



A review of empirical studies of social media on language learners' willingness to communicate

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Abstract

Many studies have explored educational and pedagogical affordances of social media, but few studies have investigated their impact on emotional and psychological aspects of language learning specifically Willingness to Communicate (WTC) in second and foreign language learners. In this paper, we have reviewed related research published in the last decade and inspected their results and the researchers' points of view towards this issue. The main purpose of this study was to review the published papers to know about their data collection methods, contexts, participants, and predictors of WTC that were modified by social media. The findings showed that most of the studies utilized quantitative research design and were conducted in formal contexts in Asia. Social Media Assisted Language Learning (SMALL) users were often adolescent and young adult learners. Moreover, through analyzing data taking a content analysis approach, three themes related to predictors of WTC emerged: 1) SMALL and L2 learners' self-confidence, 2) SMALL and L2 learners' motivation, 3) SMALL and L2 learners' anxiety. The themes were examined in-depth and some interesting and remarkable studies were narrated thoroughly. Scrutinizing the themes revealed that social media helped language learners to improve L2 WTC by increasing self-confidence and motivation and decreasing anxiety. Based on the results, we recommend that researchers examine other predictors of willingness to communicate that can be modified by the aid of SMALL (e.g., intergroup climate or motivation). Furthermore, instructors can employ social media as effective teaching tools to enhance learners' communication competence and increase their participation in in-class activities.

Keywords Social media · Review · Willingness to Communicate (WTC)

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1 Introduction

Social media refer to a wide range of social networking sites, multimedia platforms, wikis, blogs, and applications that provide users with an accessible and easy to use communication means. Nowadays, more than three billion active users are utilizing social media and they have become an integral and essential part of daily life (Kessler, 2018). Websites and applications such as Facebook, WhatsApp, and Instagram are pervasively used for sending and receiving instant messages, sharing news and information, interacting with others, and making new friends. Many people around the world create content in the forms of text, image, audio, and video and disseminate them via social media across the Internet.

The education section has also benefited from social media since the first stages of accessibility so far. Many teachers and students have vastly applied them to increase the time of interaction, sharing materials, assessment, providing feedback, and exchanging ideas (Dashtestani, 2018; Fornana & Lomicka, 2019; Lin et al., 2016). Some studies have explored the advantages and disadvantages of utilizing social media for pedagogical aims. The results proved different levels of changes in the amount of learners' proficiency but they have generally reported significant improvement in participants' performance and enhancing their competence (Al-Rahmi et al., 2018; Moghavvemi et al., 2018).

Learning a new language is a dialogic, interactive, and communicative process and affective and emotional factors play a crucial role through this process. Apart from individual and cognitive factors, L2 learners need to engage in meaningful use of language and gain competence in communication (Brown & Lee, 2015). One of the most important constructs in the affective realm of language learning that is the concerning issue of this paper is willingness to communicate (WTC). Recently, researchers have examined a particular aspect of WTC in an educational setting that is related to second language learning (i.e. L2 WTC). L2 WTC has often been conceptualized as "a readiness to enter into the discourse at a particular time with a specific person or persons, using an L2" (MacIntyre et al., 1998, p. 547) that is associated with variables such as intergroup climate and attitudes, language competence, anxiety, self-confidence, and motivation.

According to MacIntyre (2007, p. 565), "Language anxiety captures the worry and usually negative emotional reaction aroused when learning or using an L2 uniquely provoked by L2 situations". He has categorized anxiety into three levels: trait (a person who always seems anxious), state (a person who feels anxious right now), and situation-specific level (a person who is nervous when using L2 but not L1). He believes that if anxiety is aroused, L2 performance suffers. Therefore, learners who have higher perceptions of their communication competence and experience a lower level of communication anxiety tend to be more willing to initiate communication in the L2 context (Peng & Woodrow, 2010).

Self-confidence has been recognized to be the most direct cause that affects L2 WTC vigorously. Clément et al. (2003) defined it as the combination of lack of anxiety and overall belief about one's perceived competence and capability to involve in effective and efficient L2 communication. If these two needs

are not met, the learner will not be willing to participate in discussions in class voluntarily, or likely will not attend the class at all (MacIntyre et al., 1998). MacIntyre et al. (1998, p.551) also affirmed that L2 self-confidence has two components: “1. Cognitive and corresponds to the self-evaluation of L2 skills, a judgment made by the speaker about the degree of mastery achieved in the L2; 2. Affective and corresponds to language anxiety, specifically, the discomfort experienced when using an L2”.

Based on Peng and Woodrow’s (2010, p. 836) definition, “motivation is defined as comprising effort, desire, and attitudes towards learning the L2”. Motivation can be divided into two categories: intrinsic and extrinsic motivation. Intrinsic motivation is related to the feeling of pleasure, delight, and satisfaction resulted from increasing one’s knowledge, fulfilling a task, or encouragement of acting an action. On the other hand, extrinsic motivation refers to regulations that are external to an individual’s control. In fact, external motivation relates to enthusiasm to accomplish an activity that is controlled by an external stimulus such as winning a prize, obtaining a great achievement, or better job opportunities. MacIntyre (2007) believed that L2 learners’ motivation comes from their desire to the meeting, interact, and emotional exchanges with target culture and language users. The teacher, peers, and the course itself may arise the motivation to communicate among L2 learners. These factors foster the passion of expending effort on tasks and enjoyment of performing them to learn the language efficiently.

The fast progress of social media and communication technologies has provided golden opportunities for cross-cultural communication; recent studies found a close relationship between L2 WTC and technology-based learning (Aydin, 2014; Lee & Sylvén, 2021; Reinders & Wattana, 2015). The research demonstrated that social media have had a positive impact on affective aspects of learning (Bielak & Mystkowska-Wiertelak, 2020; Buckingham & Alpaslan, 2017). That is, a nonthreatening environment accompanied by authentic language use, led to an increase in self-confidence, improving communicative competence and motivation, decrease in anxiety and shyness levels, and consequently increase in willingness to communicate. It reported that learners felt less anxious about making mistakes and less scared of evaluation in online communication comparing to a face-to-face mode (Bashori et al., 2020; Reinders & Wattana, 2015).

Knowing about the effects of using social media on L2 WTC gained achievements and further necessary attempts seem to be essential for educators and researchers in this context. Therefore, reviewing previous studies would be worthwhile to realize the advantages and disadvantages of social media-assisted language learning (SMALL) and provide a wider scope for exploring the impacts of social media on the emotional aspects of language learning. This perspective may help researchers to investigate unknown aspects of this area and lead them to step in the right direction. Thus, the present study aimed to review the particular studies that have examined the effects of using social media on the learners’ L2 WTC both inside and outside of classrooms.

2 Review of literature

To date, several review studies on social media-assisted language learning were carried out. Many researchers have explored models and theories for using social media in second/foreign language learning. Al-Qaysi et al. (2020) summarized these specific studies that have examined the theoretical framework and the models in acceptance and adoption of the use of Social Network Sites (SNSs) in education. They reported that the most relevant theories applied in social media-assisted learning were social constructivism, and the Uses and Gratifications (U&G). In terms of the best-fitted models, they found out that the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT) were the most relevant models affordable in using social media in education. However, they only examined the subject from the theoretical point of view, their attempt provided a better understanding of models and theories for further studies.

In her exhaustive review, Stewart (2015) analyzed the use of social media in education and its features, advantages in facilitating and improving the learning process, and probable disadvantages and limitations. She asserted that social media in classrooms can be hired as a comprehensive, ubiquitous, interactive, effective, and flexible tool that much more audience can benefit from them. She referred to the need for specified knowledge for applying them in classrooms and many teachers lack this knowledge. Moreover, the students should learn that using social media in academic contexts is completely different from regular use outside the classroom. Stewart's study explored many opportunities offered by social media; however, no attention was paid to emotional aspects of pedagogy and their effect on learners' anxiety, self-confidence, and motivation, and other key factors that influence willingness to communicate still remained under-researched.

With a similar approach, Chugh and Ruhi (2017) examined for and against of employing social media (Facebook) as an educational tool in higher education. The results showed that applying social media specifically Facebook improved the interaction between teachers and students and among students themselves. It also promoted students' performance and increased their engagement in the learning process. The results also revealed that a lack of awareness of the various functions and options provided by Facebook was obvious and teachers should try to raise the learners' awareness on this platform. Furthermore, they noted that the choice of social media platforms should be student-centered to improve and expedite the learning process. Additionally, the platform should be adopted in such a way that it makes teaching and learning activities simpler and more desirable.

In another review study, Xue and Churchill (2019) reviewed the affordances and development of one of the well-known mobile social media in China "WeChat" and its effects on education. They asserted that this App afforded many benefits to teachers and learners by providing authentic material, which was produced with native speakers and facilitated collaborative learning and connectivity between teachers and students and among students themselves. It also gave teachers the opportunity of assessing and providing instant feedback. Unlike other previous review papers, they referred to emotional and affective aspects of using SNSs and reported that the learners' interest, motivation, self-confidence,

and involvement in learning activities improved through utilizing social networks in classrooms.

In a systematic review, Otchie and Pedaste (2020) explored 10 studies conducted on using social media in learning in high school context throughout 5 years. They reported that using social media in high schools can fulfill many purposes. In addition to teaching and learning tools, they can be employed as facilitators for interaction, collaboration, and communication among learners; entertainment, socialization, and diffusion of information; and sharing sources. The findings revealed that educational use of social media had a strong positive effect on social skills, however, evidence was not very strong. The researchers also found that reviewed studies did not utilize appropriate test instruments to measure and show the effects of social media on learning outcomes compared with other tools.

In a newly-published review paper, Barrot (2021) reviewed the literature on social media as a language learning environment throughout 12 years. She declared that the publication trend in this field has developed gradually and continues to expand. The reviewed studies generally reported positive impacts of social media on the teaching and learning environment. Most of the users were adolescent and young adult. Asian countries shared the most number of publications in this field and Facebook was the most popular platform used by language teachers and learners. In terms of research methodology, the majority of studies adopted the qualitative method, however, there was an increasing trend in applying quantitative designs (e.g., experimental designs). She also stated that language learning scholars paid most attention to four social network platforms: Facebook, Skype, WhatsApp, and Tweeter. These results are attributed to the number of active users, the geographical scope, and the communication affordances provided by these platforms.

By now many review studies have been carried out on the pros and cons of using social media for educational purposes in classrooms but rarely have they focused on emotional and affectional aspects of learning. Considering all the above-mentioned review studies, we noticed that no attempt has been done to review the studies which examine emotional aspects of social media-assisted language learning (SMALL) that are resulted in increasing willingness to communicate (WTC) by focusing on reducing anxiety and shyness, enhancing self-confidence and motivation, and promoting collaborative learning. This review is addressing the research questions below:

1. What methodologies did the researchers utilize in reviewed articles?
2. What were the contexts in which the studies were conducted?
3. What cohorts did the researchers study in reviewed articles?
4. What predictors of willingness to communicate modified by social media emerged from the review of existing empirical studies and the literature?

3 Methodology

Preferred Reporting Items for Systematic Review and Meta-Analysis (PRISMA) was employed in this systematic review study. Moher et al. (2015) stated that PRISMA is a set of items aimed to aid authors to arrange a broad collection of

systematic reviews and meta-analyses and report them appropriately. Accordingly, to search for reviewed articles, the researchers went through databases such as Education Resources Information Center (ERIC), EBSCO Discovery Service, JSTOR, and Web of Science. These databases were selected because they are most often searched in applied linguistics specifically in second language acquisition (SLA). The keywords such as social media, social media-assisted language learning, Willingness to Communicate, anxiety, self-confidence, motivation, affective factors, collaboration, engagement, and communication were used separately or in combination as search terms of the study. These terms were chosen because they have often been applied in literature in connection to social media assisted language learning and WTC. Noticing the findings of previous studies, we realized that social media as a language learning environment have generally been developed over the last decade (Barrot, 2021). Therefore, the date of publications was set on “since 2011”. Book reviews and book chapters, conference papers, and commentaries were excluded from target searched scholarships.

At the initial stage, 633 articles were gathered and their title, abstract, and keywords were examined to clarify their relativity to review the questions of this study. In the second stage, they were read in-depth and thoroughly and some touchstones were applied for exclusion and inclusion of the articles. A number of the criteria are mentioned below:

- One specific platform of well-known and comprehensive social media (e.g., blogs, virtual communities, and social network sites such as Instagram, Facebook, Twitter, YouTube, Telegram, Skype...) should have been applied as a tool of the training intervention or surveying attitudes.
- The study should exactly have examined the effects of social media-assisted education on the learners’ affectional factors, which modify WTC and it did not matter if any other aspects of its effects have been explored in the study as well.
- The study should have been conducted in formal educational settings such as labs, schools, universities, colleges, or institutes.
- The study should have been conducted from 2011 to 2021.

Of all those 633 initial articles, 58 were identified as the most relevant ones and prepared for the third stage. In the third stage, the papers were examined in terms of their quality. It means all the probable factors that may affect quality were scrutinized. Factors such as quality of abstract, providing sufficient background information, articulating related theories and models, and finally, the research question(s) of the studies were examined carefully. In this stage, after strict screening 35 articles were excluded and 23 articles were identified as well-matched and eligible ones with the research criteria. In the fourth stage, 23 remained articles were read thoroughly and their features were summarized and inserted in a table with a mapping method (Macaro, 2020). In short, characteristics that were considered in mapping the articles were: title, date of publication, the language of publication, the country in which research was conducted, the age of learners, the educational setting (lab, school, university, office...), the

language being studied, methodology (qualitative, quantitative, or mixed methods), sample size, the name of authors and journals, and applied social media. Table 2 in Appendix summarizes the results of the mapping phase.

4 Coding Data and Analysis

At this stage, to analyze gathered data, a content analysis using an open coding approach (Creswell & Creswell, 2018) was taken. The positive impact of employing SMALL on L2 WTC identified in literature was pointed as a framework for data analysis and the researchers individually and independently coded the data. The similar emerged codes were categorized, refined, and revised carefully. Then, initial themes were extracted and developed from these categories. The researchers enhanced the codes based on the emerging data from the findings of reviewed papers and allowed the codes to emerge during the data analysis. Therefore, the emerged codes were the products of scrutinizing and interacting with collected data; no predetermined codes were used and the results emerged from real data, inductively. To reinforce the validity of the results, the report of findings was written by both researchers. After that, they went through the coded sections that did not completely agree on. The process was continued until a 100% agreement was achieved and they assented to three final themes (Ary et al., 2019).

5 Results

In this section, firstly a brief overview of the results is presented and then three emerged themes from collected data are reported in detail. Moreover, a few significant and interesting studies are analyzed in depth. Since collecting data for this study ended in April 2021, simply articles published before this date could be examined.

5.1 Methodological characteristics of the reviewed studies

Totally, 23 published studies from 2011 to 2021 April on the effects of social media in the amount of language learners' willingness to communicate were identified as the most relevant papers from the literature. The results showed that the majority of studies were conducted in Asia ($N=22$), and only one in Europe. Most of the studies ($N=19$) were held in universities and other ones at middle schools and high schools ($N=4$). All the studies were conducted in a formal context and in all of them, English was the target language (except one in which L2 was Dutch). From a methodology point of view, researchers selected quantitative, qualitative, and mixed methods to collect data. All the quantitative studies comprised either survey ($N=9$) or quasi-experimental design ($N=2$). On the other hand, qualitative research ($N=5$) applied interviews, personal documents, and observation for their research methods. Researchers of the studies with a mixed-methods approach ($N=7$) generally used surveys and semi-structured

interviews to collect data. As can be concluded from data, most of the studies have been conducted with a quantitative approach specifically surveys. Figure 1 shows some noticeable characteristics of reviewed papers. Social media platforms that were applied as education mediators/assistants in the studies were Facebook (13), Tweeter (3), WhatsApp (2), Instagram (2), Line (2), Skype (2), some sorts of Informal Digital Learning of English (IDLE) (2), WeChat (1), YouTube (1), KaKao Talk (1), Snapchat (1), Telegram (1), Wiki (1), and Edmodo (1) as well as three kinds of different educational websites. As the final features, the age of participants ranged between 12 and 39 years old, their gender was both male and female, and the sample size was very small to large (between 14 and 1265). It is noteworthy to mention that increase in the number of studies that were conducted in recent years (especially from 2016 onwards) indicates that researchers' attention and interest in exploring the effects of social media-assisted education on WTC are increasing.

5.2 The effects of using social media on L2 WTC

After discussing disparities, revising, and finalizing the results, the researchers reached total agreement and consent on three categories. The main categories that were emerged from analyzed data were: self-confidence, motivation, and anxiety. A summary of key findings and the reviewed papers that comprise evidence for these findings can be observed in Table 1.

5.3 SMALL and L2 learners' self-confidence

Personality attributes via variables such as self-confidence, learners' attitudes, and L2 anxiety affect L2 WTC directly (MacIntyre & Legatt, 2010). Self-confidence was the most frequent variable ($N=15$) that was reported to increase WTC in

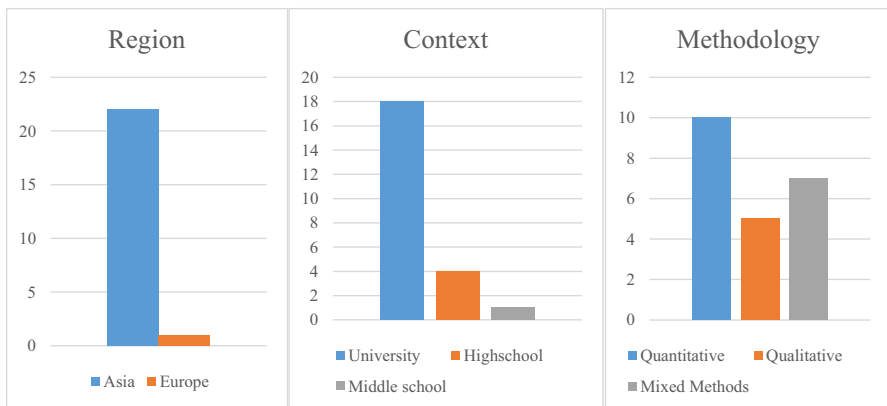


Fig. 1 Summarized data of reviewed papers main characteristics

Table 1 Main categories emerged from analyzed data

Modified variables of WTC in social media-assisted language learning (SMALL)	Key findings	Studies containing evidence for key findings
self-confidence	<ol style="list-style-type: none"> 1. Social media form a more relaxed and stress-free language learning environment that makes the learners become more self-confident language users 2. Communicative self-confidence is the strongest predictor of L2 WTC and can be improved by utilizing social media 3. Higher level of self-confidence may cause more L2 WTC both inside and outside of classrooms 	<p>Bashori et al., 2020; Basöz, 2016; Fadilah, 2018; Chotipaktanasook & Reinders, 2016; Gallagher, 2018; Jauregi et al., 2012; Lee, 2019; Lee & Drajati, 2019; Lee & Dressman, 2017; Lee & Hsieh, 2019; Lee & Lee, 2019; Lee & Lu, 2021; Mohammad et al., 2019; Oh et al., 2020; Sharma, 2019</p>
Motivation	<ol style="list-style-type: none"> 1. Social media have a positive effect on the learners' intrinsic and extrinsic motivation. They assist learners to work on their weak points both individually and in a group 2. Social media are perceived as effective and innovative tools in a student-centered learning environment. They enrich learners' educational experiences, encourage them to collaborate effectively with their peers and teachers. They also allow the educator to provide innovative ways of motivating and involving students in the learning process 	<p>Deng & Tavares, 2013; Fadilah, 2018; Gallagher, 2018; Jauregi et al., 2012; Kartal & Balçikani, 2018; Lamb & Arisandy, 2020; Lee & Drajati, 2019; Lee & Hsieh, 2019; Lee & Lee, 2019; Lee & Lu, 2021; Oh et al., 2020; Ratneswary & Rasiyah, 2014; Sharma, 2019; Le et al., 2018</p>
Anxiety	<ol style="list-style-type: none"> 1. Using social media has a positive effect on the reported WTC and communication anxiety 2. Lack of L2 anxiety is a significant predictor of students' L2 WTC in both in- and out-of-class contexts 3. Digital environments may provide social support and additional psychological benefits, which potentially contribute to creating less L2 anxiety-provoking environments 4. Some students may feel more comfortable with communicating in the social network sites (SNSs) than conventional face-to-face methods, whether they use L1 or L2 5. Allowing students to control their social presence in online communication can encourage shy students and promote their WTC 6. Text and audio chat are less face-threatening than video chat; therefore, students are more willing to speak in conditions of lower social presence 7. Students feel less anxious when speaking in front of their virtual interlocutors compared to speaking to peers or teachers 	<p>Bashori et al., 2020; Buckingham & Alpaslan, 2017; Gallagher, 2018; Kartal & Balçikani, 2018; Lee, 2019; Lee & Drajati, 2019; Lee & Hsieh, 2019; Lee & Lee, 2019; Lee et al., 2021; Sharma, 2019; Le et al., 2018</p>

social media-assisted language learning context in the reviewed papers. To give an instance, Basöz (2016) surveyed this issue in Turkey. The results showed that L2 learners believe that social media helped them to become more confident language users and enabled them to enhance their study skills simultaneously. However, she discussed the results based on descriptive data and the results have provided no clue about the probable factors that helped the learners to enhance their self-confidence. An interview would have revealed more details and presented more information about the topic and assist the readers to learn how social media might help learners to be more confident learners and consequently more willing to communicate.

In line with this study, Lee (2019) through qualitative research found that individual variables such as L2 self-confidence and anxiety could be known as major factors that influence participants' L2 WTC. He conducted a semi-structured interview and interviewed 98 students in Korea. Participants stated that they had turned to passive learners during their traditional language learning period. They also believed that English learning in Korea was generally test-driven and there was no opportunity to initiate a conversation in class and it had diminished their communicative skills and WTC. On the other hand, the participants who had experienced making friends via digital context and communicating through social media claimed that their frequent communication with their foreign friends on Facebook or other similar platforms assisted them to increase their L2 self-confidence. Some of them who were engaged with a lot of foreign friends through engaging with them via digital games and virtual communities emphasized that they were not afraid of making mistakes when they talked to native persons. The reason may be their familiarity and proximity with intimate foreign friends that may decrease the fear of losing face. They evaluate their experiences of studying and using L2 in social media as positive and enjoyable. They affirmed that they would encourage other learners to use social media to be more confident in language learning.

Comparing the amount of learners' WTC in three different contexts (i.e. in-class, out of class, and in a digital context), Lee and Lee (2019) conducted a survey in Korea and found that first, a lack of L2 speaking anxiety, as well as L2 grit and motivation, were key factors of students' L2 WTC inside the classroom. Second, the learners' risk-taking and self-confidence amount, and their major were reckoned as important agents of their L2 WTC outside the classroom. Finally, the learners' self-confidence, their age, and virtual intercultural experience were considered as important factors of L2 WTC in social media and the virtual world.

According to the results of the study, two crucial causes that affect the learners' WTC efficaciously are demographic and affective (i.e. self-confidence and risk-taking) variables and involvement in virtual intercultural activities. The researchers also mentioned that younger learners had a higher level of self-confidence and a tendency to engage in digital communication activities. They felt more comfortable about initiating communication in social media contexts maybe because they grew up in these environments and the social network sites have become an integral section of their daily lives. Based on this finding, it can be concluded that further research focusing on the effects of factors such as learners' age, gender, and culture may reveal more evidence of the advantages of using social media to develop L2

WTC in specific users (e.g., male or female adolescents, teenagers, and young adults with different cultures).

In a similar study, Lee and Hsieh (2019) examined four affective variables: grit, motivation, L2 anxiety, and L2 self-confidence in three different contexts: in class, out of class, and the digital context in Taiwanese learners. The results were approximately the same as Lee and Lee's (2019). They declared that variables such as learners' grit and self-confidence are the most significant predictors of their willingness to initiate communicating in English in the digital context, in-class, and out-of-class settings. Moreover, lack of L2 anxiety was announced to be the key factor of learners' L2 WTC. Similar to Lee and Lee's (2019) study, young learners using both L1 and L2, were more confident and comfortable in the digital setting rather than in other contexts. Moreover, the researchers asserted that digital context could provide psychological and social support for learners and decrease their L2 anxiety and consequently increase their self-confidence and L2 WTC.

All in all, the results of most studies (approximately 65%) that focused on willingness to communicate in social media context affirmed its effectiveness and efficiency in promoting learners' self-confidence. This factor was referred to in other studies such as Lamb and Arisandy (2020), Lee and Drajadi (2019), and Lee (2019), too. However, some further case study research or ethnography with observing and interviewing L2 learners deeply and closely may help other researchers and instructors to realize how and to what extent social media affect this particular variable that influences WTC seriously.

5.4 SMALL and L2 learners' motivation

In the pyramid model of WTC proposed by MacIntyre et al. (1998) (see Fig. 2), the fourth layer represents motivational propensities and it is divided into three main sections: interpersonal motivation, intergroup motivation, and self-confidence. They believed that through the process of learning L2, there is always a conflict between the passion for learning a new language and fear of probable challenges and failure. Sometimes this desire pushes the learner towards making communication but anxiety or fear of making mistakes hamper them. In this sense changing their attitudes towards the course, the teacher's personality, and providing proper feedback by the teacher would be critical motivators for enjoying the task and keeping the learners' grit that in turn results in successful communication and enhancing their WTC.

As a case in point of the studies that investigated the impacts of SMALL on motivation, Fadilah (2018) in his extensive study claimed that since social media encourages students to collaborate and arrange their own learning style, their motivation, confidence, and perception are improved. Factors such as inspiring learners to socialize with their friends and lecturers and joining academic groups were supposed to be significant agents in this regard.

As another illustration, Oh et al. (2020) through action research used eleven indicators (confidence, high performance, autonomy, independence, sympathy, enjoyment, eagerness to learn, self-efficacy, sense of achievement, belonging to the group, and engagement in communicative activities) to measure motivation

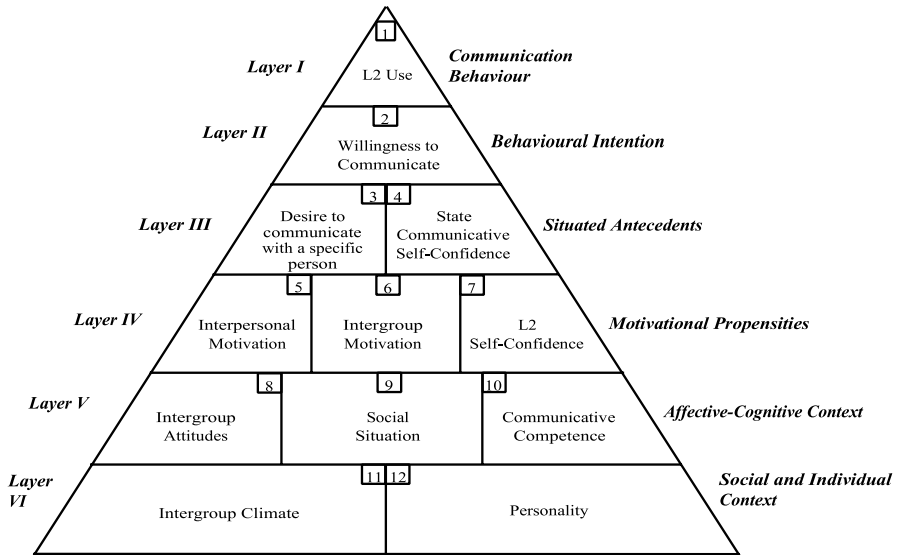


Fig. 2 The Pyramid Model of Willingness to Communicate proposed by MacIntyre et al. (1998)

in social media-assisted in a project-based learning class. The findings indicated that integrating social media into language learning may aid to overcome communication obstacles between the learner and their peers, teachers, and the public. Social media also helped them to make a safe connection with the most relevant communities and receive instant feedback from their groupmates. Social media fostered the sense of belonging and being accepted by other members of the group, which could promote their motivation; however, their age and culture may affect this sense of relatedness intensely. Since the learners assume this environment to be familiar and sincere, they felt more secure in stating their viewpoints and ideas.

Jauregi et al. (2012) addressed the effect of cross-cultural interaction supported by video-web communication (VC) between students and native preservice language teachers on the learners' motivation with two levels of language proficiency: beginners and intermediate. The result showed that there is a relationship between interaction via social media and learners' motivation to communicate. The participants generally had a positive attitude towards online communication with native speakers. They believed that initiating and maintaining informal contact and seeing the gestures and facial expressions of their speech partners can facilitate meaningful communication. The learners also reported that the increase in motivation can be attributed to some motivational strategies taken by their native interlocutors. For example, by establishing good relationships and empathizing with them, utilizing gestures and informal chat to reinforcing rapport, respecting their attempt and complimenting them on trying to communicate, and providing motivational feedback in order to increase their enjoyment and achievement of the interaction experience. They described the

atmosphere of the social network to be supportive, pleasant, and amusing with a lot of jokes and laughter. They received positive and corrective feedback from their peers and it could motivate them to be more willing to communicate. Some of them made friends and stayed in touch through Skype and e-mail and even met each other in person.

Among all the reviewed studies, 14 (approximately 60%) reported positive impacts of social media on language learners' motivation to communicate (see Lee & Drajati, 2019, Lee & Lu, 2021, and Ratneswary & Rasiah, 2014). These researchers believed that learning and using a new language require a long-term confronting effort, challenges, pains, and difficulties. Utilizing social media as teaching aids may help learners to keep perseverance and motivation through presenting a pleasant environment, entertainment, enjoyment, positive emotion, feeling proud by fulfilling tasks, and mastering new skills (Chik, 2019).

5.5 SMALL and L2 learners' anxiety

The results of the present study show that after self-confidence and motivation, L2 anxiety was the third determinant item that reviewed research ($N=11$, approximately 47%) referred to as one of the factors that could be modified by the aid of using social media. In-class anxiety may be caused by fear of losing face, that is the learners think they would lose their dignity by making mistakes. Therefore, they prefer not to initiate any communication even if they are willing or ready to communicate. Social media could decrease the level of this fear by enabling learners with virtual communication where they are not forced to establish face-to-face communication with their teachers or classmates. They can learn and practice a lot of communication skills without any fear of losing their face (Bashori et al., 2020).

Among the studies that were reviewed by the researchers of this paper, Lee's (2019) study was a noticeable one in terms of its particular attention paid to L2 learners' anxiety. He examined Korean EFL students' high level of anxiety in the classroom through face-to-face communication comparing with their anxiety using social media. Surprisingly, the participants reported some degree of nervousness through using social media and interacting with their interlocutors specifically Korean ones. They thought they would lose their face if they made any writing mistake in front of their "Korean" peers. However, they felt more comfortable communicating with their foreign pen pals. It shows that many participants only worry about their faces when communicating with their same-language friends rather than foreigners. Therefore, this can be considered as an advantage of using social network sites that encourage learners to communicate more; since they do not know peers, they are not concerned about their face.

Bashori et al. (2020) explored the effects of web-based speaking instruction on Foreign Language Speaking Anxiety (FLSA) of Indonesian language learners. The results revealed very interesting facts about this issue. First, students who evaluated their language competence lower than others or those who use L2 rarely reported a higher level of anxiety. Second, through interviews, the participant asserted that they were more relaxed and comfortable with web-based training because they believed

that computers do not laugh at their mistakes or bully them and it could make them feel less nervous or anxious. Third, teachers had positive attitudes towards web-based language learning. They stated that face-to-face communication requires learners' interaction with peers or teachers and it may be face-threatening while social media and various kinds of distance communication sites make the student more confident and less anxious. Moreover, they believed that students feel less anxious when speaking is not the central learning activity in the classroom context. In sum, this study proved that social media could help learners in two different ways; it could increase the time of using the language outside the classroom, as well as improve the learners' communication competence that both of these outcomes may result in a higher level of WTC. Nearly half of all the reviewed studies reported that social media could reduce speaking anxiety among language learners. Of all the research that referred to this fact except for the above-mentioned ones, some studies namely Kartal and Balcikanli (2018), Lee et al. (2021), and Lee and Drajeti, (2019) can be named as remarkable attempts to explore the impacts of social media on L2 using anxiety.

6 Discussion

The purpose of this study was to improve researchers' understanding and awareness of the role of social media (SNSs, blogs, virtual communities, online interactive group games, chatrooms, etc.) to increase L2 learners' willingness to communicate. The researchers of this study endeavored to examine the latest original and cogent studies from top-tier journals to pave the way for researchers who are interested in digging into this new and compelling research area. In this study, research papers related to the effects of social media-assisted instruction on L2 WTC published in past ten years were reviewed thoroughly. Some significant studies were narrated in detail and their results and noticeable findings were reported elaborately. After downloading and analyzing more than 600 newly published articles, and summarizing and winnowing their noticeable findings, the authors detected some responses to the research questions.

The first research question deals with the method approaches that were used in articles. The most prevalent data collection methods were surveys and interviews. That is not surprising because WTC is a psychological construct and is generally measured by questionnaires and different types of interviews (structured, semi-structured, and unstructured) that allow the participants to assert their viewpoints and experiences freely. These kinds of research design aid the researchers with collecting attitudinal and personal data (such as WTC) to investigate the abstract concepts that are not directly observable (Creswell & Creswell, 2018).

Advancing the second research question that addressed the contexts in which reviewed studies were conducted, the results showed that most of the studies were done in a formal context in Asia. It seems that there are some cultural or social values in some Asian countries that prevent the student from effective communication with their peers or teachers and they do not feel comfortable initiating and

continuing a discussion in their classrooms (Brown & Lee, 2015; Lee, 2019). They think they should talk when they are perfect and should not argue with their teachers when they do not agree with them. Probably, in these countries, unwillingness to communicate is considered a crucial problem that needs to be solved. Hence, the researchers have focused on some effective tools such as social media and investigated their efficiency to enhance the learners' WTC.

Regarding the third research question, it was found that the users of SNSs were both male and female and their age range was between 12 to 39 years old. Accordingly, they can be categorized as adolescent and young adult learners. It demonstrates the pervasiveness and effectiveness of using social networks specifically among young learners. Plus, the utilizers were generally university students. It reveals the fact that the tendency of applying SMALL has been increased in the higher education context perhaps due to the users' age, the competence of working with these apps, their time management skills, having control over learning activities, and being aware of wasting time on surfing other useless websites or time-consuming games. In these contexts, students are usually supposed to use their cellphones for educational purposes. They commonly assign more time for using social media and are focused on the activities that they are asked for.

The fourth research question addressed predictors of willingness to communicate modified by social media emerged from the review of existing empirical studies and the literature. Most of the studies introduced three major factors as predictors of WTC in social media-assisted instruction: self-confidence, motivation, and anxiety. Furthermore, almost all the research reported positive impact and participants' positive attitudes towards social media assisted language learning. These advantages may be attributed to providing opportunities of stating ideas freely, no force to face-to-face interaction, presence of an unknown audience, and no compulsion to communicate when the learner is not ready or willing to speak (Deng & Tavares, 2013; Wu & Marek, 2019). It is noteworthy that previous review articles have not examined the effects of SMALL on different variables of L2 WTC, therefore no comparison or contrast can be done with the findings of exist literature.

In many cases, the reason for L2 speaking anxiety was attributed to low speaking competence. Students experienced a higher level of anxiety when they were forced to speak (Bashori et al., 2020) but in other situations like writing, listening, or reading, they showed no clue of nervousness. Moreover, many reviewed studies proved that speaking deficiency (poor vocabulary, grammar, and pronunciation) and limited use of L2 led to a higher level of anxiety. Thus, improving speaking skills may result in a higher WTC. In this regard, social media are beneficial to learners' speaking skill development and they feel less anxious that is caused by a sense of weakness and fear of making mistakes (Buckingham & Alpaslan, 2017; Lee & Dressman, 2017).

Regarding the results of previous studies, in this stage, some useful suggestions are presented to instructors and researchers. First, most reviewed research here was conducted with a quantitative approach. The researchers intended to

inspect participants' attitudes towards the affectional impacts of applying social media. They simply concluded that "social media helped learners"; perhaps, qualitative data collected from observation, learners' and teachers' personal journals, or unstructured interviews reveal more facts and shed more light on unknown aspects of this area, and show us "how" they help. Second, the previous studies explored the affectional affordances of social media throughout a short period of time. Maybe conducting longitudinal and ethnographic studies would be more illuminating and informative for grasping the dynamic, nonlinear, and complex nature of SMALL. Third, noticing MacIntyre et al.'s (1998) Pyramid Model of WTC shows that three other important predictors of WTC are intergroup climate and attitudes as well as communication competence. Studies examined here did not refer to these predictors nor did they empirically verify whether these factors lead to improving students' WTC in SMALL context. Hence, future studies might investigate if there is any relationship between these variables and the use of social media. Additionally, none of the reviewed studies took into account differences between attitudes and performance of male or female students in the context. Therefore, upcoming research may need to consider gender differences to investigate the issue.

Some metacognitive strategies would help L2 learners who apply social media to communicate with native speakers to improve their speaking skills and receive feedback on their performance (Lee & Drajeti, 2019). For example, teachers may encourage them to build a friendly relationship with their interlocutors before communicating with them to decrease their anxiety. The teachers also can introduce some motivated and successful L2 learners who were gritty and confident and took the risk to initiate communication with their teacher and other learners and their grit, motivation, and risk-taking resulted in their success (Lee & Hsieh, 2019). Teachers are also advised to select subjects that L2 learners are interested in, have background knowledge about, or experience it before; otherwise, the use of social media would be fruitless or even a stressor itself (Lee & Hsieh, 2019).

The findings exhibited that the advantages of SMALL on L2 WTC outstrip its disadvantages. In an EFL context where the opportunities of initiating and continuing effective communication with native speakers rarely are accessible, social media would be propitious and promising and can improve both the perception and production skills of learners (Lee & Dressman, 2017). Findings also revealed that the increase in WTC by the aid of social media is not due to short-term effects of using multi-media and it has long-term effects on learners' WTC, too (Chotipaktanasook & Reinders, 2016). Furthermore, it may improve shy and insecure learners' self-confidence both inside and outside of classrooms and make them more active and motivated language users (Chotipaktanasook & Reinders, 2016; Sharma, 2019). Research also showed that social media generally develop learners' intrinsic motivation and sense of independent learning by strengthening communication skills unconsciously, achieving a higher level of autonomy and freedom, intensifying the connections and relatedness between them, and enhancing their interest and enjoyment (Oh et al., 2020; Palfrey & Gasser, 2011).

Social media also involve them in an active dialogue with their peers and teachers and encourage a sense of collaboration (Ulla & Perales, 2020). The sense of collaboration, in turn, develops a feeling of rivalry and stimulates extrinsic motivation. Moreover, it can help learners to establish more informal relations with their teachers and faculty members compared to the traditional classrooms (Jauregi et al., 2012).

7 Conclusion

Rapport building, participating in in-class activities and establishing effective communication with peers, groupmates, and teachers are some of the most important goals of pedagogy. In language learning context active and sociable learners are usually praised by teachers and they attempt to promote the learners' communicative competence as much as possible. Willingness to communicate in language classes emerges from the interaction of many different personal and interpersonal factors. Social media help language learners to improve L2 WTC by increasing self-confidence and motivation and decreasing anxiety.

In this study, we conducted a systematic review of the use of social media on L2 WTC. 23 eligible studies published over the last 10 years were identified from four databases. Three categories related to predictors of WTC emerged from the results: self-confidence, motivation, and anxiety. The review of studies shows that the number of publications was increasing during recent years and both language learners and teachers had positive attitudes towards the impacts of social media on WTC. The findings are particularly encouraging for Asian language teachers who may feel annoyed with some language learners' unwillingness to communicate in language classrooms. Informal communication, practicing communication virtually, and chatting with classmates and teachers in a friendly and nonthreatening atmosphere are some opportunities afforded by social media.

This research was limited in a few ways. The first was time limitation. We spent six months collecting and analyzing data. Admittedly, spending more time on this research would lead to more accurate results. Furthermore, we only reviewed published articles from 2011 to 2021. Other researchers may determine to comprise a wider range of publications such as book chapters, book reviews, and conference papers. The second limitation was the subject itself. Very few studies have been conducted in this area. We aimed to find more reliable and original studies to review but the number was very low. It is also noteworthy that the present study considered social media as its broad concept, which means all the social network sites (SNSs), weblogs, online group games, etc. were reckoned as platforms of social media. Other researchers might use a narrower viewpoint to study this topic. Further review research is needed to identify the effects of using social media on other psychological aspects of language learning; such as self-regulation, autonomous learning, metacognition, and self-esteem.

Appendix

Table 2 An overview of reviewed papers' features

Titles	Author(s) & year of publication	Country	Sample size & Age of participants	Setting	Methodology	Journal	Social media that were used
1. Willingness to communicate and communication anxiety of EFL learners in a virtual world	Kartal & Balci-kanli (2018)	Turkey	N=65 Age = Not mentioned	University	Mixed methods: introspective interviews, weekly evaluation forms, observation, and focus-group and semi-structured interviews	Journal of Educational Teaching	A virtual world site (second life tasks)
2. Affective variables and willingness to communicate of EFL learners in in-class, out-of-class, and digital contexts	Lee and Hsieh (2019)	Taiwan	N = 261 Mean age = 19.5	University	Survey	System	The participants' attitudes towards SNSs such as Facebook
3. Incorporating LINE smartphone affordances: Cross-cultural collaboration, willingness to communicate, and language learning	Wu and Marek (2019)	Japan and Taiwan	N = 41 Age = Not mentioned	University	Mixed methods: (Questionnaire, essay writing)	International Journal of Computer Assisted Language Teaching	Line

Table 2 (continued)

Titles	Author(s) & year of publication	Country	Sample size & Age of participants	Setting	Methodology	Journal	Social media that were used
4. Pre-service EFL teachers' attitudes towards language learning through social media	Basöz (2016)	Turkey	N = 120 Age = 18–35	University	Survey	Procedia—Social and Behavioral Sciences	The participants' attitudes towards SNSs (Facebook, Tweeter, Wiki etc.)
5. Willingness to Communicate in social media: An investigation of the long-term effects	Chotipaktanasook and Reinders (2016)	Taiwan	N = 40 Age = Not mentioned	University	Survey	Asian EFL Journal	Instagram
6. The relationship between willingness to communicate and social presence in an online English language course	Le et al. (2018)	Vietnam	N = 18 Mean age = 16	High school	Qualitative (interview)	Jalt call journal	Facebook and skype
7. Perception, motivation, and communicative self-confidence of Indonesian students on willingness to communicate in L2 by using Facebook	Fadilah (2018)	Indonesia	N = 156 Age = Not mentioned	University	Survey	JEELS	Facebook

Table 2 (continued)

Titles	Author(s) & year of publication	Country	Sample size & Age of participants	Setting	Methodology	Journal	Social media that were used
8. The effect of Edmodo on students' Willingness To Communicate, intrinsic motivation, and self-confidence of SMIKN 4 Kendari	Kahar et al. (2016)	Indonesia	N = 27 Age = Not mentioned	University	Mixed methods: (Questionnaire + interview)	Journal of Language Education and Educational Technology	Edmodo
9. Web-based language learning and speaking anxiety	Bashori et al. (2020)	Indonesia	N = 573 Age = 14–18	High school	Mixed methods: (Questionnaire + interview)	Computer Assisted Language Learning	A researcher-made website
10. Saudi students' perspective on social media usage to promote EFL learning	Sharma (2019)	Saudi Arabia	N = 60 Age = Not mentioned	University	Survey	International Journal of Linguistics, Literature and Translation	Participants' attitudes towards using SNSs (YouTube, WhatsApp, Facebook, Snapchat, Twitter, Wikipedia, and Skype)
11. EFL students' views of willingness to communicate in the extramural digital context	Lee (2019)	Korea	N = 98 Age = 19–27	University	Qualitative (semi-structured interview)	Computer Assisted Language Learning	Extramural digital context (e.g., Facebook, Instagram, Tweeter)

Table 2 (continued)

Titles	Author(s) & year of publication	Country	Sample size & Age of participants	Setting	Methodology	Journal	Social media that were used
12. When IDLE hands make an English work-shop: Informal digital learning of English and language proficiency	Lee and Dressman (2017)	Korea	N = 94 Age = 19–27	University	Mixed methods: demographic survey and three assessment measurements: (1) willingness to communicate (WTC) online, (2) an English vocabulary levels test, and (3) speaking scores	TESOL Quarterly	Informal Digital Learning of English (IDLE)
13. Affective variables and informal digital learning of English: Keys to willingness to communicate in a second language	Lee and Drajati (2019)	Indonesia	N = 183 Age = 18–36	University	Survey	Australian Journal of Educational Technology	Participants' attitudes towards chatting on social media and posting on Facebook
14. Willingness to communicate in digital and non-digital EFL contexts: Scale development and psychometric testing	Lee and Drajati (2019)	Indonesia	N = 329 Age = 18–36	University	Survey	Computer Assisted Language Learning	Participants' attitudes towards using SNSs such as Facebook

Table 2 (continued)

Titles	Author(s) & year of publication	Country	Sample size & Age of participants	Setting	Methodology	Journal	Social media that were used
15. The effectiveness of using flipped classroom model on Iranian EFL learners' English achievements and their willingness to communicate	Mohammadi et al. (2019)	Iran	N = 95 Age = 16–17	High school	Quasi-experimental (pretest/posttest)	English Language Teaching	Telegram
16. Native/non-native speaker interactions through video-web communication: a clue for enhancing motivation?	Jauregi et al. (2012)	Czech, Netherland	N = 71 Age = Not mentioned	University	Quasi-experimental (pretest/posttest)	Computer Assisted Language Learning	Video-web communication (VC)
17. Affective factors, virtual intercultural experiences, and L2 willingness to communicate in in-class, out-of-class, and digital settings	Lee and Lee (2019)	Korea	N = 176 Age = 19–39	University	Survey	Language Teaching Research	Participant' attitudes towards using Facebook, Kakao-Talk, Line, WeChat, WhatsApp

Table 2 (continued)

Titles	Author(s) & year of publication	Country	Sample size & Age of participants	Setting	Methodology	Journal	Social media that were used
18. Social media and E-Portfolios: Impacting students' motivation through project-based learning	Oh et al (2020)	Hong Kong	N = 60 Age = Not mentioned	University	Qualitative (interview + personal journal)	IAFOR Journal of Education	Facebook
19. The impact of online use of English on motivation to learn	Lamb & Arisandy (2020)	Indonesia	N = 308 Age = 18–22	University	Mixed methods (survey + interview)	Computer Assisted Learning	Participants' attitudes towards "online informal learning of English" (OILE)" such as online games, Facebook and YouTube, websites...
20. From Moodle to Facebook: Exploring students' motivation and experiences in online communities	Deng and Tavares (2013)	Hong Kong	N = 14 Age = Early 20 s	University	Qualitative (interview)	Computers & Education	Moodle and Facebook
21. Transformative Higher Education Teaching and Learning: Using Social Media in a Team-Based Learning Environment	Ratneswary and Rasiyah (2014)	Malaysia	N = 122 Age = not mentioned	University	Qualitative (students' reflective journals and analyzing their posts on Facebook)	Proceedia—Social and Behavioral Sciences	Facebook

Table 2 (continued)

Titles	Author(s) & year of publication	Country	Sample size & Age of participants	Setting	Methodology	Journal	Social media that were used
22. Informal digital learning of English and L2 willingness to communicate: roles of emotions, gender, and educational stage	Lee et al (2021)	Korea	N = 1265 Age = not mentioned	High school and university	Survey	Computer Assisted Learning	IDLE
23. L2 motivational self-system and willingness to communicate in the classroom and extramural digital context	Lee and Lu (2021)	China	N = 417 Age = 12–24	Middle school	Mixed methods (survey + interviews)	Journal of Multilingual and Multicultural Development	An English communication channel

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2. Hossein Bozorgian: coding data, editing, proofreading.

Declarations

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