful, J. A. (2018). EFL prospective teacher educators' beliefs towards the use of WhatsApp in English learning and teaching. PAROLE: Journal of Linguistics and Education, 8(2), 66–71. https://doi.org/https://doi.org/10.14710/parole.v8i2.66-71

Saleh, A., & Bista, K. (2017). Examining factors impacting online survey response rates in educational research: Perceptions of graduate students. Journal of MultiDisciplinary Evaluation, 13(29), 63–74.

https://journals.sfu.ca/jmde/index.php/jmde_1/article/view/487

Salmon, G. (2002). E-tivities: The key to active online learning (1st ed.). Kogan Page Limited.

Salmon, G. (2013). E-tivities: The key to active online learning (2nd ed.). Routledge.

Sandoval-Cruz, R. I., Rangel, Y. N., Calleros, J. M. G., & Perales-Escudero, M. . (2020). Pre-service EFL teachers' conceptions of Learning about SLA through online discussion forums and WhatsApp in blended learning. RELC Journal, 00(0), 1–15. https://doi.org/10.1177/0033688220917221

Silalahi, P. V., & Pariyanto. (2021). Using WhatsApp as an instructional tool to enhance reading and writing skills: Indonesian EFL learners' perception. Anaphora: Journal of Language, Literary, and Cultural Studies, 4(1), 79–86. https://doi.org/https://doi.org/ 10.30996/ anaphora.v4i1.5289

Tarinje, O. C. N., & Tungka, N. F. (2021). Integrasi aplikasi WhatsApp sebagai media belajar dalam pembelajaran Bahasa Inggris. Universitas Sintuwu Maroso.

Trede, F., Markauskaite, L., McEwen, C., & Macfarlane, S. (2019). Education for practice in a hybrid space: Enhancing professional learning with mobile technology. Springer Nature Singapore Pte Ltd.