

Article



# Teaching presence in students' WhatsApp groups: Affordances for language learning

E-Learning and Digital Media 2023, Vol. 20(3) 282–299 © The Author(s) 2022 Article reuse guidelines: sagepub.com/journals-permissions DOI: 10.1177/20427530221107968 journals.sagepub.com/home/ldm

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#### **Abstract**

With the recent COVID-19 pandemic and disruption of campus-based education, the use of mobile social networking applications to supplement formal education has attracted a great deal of attention. Teachers do have opportunities to join students' online groups to share, clarify, and exchange housekeeping information and course-related content with them. Teachers can, in particular, provide English as a foreign language (EFL) students with more sources of linguistic input, interaction, and feedback. Research investigating this potential, however, is still scarce in such contexts. The current study explores the likely affordances of teaching presence in students' WhatsApp groups for designing, facilitating, and guiding cognitive and social processes conducive to their language learning. A mixed-method design was employed to collect both quantitative and qualitative data and information from English-major undergraduates (N = 111) and faculty teachers (N = 8) who joined the same WhatsApp groups for one academic semester at a major university in Oman. Descriptive and thematic analyses of data from a survey with both closed-ended and openended questions and semi-structured interviews indicate that the shared WhatsApp groups functioned as small close-knit communities where students were able to constantly access teachers for their assistance, feedback, and clarification of content. Despite these merits, however, the participating faculty believed that the presence of teachers in WhatsApp groups might have consequences for students' tolerance of ambiguity, scaffolding, and autonomous language learning. The paper concludes by discussing several pedagogical implications and directions for future research.

#### **Keywords**

Teaching presence, teacher presence, mobile social networking applications, whatsapp, English as a foreign language, COVID-19

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## Introduction

Social media platforms such as Facebook, Twitter, Instagram, Snapchat, and WhatsApp have been designed to provide users with opportunities to communicate, interact, share, collaborate, publish, and manage their daily lives (He et al., 2020; Manca, 2020; Quan-Haase, 2008; So, 2016; Tang and Hew, 2017). Such mobile social networking (MSN) technologies have also been used in education particularly as spaces for foreign language learning due to their potential to engage students in informal online activities conducive to developing different aspects of their language learning (Jurkovič, 2019; Kusyk, 2017; Lai et al., 2017; Lee and Dressman, 2018; Toffoli and Sockett, 2015; Trinder, 2017). More specifically, informal online language learning activities offer opportunities for extensive comprehensible input (Krashen and Terrell, 1983) and meaningful interaction that would help language learners notice gaps in their interlanguage and make efforts to fix them relying on a wide range of mediational means and sources of knowledge or feedback (Siemens, 2005; Swain, 2006). Furthermore, the use of MSN technologies can facilitate participation in various activities and contexts (Lund, 2006) and promote scaffolding mediated by human agents or tools and artifacts (Kukulska-Hulme and Viberg, 2018).

MSN tools have also made inroads into formal language learning programs in different educational contexts (Andujar, 2016; Naghdipour and Hancioğlu, 2016; Pimmer and Rambe, 2018; Tang and Hew, 2017). Resorting to these applications, as the most accessible and fastest channels of communication to support student learning, has gained momentum with the COVID-19 outbreak since early 2020 and disruption of campus-based education across the globe (Bozkurt et al., 2020; Carretero Gomez et al., 2021). In Oman, colleges and universities were closed during Spring Semester 2020 and teachers were required to use course or learning management systems and videoconferencing tools such as Microsoft Teams to teach as well as communicate with students. However, as also reported in other studies (Greenhow and Chapman, 2020; Greenhow et al., 2020), the use of social media for such purposes has become popular in this context because the infrastructure for remote types of learning was not well developed or sophisticated learning management systems were in place but not exploited to their full potential, due to insufficient training or unavailability of essential hardware. Faculty teachers have therefore turned to online social media platforms to communicate with students and assist them in addressing their learning challenges and problems. While previous research (e.g. Andersson et al., 2014; Naghdipour and Hancioğlu, 2016; Prescott et al., 2013; Selwyn, 2009) cast doubt on the integration of online social media into formal education, the emergence of new MSN applications such as WhatsApp with multimedia capabilities have promised new opportunities for language learning development (Hwang and Fu, 2019; Kukulska-Hulme and Viberg, 2018). In addition to housekeeping purposes, such applications have been proved to be effective tools for building language learner communities and enhancing learners' confidence in language learning skills (Barrot, 2018; Jurkovič, 2019; Lee and Dressman, 2018; Trinder, 2017).

However, creating a learning environment that attends to students' needs and supports such a learning community could be affected by motivational (Song and Bonk, 2016), practical (He et al., 2020), linguistic, contextual, and institutional factors (Kern, 2014). Another key factor affecting student engagement and satisfaction in online literacy and learning activities is teaching presence (Anderson et al., 2001; Garrison et al., 2000; Shea and Bidjerno, 2008; Stone and Springer, 2019; Swan et al., 2009; Zilka et al., 2018). Teaching presence was originally defined as 'the design, facilitation, and direction of cognitive and social processes for the purpose of realizing personally meaningful and educationally worthwhile learning outcomes' (Anderson et al., 2001: p. 5). However, recent developments emphasize distributed teaching among instructors and participants

as prominent imperative in large online classes (Amemado and Manca, 2017). Teaching presence in students' synchronous and asynchronous media and environments is more crucial in EFL contexts as it can help expose students to sufficient linguistic input and facilitate interaction, feedback, and knowledge creation or sharing. Despite these potentials, little attention has been paid to how teaching presence can facilitate or otherwise hamper students' learning on MSN applications in EFL contexts, where making use of such tools could be affected by exam-driven educational policies and curricula (Kim and Kim, 2016; Richards, 2015).

Against this backdrop, the current study seeks out to explore undergraduate English-major students' and faculty teachers' experiences and opinions of the affordances of teaching presence, or ubiquitous presence of teachers (Zilka et al., 2018), in students' WhatsApp groups for language learning and development purposes during the COVID-19 pandemic. For the specific purposes of this study, WhatsApp was selected because it was the most popular MSN application in Oman (Al Rashdi, 2018) at the time this study was conducted and because it can enhance teacher immediacy and presence online, especially in resource-constrained environments (Rambe and Mkono, 2019). The findings of this study contribute to the ongoing debates on incorporating social media into more conventional types of education in EFL contexts, where students typically share the same first language and culture and teaching presence in joint social media groups can facilitate their access to alternative sources of learning, knowledge, and feedback.

### **Review of literature**

# Bridging formal and online informal language learning

With the popularity of MSN technologies installed free of charge on smartphones and availability of internet connection on campuses, students are now increasingly moving back and forth between campus-based formal education and learner-controlled online informal learning, blurring the boundaries between these two learning environments (Andujar, 2016; He et al., 2020; Greenhow and Lewin, 2016; Manca, 2020; So, 2016). This amorphous border has led to calls for bridging online informal and formal language learning. Lund (2006), for example, observed that multiple out-of-school technology-rich contexts and environments could give rise to diverse practices that need to be explored and deployed to mediate learning in educational contexts. The combination of both learning contexts, as Zilka et al. (2018: p. 104) assume, "may lead to the realization of the educational vision of creating a learning environment that supports students and responds to their needs, enabling autonomous and collaborative learning while creating a learning community." Influenced by the principles of language awareness and notion of multiliteracies, Thorne and Reinhardt (2008: p. 561) also proposed the pedagogical model of "bridging activities". Bridging activities seek to explore and analyze student-produced or selected texts using Web 2.0 technologies with an aim to enhance student engagement, expertise, and experience in digital textual conventions with the teacher guidance at semiotic, interactional, grammar, and genre levels. Likewise, Cope and Kalantzis (2009) suggested a pedagogy of multiliteracies to address teaching and learning in this new era of diversity in literacies and new modes of communication and discourse. Such a pedagogy strives to create conditions that allow people to collaborate and negotiate with others while traversing different identities and social languages (Cope and Kalantzis, 2009).

Recent research in this area has found that digital informal platforms such as WhatsApp can supplement classroom-based language learning in EFL contexts. Andujar (2016), for example, found that the use of WhatsApp contributed to the development of writing accuracy of second language learners. In addition, WhatsApp functioned as a helpful educational tool to encourage

language learners' interaction and involvement in learning activities. Students in Andujar's (2016) study benefited from the exchanged language-related episodes (LREs) that focused on linguistic accuracy through questioning each other's language use and addressing errors. Having reviewed 37 studies that employed WhatsApp for language learning purposes, Kartal (2019) also concluded that WhatsApp supports ubiquitous learning, encourages cooperation among learners, and serves as an effective educational tool for second language vocabulary development. In another intervention study using WhatsApp to foster language learning beyond the classroom, Mackay et al. (2021) found that English was integrated into students' daily routines as a vehicle for communication which helped their spontaneous use of language over time. Despite being a text-mediated online platform, Andújar-Vaca and Cruz-Martínez (2017) suggest that WhatsApp can even develop language learners' oral proficiency through offering them opportunities to engage in authentic interaction, feedback exchange, and meaning negotiation.

Integrating MSN technologies into more formal language learning courses or programs could, however, accompany several challenges. In a study conducted by Toffoli and Sockett (2015), teachers mentioned the difficulty in adapting online practices to the curriculum or content of their subject areas, lack of critical stance on the input, and irrelevance of language used on digital informal applications to academic contexts. Furthermore, digital platforms such as social media could be distractive to learning (Andersson et al., 2014) and might be used for non-academic purposes (Selwyn, 2009) or course-related communication only (Prescott et al., 2013). In addition, appropriation of social media in traditional pedagogy might be at odds with the participatory and free nature of social media (Crook, 2012; Merchant, 2012; Warschauer and Matuchniak, 2010). As an example, EFL students who used Facebook in a blending learning course preferred funny, comic, and entertaining learning materials to vent off their boredom caused by formal education (Naghdipour and Hancioğlu, 2016). Systematic reviews of the role of mobile instant messaging applications in knowledge development (e.g. Quan-Haase, 2008; Pimmer and Rambe, 2018; Tang and Hew, 2017) also revealed contradictory results with respect to the impact of using such applications on students' academic work. These included improper use of language and irrelevant conversations which led to tensions and ambiguities.

# Teaching presence in online literacy and language learning environments

Teaching presence has been recognized as a key factor affecting student learning experiences in online literacy and learning activities (Garrison et al., 2000; Stone and Springer, 2019; Zilka et al., 2018). Garrison et al. (2000) illustrated the components of teaching and learning in virtual environments through the Community of Inquiry framework where teaching presence, cognitive presence, and social presence help create and sustain a successful learning experience. In this model, teaching presence creates a supportive environment for both cognitive presence and social presence to flourish (Garrison, 2011). More recently, Zilka et al. (2018) suggest that teaching presence and teacher presence have been used interchangeably in the literature. Zilka et al. (2018: p. 105) define teacher presence as "meaningful communication for shaping, assisting in, and directing cognitive and social processes". They stated that personality of the teacher, social characteristics, and teaching style account for the dimensions of teacher presence online. The teacher personality includes manners and behaviors such as communication, feedback, and leadership styles; the social characteristics refer to how well the teacher moderates the online discussions and discourse of the learner community; and the teaching style is attributed to the teacher as a leader in learning (Zilka et al., 2018). Because the online environment is different from traditional learning and teaching contexts, teachers and students have been advised to redefine their roles (Anderson et al., 2001;

Stone and Springer, 2019). Teachers, for example, need to ensure their presence by intervening as subject matter experts to encourage student participation and response. Such intervention entails offering timely assessment and feedback, diagnosing misconceptions, and referring students to a wealth of knowledge and learning resources for the individual as well as group work activities (Anderson et al., 2001; Kukulska-Hulme and Viberg, 2018).

Having conducted a study involving 16 universities in Australia, Stone and Springer (2019) reported that an engaging teacher presence along with course design and delivery were found to boost student experience of online learning. In particular, the participants in this study appreciated establishing rapport with their teachers and feeling of community when teaching staff maintained a strong presence managing interactions and discourse online. Other scholars have reported that teacher presence contributes to the process of community building (Garrison, 2011), humanizes the online environment, and reduces the psychological distance between teachers and students (DuCharme-Hansen and Dupin-Bryant, 2005). As the reduced psychological distance helps boost the rapport and relationship with students, teachers can provide students with both public and private feedback and motivate them to work harder. In the context of WhatsApp, teacher presence is realized through a screen and across a distance to help students feel connected and catered for.

Maintaining a strong element of teacher presence online, however, may not always be easy. Teachers, for example, may not have the institutional support to join students' digital informal platforms due to the availability of more sophisticated learning management systems (Stone, 2017). Teachers are also involved in administrative responsibilities that require a considerable amount of paperwork, meetings, and report preparation. If they do not strike a balance between their formal and informal roles in the class and beyond, their presence in students' virtual communities could impede or negatively affect their interaction with students (Mackay et al., 2021). Likewise, boundaries of time and place which are usually blurred and less clearly defined in online education (Stone and Springer, 2019) become more complicated when teachers and students communicate with each other online. As such, using MSN technologies for educational purposes could lead to tensions, constraints, and challenges (Rambe and Nel, 2015; So, 2016). Given that little attention has been paid to teaching presence in MSN platforms in EFL contexts, the current study seeks to fill in this gap.

# Research questions

The current study explores EFL undergraduates' and their teachers' experiences and perceptions of the opportunities and challenges of teaching presence in their joint WhatsApp groups for language learning. As teacher presence in WhatsApp groups would also encompass and ensure teaching presence, this study follows Zilka et al. (2018) in using both concepts interchangeably wherever such a presence aims at shaping, facilitating, and guiding cognitive and social processes of language learning. A mixed-method approach to data collection and analysis was employed to obtain insights into the participants' experiences of teacher presence for language learning prospects. The following two research questions will guide the design of this study:

- What are EFL students' experiences and opinions of the benefits and drawbacks of teacher presence in their WhatsApp groups for shaping, facilitating, and directing cognitive and social dimensions of their learning?
- What are teachers' experiences and perceptions of the affordances of their own presence in students' WhatsApp groups for language learning?

# **Method**

# **Participants**

This study was conducted at the end of Spring Semester 2020 at a major university in Oman during the time when the campus was closed due to the Covid-19 pandemic. Initially, 400 second-, third-, and fourth-year undergraduates majoring in English were invited to participate in the study. Thus, a convenience sampling method was employed as all students registered in a Bachelor of Arts in English Language Studies program were given a chance to participate. First-year students were excluded assuming that they had insufficient experience in sharing a WhatsApp group with their classmates or teachers. Students were requested through the university's learning management system to participate in the study by sharing with them the link to an online survey. Of these, however, only 111 (5 male and 106 female) agreed to participate and responded to the survey (a return rate of 27.75%) Table 1. More fourth-year and third-year than second-year students participated in the study due to having more experience using WhatsApp for course-related communication. All respondents enjoyed a CGPA (Cumulative Grade Point Average) of over two and approximately 90% had a CGPA of over three. In addition, over 90% rated their general English proficiency as 'very good' or 'good'. More than half of the students registered for four courses, one third took five courses while others took two or three courses. Table 1 also shows the percentage of 1, 2, 3, 4 or 5 teachers' presence in the WhatsApp groups. All participants were Omani nationals and spoke Arabic as their first language.

In addition, one third (3 female and 5 male) of the teacher population who were involved in teaching the participating students were interviewed to investigate the likely affordances of their presence in students' WhatsApp groups for language learning development. They were invited from a pool of 17 teachers who joined students' WhatsApp groups during the same academic semester. The teachers agreed to participate in the study by responding to an online call sent through an email. Both Arabic and non-Arabic speaking teachers were invited. The interviewed teachers were all holding a PhD degree in English, TESOL, Applied Linguistics or Translation with more than 5 years of teaching experience. They had also been using WhatsApp for several years (Table 2).

### Instruments and data collection

In this study, we adopted a mixed method approach that relies on "the primary importance of the question asked rather than the methods, and [...] the use of multiple methods of data collection to inform the problems under study" (Creswell and Plano Clark, 2011: p. 41). In this perspective, a variety of different method tools was chosen because in a mixed method approach "a researcher or team of researchers combines elements of qualitative and quantitative research approaches [...] for the broad purposes of breadth and depth of understanding and corroboration" (Johnson et al., 2007:

Tabl	e I	•	Participatir	ng s	tudents'	bacl	kground	information	on.
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Gender (N)		Year	· (%)		CGPA (%)			Courses taken (%)			Presence of teachers in the WhatsApp group (%)						
M 5	•	2 <sup>nd</sup> 27		4 <sup>th</sup> 41		2.5–3 26	3–3.5 30	3.5–4 33					1 55				5 4

Pseudonym	Gender	Age group	Subject area	Experience (Year)	WhatsApp (Year)	Native language	Title
Hanin	F	40–45	Applied linguistics	Seven	Six	Arabic	Asst. Prof
Roseline	F	40-45	English	Twelve	Five	Indian	Asst. Prof
Sophia	F	35-40	TESOL	Six	Five	Filipino	Asst. Prof
Ali	М	35–40	Applied linguistics	Seven	Four	Persian	Asst. Prof
Karim	M	45-50	Translation	Fourteen	Five	Arabic	Assoc. Prof
Marwan	M	30-35	Translation	Seven	Five	Arabic	Asst. Prof
Pervin	M	40-45	English	Ten	Six	Indian	Asst. Prof
Varghese	М	35–40	English	Eight	Five	Indian	Asst. Prof

Table 2. Participating teachers' background information.

p. 123). Specifically, a survey which combines quantitative and qualitative questions, and a semi-structured interview was used for triangulation purposes. As for qualitative tools, the research was conducted following the researchers' values which also shape how the study data are interpreted (Creswell, 2007).

Survey. A survey with 10 questions was designed and administered through Google Forms to investigate students' experiences and opinions of teacher presence in their WhatsApp groups for language learning development. The first eight questions addressed the participating students' demographic data and their WhatsApp group dynamics. The last two questions, however, required students to comment on the extent to which teacher presence in the joint WhatsApp groups could facilitate or hamper their language learning (Appendix A). The ethical approval was obtained from the University Ethics and Biosafety Committee (UEBC) and the participants' consent was sought before they completed the survey online. The survey was anonymous excluding questions on personal information such as name and student number. Students were also assured that their responses would be used for research purposes only.

Interviews. Semi-structured interviews were conducted with the selected teachers to explore their experiences and perceptions of the affordances and opportunities of their presence in students' WhatsApp groups for language learning. The interview protocol was composed of eight questions with follow-up inquiries for further clarification and information depending on the teachers' responses and comments (Appendix B). Apart from the first two interview questions that addressed the motivation for teachers' subscription to students' WhatsApp groups, questions 3, 4 and 8 were concerned with the whole process of language learning whereas questions 5, 6 and 7 focused on the nature and dynamics of interaction in the group and its impact on student learning. After planning the interview time with the teachers, the lead researcher interviewed them in English in their own offices. Each interview lasted approximately between 25 and 30 min. Teachers were audio-recorded with their consent and were assured of anonymity.

# Data analysis

As for the first research question, students' responses to closed-ended questions of the survey were analyzed electronically by Google Forms and reported in the form of summaries and percentages to

provide background information on the participants. Students' comments on the last two openended questions of the survey, however, were filed into two separate categories: 'benefits' and 'challenges' of teacher presence in WhatsApp groups. Teachers' responses to the interview questions were also transcribed and returned to them for member checking. Then, interview data along with students' comments on the survey questions were subjected to thematic analysis using inductive analysis (Thomas, 2006) to identify recurring patterns and themes. The lead researcher read the data separately in an iterative manner to assign initial codes. These codes were then checked for overlaps before being merged and categorized into themes and sub-themes (Guest et al., 2012). For example, codes like an 'informal tool', 'too personal', and 'private life' related to students' perceptions of WhatsApp as an educational tool were merged under 'serious' or 'formal' means of education; however, the codes addressing the authority of teachers such as 'hurt teachers' feelings', 'no respect for teachers', and 'annoying teachers' were categorized under 'not culturally warranted' theme.

Guided by the second research question, data from the interviews were also thematically analyzed (Guest et al., 2012; Thomas, 2006) and coded. The codes related to the perceived benefits and challenges of teacher presence in WhatsApp groups for students' learning were categorized under 'facilitating learning' and 'hampering learning' themes whereas those affecting teaching were merged under 'facilitating teaching' and 'hampering teaching' themes. The participants' quotations were then selected and reported verbatim in support of the major themes. However, since this was an exploratory study, the attempt was made to explore the extent to which teacher presence in students' WhatsApp groups could have facilitated or hampered students' learning while they interacted with the instructional materials which were designed and delivered mainly on the university's learning management system. To account for the reliability of the results, an experienced colleague with a PhD degree in Applied Linguistics recoded the qualitative data from survey and interviews independently, which resulted in an inter-rater agreement Kappa of 0.81. The codes were later shared, compared, and negotiated during a meeting to resolve the disagreements and produce the final list.

#### Results

RQ1) what are EFL students' experiences and opinions of the benefits and drawbacks of teacher presence in their WhatsApp groups for shaping, facilitating, and directing cognitive and social dimensions of their learning?

Analysis of the data from the close-ended questions of the survey indicated that all students except for two joined WhatsApp groups for all courses taken. Over half also reported that at least one teacher joined their WhatsApp group. While approximately the same number of students reported that four (15%), three (14%) or two (12%) teachers joined their group, a small percentage (4%) experienced the presence of five teachers. In addition, an overwhelming majority of students (84%) agreed that teachers should join their WhatsApp groups whereas a small minority (8%) disagreed or remained undecided.

The first open-ended question addressing the advantages of teacher presence in students' WhatsApp groups elicited 51 comments from the participants. Students indicated that using WhatsApp provided quick and convenient communication with their teachers, repeating the adjectives 'easy', 'fast' and 'convenient' and the verbs 'communicate' and 'connect' more than 10 times each. Out of the shared responses, 19 students commented specifically on better and faster communication with their teachers. Approximately the same number of students (18) mentioned that teachers informed them of the first-hand news and views, announcements, and updates related

to the course, especially those on assignments and exams. In addition, a quarter of students (12) referred to the ease of posting their questions on WhatsApp and receiving explanations and clarifications from their teachers on challenging areas in course materials. Several students also reported that their teachers' presence in WhatsApp groups strengthened their rapport with them.

The second open-ended question sought students' opinions on the ways teacher presence in the joint WhatsApp groups could hamper their learning. Out of 47 comments, 20 students simply wrote 'nothing' or 'no disadvantages' whereas others cited several issues. As the main reported challenge, students (12) complained that their peers raised the repetitive concerns asking teachers the same questions already shared in the group. In addition, some students (6) complained about the interrupted discourse on the page, finding it difficult to navigate it when a response was missed due to the heavy volume of messages that needed to be surveyed to figure out whether one's question had been already answered or raised in the first place. Talking about irrelevant or non-academic issues in Arabic in the presence of teachers was another source of dissatisfaction. Some students (6) believed that teachers' subscription to their WhatsApp group was not culturally warranted as some peers may, intentionally or unintentionally, annoy or disrespect them. As the last recurring theme, several students complained that social media applications are not serious means of communication and believed that more formal channels of communication such as the university's learning management system and email should be used instead.

# RQ2) what are teachers' experiences and perceptions of the affordances of their own presence in students' WhatsApp groups for language learning?

Analysis of the interview data revealed that teacher presence in students' WhatsApp groups facilitated both learning and teaching processes alike. The findings are divided into two categories of those facilitating learning and teaching and those hampering these two processes.

Facilitating learning. Teachers stated that their students enjoyed fast and convenient access to course-related and house-keeping updates, sought clarification on course materials, received immediate feedback on their learning problems, and practiced the covered lesson or content. As the main major theme, all interviewed teachers reported sharing information related to various aspects of their courses.

Instead of logging into Moodle, students used WhatsApp on their smartphones. WhatsApp is part of their daily life. They could double-check with me information related to the course such as announcements, submission deadlines and so forth. Students like WhatsApp groups more; they feel Moodle is imposed on them and something they must use, like going to a classroom on the campus; I mean, a kind of obligation. (Karim)

Student-teacher communication on WhatsApp was not, however, limited to sharing or requesting housekeeping updates. Teachers were able to explain difficult points addressing students' concerns about course content, assignment task requirements, sample materials, and formative assessment practices such as mock quizzes or exams.

WhatsApp is a wonderful tool for clarification; students asked questions about topics related to lessons, assignments, and mock exams and it was easy to clarify them. Personally, I liked it because I found it easy to deal with students' problems and concerns on the spot. (Marwan)

In particular, the fast and convenient student-teacher communication provided more reserved students with a chance to seek further assistance using the private messaging option. Five teachers attributed these students' engagement to the strong rapport established with them on WhatsApp. One teacher compared it to one-to-one student-teacher campus-based conferences where students would receive more personalized type of support or feedback.

I noticed that students were weak in writing and preferred to privately send audio recordings. This also helped shy students more who also preferred private messaging. I believe WhatsApp caters to the needs of students with different personalities. (Roseline)

Furthermore, students were given a chance to practice newly learned materials. Two teachers posted short questions on the group page to offer students opportunities for further practice of the covered content.

I shared a question around 7 p.m. every day for students to have a recap of the covered materials; it was a simple exercise in the form of a question. The good thing was that students were cooperative and shared their answers a short while later. (Sophia)

Facilitating teaching. Teachers' presence in students' WhatsApp groups also facilitated teaching as they were able to exploit WhatsApp multimedia facilities to explain a lesson, respond to students' questions, and address their learning concerns.

WhatsApp has multimedia features, and I can record and send audio messages to students for immediate use. It can save my time. Instead of typing or putting up posts on the discussion forum, I recorded and shared explanations in response to students' requests and questions. (Karim)

From a psychological perspective, teacher presence brought along a personal touch to student-teacher communication. Six teachers believed that their presence established a sense of community motivating students to be more active online. They believed that students would benefit more if teachers were essentially interested in socializing and networking on social media. One teacher, however, attributed the success of this community-building feature of WhatsApp groups to teachers' personality type.

For me, WhatsApp has a personal touch; I am a social person and I enjoy being on social media. I am excited about it. This is my personality and I believe teachers' use of social media also depends on their personality type. I know some colleagues do not like it; this is all about their personality. (Marwan)

Hampering learning. Teachers, however, cited several drawbacks of their presence in WhatsApp groups that in their opinion affected student language learning. As the main challenge, teachers referred to students' use of informal and occasionally inappropriate and incorrect language on the group page. Although teachers viewed it as their responsibility to ensure students' proper and correct use of language, they felt this potential was generally compromised by the casual nature of communication on MSN applications.

I kept telling students to text in proper and correct English, but WhatsApp is fast and everything is acceptable including shortcuts and abbreviations as far as we understand them. I did not give feedback,

nor did I correct students' errors. So, I think it could negatively affect their writing. But I also thought students were using language for communication, so it could be a good practice for them. (Varghese)

In addition, five teachers stated that their presence was against the very mission of using social media platforms, which are typically exploited for collaboration and communication among individuals with the same interests, needs, and goals. In other words, they found their presence disturbing the group dynamics, mainly affecting student-student interaction and collaboration or scaffolding.

My presence helped students in many ways, but I think it discouraged students' group work and scaffolding. When I was available and ready to answer any question in the group, students had less opportunities to interact with or learn from each other. When they had this chance, they talked in Arabic negotiating how to, for example, request an assignment extension. (Ali)

At the same time, teachers opined that their presence provided insufficient opportunities for autonomous learning. Four teachers mentioned that such a practice might have consequences for students' language learning in the long run and their preparation for future professional life.

I believe students should learn to be in charge of their own learning. I mean they should try other ways to find solutions for their learning problems. They can search and read about everything online. Some students asked me about new words in the course materials without bothering to look them up in a dictionary or google them. (Hanin)

Two teachers also referred to students' low tolerance of ambiguity when encountering a new learning problem or a confusing situation in WhatsApp groups. They believed it would be a hindrance to building knowledge of language or problem-solving skills.

I believe social media make students impatient. My students would pose questions on whatever came to their minds. When they did not understand a point, they would immediately post it on the group page; I think they should learn to give problems some time. (Pervin)

Hampering teaching. Teachers commented on several practical, professional, and cultural issues that negatively affected their motivation to facilitate and guide students' learning. As the most common complaint, six teachers referred to students' use of inappropriate language and discourse on WhatsApp.

Initially I joined students' WhatsApp groups just to support them, but I felt no boundaries at all. Students were very entitled to have my responses to their questions as soon as possible. I myself felt this obligation to answer back each and every message. For me, it was not a successful experience. Students used exclamation and question marks and I found some messages inappropriate. (Sophia)

Teachers also stated that WhatsApp cannot be easily adapted for formal classroom-based teaching and learning, mostly due to lack of time and place boundaries.

Sometimes students posted irrelevant or repetitive questions. Someone asked a question from the first lesson; someone from the second lesson, so the shared information did not equally benefit all. This might

happen in the classroom as well, but students normally make appointments to see us during office hours. So, there is no sense of time on social media. (Ali)

Finally, teachers felt a conflict between their professional and personal commitments that affected their efficiency to support students in dealing with their language learning problems.

We need to design materials, prepare assessments, mark exams, go to meetings, draft reports, and attend workshops. We do have personal responsibilities, too, so using social media with students will burn us out. (Varghese)

Overall, despite several challenges, teacher presence in students' WhatsApp groups supported and facilitated both cognitive and social processes of language learning in different ways. It helped students communicate with their teachers beyond the time and place constraints, build a community, and resolve their learning problems on spot. Likewise, teachers were able to employ multimedia facilities to clarify the content, offer more focused and personalized feedback, and build rapport with their students.

# **Discussion**

The current study set out to provide insights into the likely opportunities and challenges of teacher presence in EFL students' WhatsApp groups for language learning purposes. The first research question sought students' experiences and opinions of teacher presence for better shaping, organizing, and facilitating cognitive and social aspects of their language learning on WhatsApp. The results indicated that students benefited from this easy and fast channel of communication to receive course-related updates, seek advice and clarification on the covered content, and receive immediate feedback on their concerns or learning. In other words, of three aspects of teaching presence (shaping, facilitating, and directing cognitive and social processes), students were to a large extent concerned with the facilitatory component as it catered for their needs to be connected, updated, and assured of understanding the course content. Indeed, students were accustomed to constant teaching presence, physically and psychologically, through attending classes, office hours, and other events on the campus. Thus, being deprived of such an opportunity pushed them to resort to MSN technologies for direct and immediate access to the campus-based sources of learning and information. Previous research (Andújar-Vaca and Cruz-Martínez, 2017; Kartal, 2019; Mackay et al., 2021; Stone and Springer, 2019; Zilka et al., 2018) also suggested that teacher presence in students' online groups helps social presence to flourish. In this study, teacher presence established a trusting and close-knit community where students benefited from constant and immediate support besides strengthening rapport and relationship with their teachers. This online presence further lowered students' affective filter (Krashen and Terrell, 1983) and facilitated their communication with their teachers to share with them their ideas or questions without much stress or anxiety (DuCharme-Hansen and Dupin-Bryant, 2005).

The second research question addressed teachers' experiences and opinions of their presence in students' WhatsApp groups. The data suggest that teachers exploited this platform for designing, organizing, delivering, and clarifying purposes in one way or another. However, like students, they emphasized the facilitatory component of teacher presence at the expense of other aspects. For example, they shared information on various aspects of courses with students, walked them through assignment and mock exam guidelines, offered one-to-one conferences with more reserved ones, and posed questions and hints to check their understating or provide them with further practice on

course materials. Despite these benefits, teachers reported having difficulty navigating the page and complained about students' use of incorrect and inappropriate language and discourse and their reliance on Arabic while interacting with each other. Although some of these findings resonate with previous research on the challenges of using MSN applications for formal education (Naghdipour and Hancioğlu, 2016; Pimmer and Rambe, 2018; Quan-Haase, 2008; Tang and Hew, 2017), others refer to educational and cultural factors perhaps common in other EFL or Middle Eastern contexts. For example, students felt entitled to have their teachers' immediate response to their questions. While this sense of entitlement appears to be a legitimate expectation, it could highlight students' cultural understanding of the teacher role in this context typically viewed as a transmitter, rather than a facilitator, of knowledge and information (Shehadeh and Coomb, 2012). Furthermore, students might have used inappropriate language due to their underdeveloped pragmatic competence of English, which has its roots in the prevalence of conventional language teaching practices in such contexts (Kim and Kim, 2016; Naghdipour, 2021; Richards, 2015).

There were, however, unexpected findings regarding the impact of teachers' presence in students' WhatsApp groups on their language learning. Firstly, teachers stated that their presence reduced students' opportunities for autonomous learning beyond the classroom. While offering feedback on student performance or learning is one of the affordances of teaching presence online (Anderson et al., 2001; Zilka et al., 2018), with a less ubiquitous presence students might be able to better foster their learning autonomy and agency, as prerequisites to more enduring language learning experiences (Mackay et al., 2021). Secondly, teachers noticed that their presence affected students with low tolerance of ambiguity. As teacher presence shapes, supports, and directs a supportive environment for better functioning of cognitive processes (Zilka et al., 2018), one of the manifestations of this presence is to equip language learners with effective learning strategies to involve in deeper processing of learning and cope with learning problems, rather than getting confused by new stimuli. Thirdly, teachers' presence appears to have affected scaffolding and student-student interaction or collaboration. In other words, teachers thought that insufficient scaffolding hampered students' efforts to fill gaps in their interlanguage through what Swain (2006) calls 'languaging'. As a characteristic of the sociocultural approach to language learning (Kukulska-Hulme and Viberg, 2018), scaffolding can be accomplished by group activities and interaction on social media, which have been praised as supportive spaces for building connections, promoting collaboration, and sharing knowledge with others (He et al., 2020; Siemens, 2005). Yet, opportunities for scaffolding could be compromised in the presence of an expert figure who is ready to respond to any concerns or questions regardless of the time and place boundaries.

# Implications for practice and research

Because MSN applications can provide affordances for language learning development and use (Andujar, 2016; Andújar-Vaca and Cruz-Martínez, 2017; Kusyk, 2017; Lai et al., 2017; Lee and Dressman, 2018; Trinder, 2017), the findings of this study could offer several implications for EFL learning during the time when online learning has become the new normal. To begin with, teachers' presence in students' MSN groups would build on students' affective and emotional investment in language learning provided that they strike a balance between personal and professional undertakings (Mackay et al., 2021). However, such a presence should not compromise students' learning autonomy and agency. That is, teachers should manage their presence in a way to guide students to find solutions for their learning problems, either independently or through working with others, rather than providing them with the correct answer or solution. In addition, although tolerance of ambiguity has been conceptualized in different ways (Grace, 1998), teachers can assist students with

low tolerance of ambiguity by explicitly deploying learning strategies that entail developing problem-solving skills to better prepare them for real-life and authentic communicative events in their future academic and professional lives. Finally, once joining students' social media groups, teachers should strive to promote scaffolding prospects to help students learn from each other and other means of knowledge and information through autonomous and group work learning experiences. More effective scaffolding could be achieved by posting challenging questions, tasks, and activities that offer opportunities for more interaction and negotiation of form and meaning (Swain, 2006) among students.

Although this study offers new insights into some of the affordances of teacher presence in students' MSN groups for language teaching and learning, the results cannot be generalized to other contexts as the data was obtained from a small sample size out of a big population of both students and teachers. Similar studies with a bigger sample size would lead to drawing more solid conclusions about the results. Also, students with higher CGPA participated in this study due to having a higher level of proficiency and confidence to comment on the survey questions. Including a wider range of students from different academic abilities and language proficiency levels would provide new insights into their experiences of teacher presence in their MSN groups. Furthermore, whether teacher presence in students' MSN groups promotes their intolerance of ambiguity or favors those with low tolerance of ambiguity needs further investigation.

#### Conclusion

Digital informal platforms have emerged to respond to our social needs to be connected, yet they have been adopted in other spheres of our life including education in general and language learning in particular. This potential, however, could be affected by teachers' presence in students' online circles unless they are aware of the benefits and drawbacks involved. While teachers may join students' social media groups out of professional commitment to help them move their learning forward, their presence could at the same time lead to students' superficial engagement with language, depriving them of the opportunities to co-construct knowledge through negotiation and interaction with peers or other sources of learning or feedback. As the findings of this study indicate, the success of teacher and student subscription to the same MSN group to supplement or bridge informal and formal language learning depends on several practical, cultural, and professional factors (He et al., 2020; Kern, 2014; Song and Bonk, 2016). In order not to replicate the traditional education online, it is therefore incumbent on teachers to explore and make sense of the complexities of different online learning landscapes (Greenhow and Lewin, 2016) where a wide range of discourses and literacy practices are required, shaped, and shared. If teachers recognize the potential of online informal learning platforms for language learning development and approach them prepared, they can turn this experience into a rewarding one for themselves and new generation of students who are more wired to the use of technology in their day-to-day lives.

#### **Declaration of conflicting interests**

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

#### **Funding**

The author(s) received no financial support for the research, authorship, and/or publication of this article.

#### References

- Al Rashdi F (2018) Functions of emojis in WhatsApp interaction among Omanis. *Discourse, Context and Media* 26: 117–126.
- Amemado D and Manca S (2017) Learning from decades of online distance education: MOOCs and the community of Inquiry framework. *Journal of E-Learning and Knowledge Society* 13(2): 21–32.
- Andersson A, Hatakka M, Grönlund Å, et al. (2014) Reclaiming the students coping with social media in 1: 1 schools. *Learning, Media and Technology* 39(1): 37–52.
- Anderson T, Rourke L, Garrison DR, et al. (2001) Assessing teaching presence in a computer conferencing context. *Journal of Asynchronous Learning Networks* 5(2): 1–17.
- Andujar A (2016) Benefits of mobile instant messaging to develop ESL writing. System 62: 63-76.
- Andújar-Vaca A and Cruz-Martínez MS (2017) Mobile instant messaging: Whatsapp and its potential to develop oral skills. *Media Education Research Journal* 25(50): 43–52.
- Barrot JS (2018) Facebook as a learning environment for language teaching and learning: A critical analysis of the literature from 2010 to 2017. *Journal of Computer Assisted Learning* 34(6): 863–875.
- Bozkurt A, Jung I, Xiao J, et al. (2020) A global outlook to the interruption of education due to COVID-19 pandemic: Navigating in a time of uncertainty and crisis. *Asian Journal of Distance Education* 15(1): 1–126.
- Carretero Gomez S, Napierala J, Bessios A, et al. (2021) What Did We Learn from Schooling Practices during the COVID-19 Lockdown. Publications Office of the European Union.
- Cope B and Kalantzis M (2009) "Multiliteracies": New literacies, new learning. *Pedagogies: An International Journal* 4(3): 164–195.
- Creswell JW (2007) *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. 2nd edition. London: Sage Publications.
- Creswell JW and Plano Clark VL (2011) *Designing and Conducting Mixed Methods Research*. London: Sage Publications.
- Crook C (2012) The 'digital native' in context: Tensions associated with importing Web 2.0 practices into the school setting. *Oxford Review of Education* 38: 63–80.
- DuCharme-Hansen BA and Dupin-Bryant PA (2005) Distance education plans: Course planning for online adult learners. *TechTrends* 49(2): 31–39.
- Garrison DR (2011) E-learning in the 21st Century: A Framework for Research and Practice. NY: Routledge.
- Garrison DR, Anderson T and Archer W (2000) Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education* 2(2–3): 1–19.
- Grace C (1998) Personality type, tolerance of ambiguity, and vocabulary retention in CALL. *CALICO Journal* 15(1): 19–45.
- Greenhow C and Chapman A (2020) Social distancing meet social media: Digital tools for connecting students, teachers, and citizens in an emergency. *Information and Learning Sciences* 121(5/6): 341–352.
- Greenhow C, Galvin S, Askari E, et al. (2020) #Cloud2Class: The disruption and reorganization of educational resources with social media. *American Journal of Education* 127(1): 1–11.
- Greenhow C and Lewin C (2016) Social media and education: Reconceptualizing the boundaries of formal and informal learning. *Learning, Media and Technology* 41(1): 6–30.
- Guest G, MacQueen K and Namey E (2012) Applied Thematic Analysis. London: SAGE Publications.
- He T, Huang Q, Yu X, et al. (2020) Exploring students' digital informal learning: The roles of digital competence and DTPB factors. *Behaviour & Information Technology* 40: 1–11.
- Hwang G-J and Fu Q-K (2019) Trends in the research design and application of mobile language learning: A review of 2007-2016 publications in selected SSCI journals. *Interactive Learning Environments* 27(4): 567–581.

- Jankovic V (2019) Online informal learning of English through smartphones in Slovenia. System 80: 27-37.
- Johnson RB, Onwuegbuzie AJ and Turner LA (2007) Toward a definition of mixed methods research. *Journal of Mixed Methods Research* 1(2): 112–133.
- Kartal G (2019) What's up with WhatsApp? A critical analysis of mobile instant messaging research in language learning. *International Journal of Contemporary Educational Research* 6(2): 352–365.
- Kern R (2014) Technology as pharmakon: The promise and perils of the internet for foreign language education. *The Modern Language Journal* 98(1): 340–357.
- Kim T-Y, Kim Y-K and Kim Y-K (2016) A quasi-longitudinal study on english learning motivation and attitudes: The case of South Korean students. *The Journal of AsiaTEFL* 13(2): 138–155.
- Krashen SD and Terrell TD (1983) *The Natural Approach: Language Acquisition in the Classroom.* Kronberg: Pergamon Press.
- Kukulska-Hulme A and Viberg O (2018) Mobile collaborative language learning: State of the art. *British Journal of Educational Technology* 49(2): 207–218.
- Kusyk M (2017) The development of complexity, accuracy and fluency in 12 written production through informal participation in online activities. *CALICO Journal* 34(1): 75–96.
- Lai C, Hu X and Lyu B (2017) Understanding the nature of learners' out-of-class language learning experience with technology. *Computer Assisted Language Learning* 31(1–2): 114–143.
- Lee JS and Dressman M (2018) When IDLE hands make an English workshop: informal digital learning of English and language proficiency. *TESOL Quarterly* 52(2): 435–445.
- Lund A (2006) The multiple contexts of online language teaching. *Language Teaching Research* 10(2): 181–204.
- Mackay J, Andria M, Tragant E, et al. (2021) WhatsApp as part of an EFL programme: Participation and interaction. *ELT Journal* 75(4): 418–431.
- Manca S (2020) Snapping, pinning, liking or texting: Investigating social media in higher education beyond Facebook. *The Internet and Higher Education* 44: 1–13.
- Merchant G (2012) Unravelling the social network: Theory and research. *Learning, Media and Technology* 37(1): 4–19.
- Naghdipour B (2021) English writing pedagogy at the crossroads: The case of Oman. *Journal of Second Language Writing* 52: 100815.
- Naghdipour B and Hancioğlu NE (2016) Incorporating social networking sites into traditional pedagogy: A case of Facebook. *TechTrends* 60: 591–597.
- Pimmer C and Rambe P (2018) The inherent tensions of "Instant Education": A critical review of mobile instant messaging. *The International Review of Research in Open and Distributed Learning* 19(5): 219–237.
- Prescott J, Wilson S and Becket G (2013) Facebook use in the learning environment: Do students want this? *Learning, Media and Technology* 38(3): 345–350.
- Quan-Haase A (2008) Instant messaging on campus: Use and integration in university students' everyday communication. *The Information Society* 24(2): 105–115.
- Rambe P and Mkono M (2019) Appropriating whatsapp-mediated postgraduate supervision to negotiate "relational authenticity" in resource-constrained environments. *British Journal of Educational Technology* 50(2): 702–734.
- Rambe P and Nel L (2015) Technological utopia, dystopia and ambivalence: Teaching with social media at a South African university. *British Journal of Educational Technology* 46(3): 629–648.
- Richards JC (2015) The changing face of language learning: Learning beyond the classroom. *RELC Journal* 46(1): 5–22.
- Selwyn N (2009) Faceworking: Exploring students' education-related use of facebook. *Learning, Media and Technology* 34(2): 157–174.

- Shea P and Bidjerano T (2009) Community of inquiry as a theoretical framework to foster "epistemic engagement" and "cognitive presence" in online education. *Computers and Education* 52: 543–553.
- Shehadeh A and Coomb CA (2012) *Task-Based Language Teaching in Foreign Language Contexts: Research and Implementation.* Amsterdam: John Benjamins Publishing.
- Siemens G (2005) Connectivism: A learning theory for the digital age. *International Journal of Instructional Technology and Distance Learning* 2(10): 3–10.
- So S (2016) Mobile instant messaging support for teaching and learning in higher education. *The Internet and Higher Education* 31: 32–42.
- Song D and Bonk CJ (2016) Motivational factors in self-directed informal learning from online learning resources. *Cogent Education* 3(1): 1–11.
- Stone C (2017) Opportunity through online learning: Improving student access, participation and success in higher education. Equity fellowship final report. *The National Centre for Student Equity in Higher Education*. Perth: Curtin University.
- Stone K and Springer M (2019) Interactivity, connectedness and 'teacher-presence': Engaging and retaining students online. *Australian Journal of Adult Learning* 59(2): 146–169.
- Swain M (2006) Languaging, agency and collaboration in advanced language proficiency. In: Byrnes H (ed), Advanced Language Learning: The Contribution of Halliday and Vygotsky. London: Continuum, pp. 95–108.
- Swan K, Garrison DR and Richardson JC (2009) A constructivist approach to online learning. In: Payne CR (ed), Information Technology and Constructivism in Higher Education: Progressive Learning Frameworks. Hershey, PA: IGI Global, pp. 43–57.
- Tang Y and Hew KF (2017) Is mobile instant messaging (MIM) useful in education? Examining its technological, pedagogical, and social affordances. *Educational Research Review* 21: 85–104.
- Thomas DR (2006) A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation* 27(2): 237–246.
- Thorne SL and Reinhardt J (2008) "Bridging Activities," new media literacies, and advanced foreign language proficiency. *CALICO Journal* 25(3): 558–572.
- Toffoli D and Sockett G (2015) University teachers' perceptions of online informal learning of English (OILE). *Computer Assisted Language Learning* 28(1): 7–21.
- Trinder R (2017) Informal and deliberate learning with new technologies. ELT Journal 71(4): 401-412.
- Warschauer M and Matuchniak T (2010) New technology and digital worlds: analyzing evidence of equity in access, use, and outcomes. *Review of Research in Education* 34(1): 179–225.
- Zilka G C, Cohen R and Rahimi I D (2018) Teacher presence and social presence in virtual and blended courses. *Journal of Information Technology Education: Research* 17: 103–126.

# Appendix A Student survey

- 1.Gender:
- 2.CGPA:
- 3. Year of study:
- 4. General English language proficiency (ability):
- Poor Good Very good Excellent
- 5. Number of courses you took last semester:
- 6. Number of courses for which you joined your classmates on a WhatsApp group last semester:
- 7. Number of courses for which the course teacher joined your WhatsApp group last semester:
- 8. Teachers should join students' WhatsApp groups.

Agree No idea Disagree

- 9. What would be the advantages of teacher presence in your WhatsApp groups for language teaching and learning? (Please provide details and examples)
- 10. What would be the disadvantages of teacher presence in your WhatsApp groups for language teaching and learning? (Please provide details and examples)

# Appendix B

# Teacher interview protocol

- 1. What made you join students' WhatsApp groups? If given a chance, would you join such groups again? Why/why not?
- 2. Why do you think students would like to invite teachers to join their WhatsApp groups?
- 3. How could your presence in students' WhatsApp groups benefit their language learning? How did it benefit your teaching?
- 4. What challenges did students experience as a result of your presence in their WhatsApp groups? What challenges, if any, did you face?
- 5. Would you comment on your communication with students on WhatsApp groups? Who did usually initiate it? What types of messages or questions were exchanged?
- 6.Did students interact with each other? If so, in what language? What about their interaction with you? Do you think group interactions provided opportunities for language learning? If so, in what ways? And if not, why not?
- 7. How was the group dynamics similar to the classroom environment? How was it different?
- 8. Was your presence in students' WhatsApp group a successful experience? Why/why not? What went well? What did not work well? What would be your advice for teachers who want to join such groups?

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