



Exploring the Potential of Web 2.0 Technologies for Teaching Second/Foreign Language Writing in Higher Education

Liliya Bykova¹

Julia Lanskaya²

Tatiana Perova³

Julia Remaeva⁴

Anna Voinova⁵

Journal for Educators, Teachers and Trainers, Vol. 13 (1)

<https://jett.labosfor.com/>

Date of reception: 26 Oct 2021

Date of revision: 07 Dec 2021

Date of acceptance: 10 Dec 2021

Liliya Bykova, Julia Lanskaya, Tatiana Perova, Julia Remaeva, Anna Voinova (2021). Exploring the Potential of Web 2.0 Technologies for Teaching Second/Foreign Language Writing in Higher Education *Journal for Educators, Teachers and Trainers*, Vol. 13(1). 276 – 287.

¹Senior Lecturer at the Department of Theory and Practice of Foreign Languages and Linguodidactics, Minin Nizhny Novgorod State Pedagogical University, Nizhny Novgorod, Russia.

²PhD in Philology, Associate Professor at the Department of Foreign Language Professional Communication, Minin Nizhny Novgorod State Pedagogical University, Nizhny Novgorod, Russia

³Senior Lecturer at the Department of Theory and Practice of Foreign Languages and Linguodidactics, Minin Nizhny Novgorod State Pedagogical University, Nizhny Novgorod, Russia

⁴PhD in Philology, Associate Professor at the Department of Foreign Languages and Linguo-Culturology, Institute of International Relations and World History, Lobachevsky State University, Nizhny Novgorod, Russia

⁵PhD in Pedagogy, Associate Professor at the Department of Theory and Practice of Foreign Languages and Linguodidactics, Minin Nizhny Novgorod State Pedagogical University, Nizhny Novgorod, Russia



Exploring the Potential of Web 2.0 Technologies for Teaching Second/Foreign Language Writing in Higher Education

Liliya Bykova¹, Julia Lanskaya², Tatiana Perova³, Julia Remaeva⁴, Anna Voinova⁵

¹Senior Lecturer at the Department of Theory and Practice of Foreign Languages and Linguodidactics, Minin Nizhny Novgorod State Pedagogical University, Nizhny Novgorod, Russia.

²PhD in Philology, Associate Professor at the Department of Foreign Language Professional Communication, Minin Nizhny Novgorod State Pedagogical University, Nizhny Novgorod, Russia

³Senior Lecturer at the Department of Theory and Practice of Foreign Languages and Linguodidactics, Minin Nizhny Novgorod State Pedagogical University, Nizhny Novgorod, Russia

⁴PhD in Philology, Associate Professor at the Department of Foreign Languages and Linguo-Culturology, Institute of International Relations and World History, Lobachevsky State University, Nizhny Novgorod, Russia

⁵PhD in Pedagogy, Associate Professor at the Department of Theory and Practice of Foreign Languages and Linguodidactics, Minin Nizhny Novgorod State Pedagogical University, Nizhny Novgorod, Russia

Email: marsl@list.ru, julia-lansk@mail.ru, taperova@bk.ru, jremaeva@yandex.ru, wojnowa@mail.ru

ABSTRACT

The emergence and rapid evolution of Web 2.0 technologies have resulted in their ever-growing use in education. Their communicative, participatory and interactive features have been recognised as pedagogically useful for teaching second/foreign languages, writing in particular. This literature-based study therefore explores plentiful and continually proliferating research on the potential of Web 2.0 technologies for teaching second/foreign language writing in higher education. To examine the potential of Web 2.0 technologies for teaching second/foreign language writing and answer the research question, 73 research articles were reviewed. Their data were analysed in terms of the effect technology made on students' writing abilities, namely their linguistic and pragmatic competences. The findings generally confirm the effectiveness of Web 2.0 technologies to improve the quality of students' writing and enhance their linguistic and pragmatic competences. Drawing on Web 2.0 affordances, teachers are able to create an authentic and interactive learning environment for students to practice and improve their writing skills.

Keywords: SL/FL writing, Web 2.0 technologies, technology enhanced writing, linguistic competence, pragmatic competence

INTRODUCTION

Remaining an important language domain for students to develop, writing has changed significantly over the last decade (Hyland, 2019). The concept of writing, its traditional conventions, processes and norms have undergone certain transformations in which modern technologies, Web 2.0 tools in particular, have played a significant role. Due to technology affordances, among which are interconnectedness, immediacy and interactivity, writing is no longer a one-way message from writer to reader; it can be of a one-to-many or many-to-many mode (Solomon & Schrum, 2007). Students today are not simply writers, they are readers, editors, collaborators and publishers (Chun, Smith, & Kern, 2016; Kessler & Bikowski, 2010).

Web 2.0 technologies and their potential to stimulate writing by creating an authentic writing environment where users can generate ideas and, individually or collaboratively create content and share it with a responsive audience appeal to teachers and students alike (Warschauer, 2010). For teachers, this means that they can vary instructional design for writing activities, 'set high standards and require high quality work, monitor performance at any time' stressing its excellence rather than completion (Solomon & Schrum, 2007, p.49). For students who are already active users of technology in their personal and social lives, Web 2.0 tools move learning outside the traditional classroom and provide an opportunity to bridge formal and informal education, thereby enhancing the authenticity and flexibility of learning (Solomon & Schrum, 2007). Thus, multiple opportunities to develop students' writing skills that Web 2.0 technologies offer have encouraged SL/FL teachers to utilise these tools in writing instruction.

LITERATURE REVIEW

Research into the impact of Web 2.0 technologies on students' writing skills has yielded differing results. Many studies report that students' writing benefits from using Web 2.0 technologies. Learners are able to produce high-quality written documents when employing Web 2.0 tools such as wikis and Google Docs, which allow them to join their efforts in task negotiation and text construction (Kessler, 2009; Li, 2013; Suwantarathip & Wichadee, 2014). As a result, the written texts have clear and coherent structures, grammatical accuracy and lexical richness. It has also been noted that students feel more confident and thus more motivated to write with Web 2.0 tools, especially those with a low level of language proficiency because they enjoy more time to think and compose their tasks (Kost, 2014). Due to the communicative features of Web 2.0 technologies, writing has become more engaging compared to traditional writing tasks, which were often performed in isolation and lacked communication opportunities (Yunus, Salehi, & Chenzi, 2012). There is a consensus that peer-to-peer learning and knowledge sharing in a web-based writing environment scaffolds students' work and leads to better learning outcomes (Razak, Saeed, & Ahmad, 2013; Kitchakarn, 2012).

Along with the benefits the implementation of Web 2.0 technologies provides, there are a number of disadvantages. Some studies have pointed out that despite the communicative features integral to Web 2.0 tools, the level of students' interaction did not increase *per se*, which affects the quality of writing (Allwardt, 2011; Brodahl, Hadjerrouit, & Hansen, 2011; Li, 2013). For some students, web-based writing was not a motivating activity as they were embarrassed and hence reluctant to upload samples of their writing for peer assessment (Bikowski & Vithanage, 2016; Domalewska, 2014). This hindered them from becoming more reflective and critical about their own writing. Some students experienced difficulties while dealing with the technology itself, which increased their task anxiety and decreased motivation (Brodahl et al., 2011; Wang, 2014). The use of an online environment distracted some students from their work; they were less concentrated on their writing and became more careless with it (Dizon, 2016; Yunus et al., 2012). Additionally, being involved in instantaneous communication while using social media to perform writing assignments some students pay less attention to spelling, overuse acronyms and/or often skip the revision process (Collier, Foley, Moguel, & Barnard, 2013). Some researchers have argued that in a web-based environment students are exposed to writing of different quality, and hence they might assume that everything may be published (Collier et al., 2013; Vie, 2008). This lack of critical awareness might lead to their own uncritical approach to creating a piece of writing.

From this brief overview of the research literature it is evident that alongside the multiple opportunities to develop students' writing skills that Web 2.0 technologies offer, there are also potential pitfalls which need to be considered. Therefore, teachers and students should learn how to effectively use these technologies to achieve their professional and academic goals. Yet, teachers' and writing instructors' knowledge of when and how to leverage technologies to foster students' writing skills is often limited (Li & Storch, 2017). While aware of the entertainment value of technologies, students often do not have teachers who are able to instruct them on how to employ these tools for educational purposes (Richardson, 2010). The lack of technology literacy many teachers experience is one of the reasons why the uptake and use of Web 2.0 technologies in teaching practice is still on a moderate scale, a fact which is not encouraging (Conole, 2010; Li & Storch, 2017; Yunus et al., 2012).

This literature-based study proposed to create a comprehensive picture of existing teaching practices. It aimed to refine and renew the pool of knowledge of the research field and in so doing make a valid contribution to SL/FL teachers' knowledge. The scope of the study was restricted to wikis, blogs, Google Docs and Facebook as they are widely used for teaching SL/FL writing and thus the most researched technologies (Reinhardt, 2019). The body of the reviewed literature covered the period between 2009 and 2019. The findings of earlier research might have been outdated as technologies are developing very rapidly and acquiring new characteristics and functions. The rapidly changing nature of technologies requires that teachers' expertise be constantly updated (Anderson, 2007; Richardson, 2010), a fact which also underlines the timeliness and import of the study. Moreover, research on the effect and effectiveness of Web 2.0 tools in teaching SL/FL writing before 2009 was at its rudimentary stage and thus thin on the ground, yet for the most part it had a promising tone (Ducate & Lomicka, 2008; Steel & Levy, 2013). Undoubtedly, it has matured since that time and new evidence has been provided. Has this optimistic tone become an unmitigated glorification of the educational value of Web 2.0 tools? Does new evidence support or refute the effectiveness of Web 2.0 technologies for writing instruction?

RESEARCH QUESTION

This study focused on the use of Web 2.0 technologies for teaching SL/FL writing in Higher Education (HE). It examined the impact of Web 2.0 technologies on SL/FL students' writing competence and aimed to answer the following research question: What is the potential of Web 2.0 technologies for developing students' writing skills?

METHODOLOGY

Research design and data collection

A qualitative approach framework was adopted for this research as due to its flexibility and creativity it allowed the researchers to create a holistic picture of the phenomenon under inquiry and gain a deeper understanding of this phenomenon in a specific context (Creswell, Hanson, & Clark, 2007).

The multistage search process designed to identify the relevant literature to answer the research question encompassed the identification of keywords, selection of search databases, development of criteria for inclusion and exclusion, and the data evaluation stage.

The process of literature search employed different strategies: free text searching, Boolean logic using adjacency, proximity and exclusion operators, reference and author searching. Citation tracking and checking the references of already retrieved articles proved to be useful for extracting articles relevant to the research topic.

To initiate a comprehensive search strategy, several concepts within the title and the research question for free text searching were identified. A thesaurus search in the ERIC database helped to identify synonyms and related terms for the concepts. As a result, the following key terms were extracted from the research title, aims and the research question, and were grouped together according to their similarities:

- L2/SL/FL writing
- Writing instruction
- Writing pedagogies
- Web 2.0 technologies/tools
- Web 2.0 environment
- Social/communicative technology

In each group, relevant concepts were identified. In the first group the following key terms were included: writing skills, web-based writing, computer-assisted/mediated writing, technology-enhanced writing. The second group encompassed blogs, wikis, Facebook and Google Docs.

A literature search was conducted using Google Scholar, ERIC, British Education Index, and Web of Science. The keyword search was undertaken as the initial step in identifying potentially relevant studies. Boolean operators AND, OR and NOT in such combinations as Web 2.0 technologies* AND writing skills*, technology-assisted writing* OR web-based writing*, NOT high school students* were used to combine the search terms and refine the search results.

The search of articles was narrowed down to those published between 2009 and 2019 to capture more recent information about the research topic. The studies were restricted to those conducted at university level. To ensure the rigour and reliability of the research, only peer-reviewed articles were included given their high status in academia. The selection of articles for inclusion was checked against the following criteria:

- articles published between 2009-2019 in established peer-refereed journals;
- empirical studies investigating the use of Web 2.0 technologies in teaching SL/FL writing;
- research performed in HE contexts.

Each selected article was then examined, and information related to the following factors was extracted: 1) the properties of Web 2.0 technologies utilised in teaching SL/FL writing and 2) the impact of Web 2.0 tools on students' writing performance. After the initial elimination step, 203 articles out of 617 remained, and they were further subjected to more exclusion steps in which 4 articles were removed as they were literature review studies, 61 articles from different databases were duplicated, and the full texts of 19 publications could not be accessed. Of the 119 articles remaining, 46 studies were irrelevant to the research topic and were thus discarded (some did not focus on the target study group, some explored Web 2.0 technologies in relation to their impact on students' motivation, and some studied students' perception of technology or patterns of interaction occurring in collaborative writing). This left a total of 73 articles to undertake the research.

RESULTS

What indicates the quality of writing?

To understand the potential of Web 2.0 technologies to enhance students' writing competence, it is necessary to clarify what is meant by improving writing skills and what factors determine quality of writing. According to Cumming (2006), 'learning to write in a second or foreign language fundamentally involves students improving 1) features of the text they write, 2) processes of composing, and 3) their interactions appropriate to literate social contexts' (p.474). Commenting on each of these aspects, Cumming (2006) goes on to state that increased fluency, awareness of different genre functions, use of appropriate vocabulary, grammar and syntax indicate how text improves. Composing processes with their basic stages of planning, revising and editing can be improved by discourse coherence and an appropriate choice of rhetorical functions regarding ideas, purposes for writing and a potential audience. Concerning interaction, it is likely to become more effective when students during the process of writing, assume different social roles and cultural identities and communicate with their peers, teachers and communities.

These factors of quality could be paralleled with the linguistic and pragmatic competences SL/FL learners need to develop to be able to produce high quality writing (Usó-Juan, Martínez-Flor & Palmer-Silveira, 2006). Linguistic competence comprises knowledge of grammar, syntax and vocabulary and the ability to accurately use them to produce meaningful texts, while pragmatic competence is knowledge of how to compose (plan, revise, edit) text appropriate to its purpose and audience including word choice, discourse markers and rhetorical devices (Usó-Juan et al., 2006).

Accordingly, to explore the impact of Web 2.0 technologies on students' writing the research effort focused on tracing the effects of technology use on linguistic and pragmatic aspects and how they are reflected in students' writing.

Technology impact on linguistic competence

Linguistic competence appears to be a commonly addressed aspect when Web 2.0 technologies are integrated into the writing classroom (Amir, Ismail, & Hussin, 2011; Kuteeva, 2011; Miftah, 2017). The results of technology implementation in the observed studies are mixed. Blogging was found to improve the quality of students' writing and linguistic competence in particular through a wide range of activities the technology affordances made them possible to accomplish (Huang, 2016; Özdemir & Aydin, 2015). Blog-assisted language learning was often combined in studies with the process writing approach, with its focus on the stages of text composing such as brainstorming, planning, drafting, editing and reviewing (Grami, 2012; Pham, & Usaha, 2016). For example, students were asked to compose a text, post it in their individual blogs, comment on each other's drafts, revise and publish a final product (Huang, 2016; Lin, 2017; Özdemir & Aydin, 2015; Zulfany, Sudarsono, & Sutapa, 2015; Vurdien, 2013). Lexical richness, grammatical accuracy and fluency improved when students discussed how to plan their writing and what vocabulary and grammatical structures should be chosen before completing the task individually in their blogs (Grami, 2012; Vurdien, 2013). The observed improvements in students' writing could be attributed to the collective scaffolding students received through interaction with each other while brainstorming ideas and planning their writing tasks. It also increased their confidence and personal involvement in writing, which in turn made their learning more productive and valuable (Fageeh, 2011; Huang, 2016; Iyer, 2013). Additionally, the novelty of the blog environment and its interactive nature were positively perceived by the students as motivating factors to be actively engaged in writing (Huang, 2016; Kitchakarn, 2012; Lin, 2017).

Another important finding from the articles is that blogs can create a favourable environment for peer learning (Amir et al., 2011; Özdemir & Aydin, 2015; Zhang, Song, Shen, & Huang, 2014). By viewing their peers' blogs, students were able to spot new words, revise previously learned vocabulary or pick up ideas on language use. Such 'blog walking' stimulated learners' critical thinking, which they further applied when revising their own texts (Chang, Pearman, & Farha, 2010; Mabuan, 2018; Zulfany et al., 2015).

Peer editing also contributed to students' learning and added to their linguistic competence. When reviewing their peers' blog entries, students identified spelling and grammar mistakes and left comments following the peer review guide provided by the teacher (Arslan & Şahin-Kizil, 2010; Chang et al., 2010; Mabuan, 2018). Peer reviewing encouraged students to become more sophisticated thinkers, readers and writers. Students later applied their peers' suggestions and teacher's feedback to improve their final product (Lee, 2010; Sulisty, Mukminatien, Cahyono, & Saukah, 2019).

Students' linguistic competence also benefited when they prepared materials for their blogs. They extensively researched and evaluated online resources simultaneously consulting online dictionaries, grammar and spell checkers (Zulfany et al., 2015). This process enabled them to acquire new vocabulary and improve sentence structures.

Alongside the benefits a blog-based environment can bring, it could also raise barriers to the active use of the target language. In several studies, students were reluctant to comment on their peers' blog entries because of anxiety about being criticised for the content of the comments or grammatical errors they might make (Domalewska, 2014; Groom, Lin & Lin, 2013; Lin, 2017). Moreover, they found commenting on their peers' work time-consuming due to their limited language skills. As such, no extensive writing practice in the target language occurred: the number of entries was low, and the comments were short. Students, especially those with a low level of language proficiency, expressed a preference for face-to-face discussion and in their native language as it could be much easier for them to express criticism and avoid the danger of being misinterpreted (Domalewska, 2014).

The results of the studies indicate that blogs, while offering opportunities for students to improve their writing abilities through a commenting tool, proved unable to promote a considerable degree of reciprocity among their participants. A possible explanation for this might be the learners' low level of language proficiency and the absence of guidance and training in how to provide and receive comments.

The most notable contribution of wikis and Google Docs to the development of students' linguistic competence is the opportunity to practice collaborative writing which the tools offer (Chen & Brown, 2012; Kessler, Bikowski, & Boggs, 2012). Collaborative writing is described as an activity involving 'a shared and negotiated

decision making process and a shared responsibility for the production of a single text' (Storch, 2013, p.3). Storch (2013) underlines that in collaborative writing roles, responsibilities and contributions are not divided between the participants involved in the process; conversely, they all mutually engage and coordinate their efforts via interaction throughout the entire writing process.

The findings from the articles generally support the effectiveness of Google Docs and wikis in achieving a higher quality of writing. The improved mastery of the target language in the studies was reflected in students' writing when they worked collaboratively using the available tools (Abrams, 2016; Alsubaie & Ashuraidah, 2017; Aydin & Yildiz, 2014; Celik & Aydin, 2016; Elola & Oskoz, 2010; Liu, & Lan, 2016; Seyyedrezaie, Ghonsooly, Shahriari, & Fatemi, 2016; Zou, Wang, & Xing, 2016). Specifically, students demonstrated a higher level of fluency, lexical and grammatical accuracy when they collaboratively produced a written text in Google Docs or wikis. Language accuracy was strengthened due to multiple editing during the development of the drafts (Elola & Oskoz, 2010; Liu & Lan, 2016). The linguistic features often corrected at the editing stage were spelling, subject-verb agreement, word order and prepositions (Abrams, 2016; Kessler, 2009). It was also noted that although students tended to make more lexical mistakes while collaborating than when working individually, they had more error corrections due to collective scaffolding and knowledge generation (Aydin & Yildiz, 2014; Liu, & Lan, 2016; Zou et al., 2016). When working individually in Google Docs, students used spell and grammar checkers, enabling them to simultaneously learn and correct mistakes (Alsubaie & Ashuraidah, 2017).

It is worth noting that although lexical sophistication, grammatical accuracy and fluency were attended in group activities using Google Docs and wikis, content creation and meaning making were the language aspects on which students focused more (Abrams, 2019; Aydin & Yildiz, 2014; Strobl, 2014; Elola & Oskoz, 2010; Kessler, 2009). In their attempt to explicitly convey meaning, students often neglected the linguistic aspect of their message (ibid.). These results confirm the idea that collaborative writing, with its major focus on interaction, reinforces the social aspect of writing and fosters negotiation of meaning (Storch, 2013). In the light of this argument, it is possible to suggest that the collaborative features of Google Docs and wikis are more conducive to developing students' pragmatic rather than linguistic competence.

The review of the literature on the use of Facebook for teaching writing yielded mixed evidence. Some findings reported the effectiveness of writing on Facebook for vocabulary enlargement and its retention in long-term memory as students could refer to new words when rereading their and/or other students' posts (Rodliyah, 2016; Shih, 2011; Al-Tamimi, Al-Khawaldeh, & Mohammad, 2018; Yunus & Salehi, 2012). Students' writing also demonstrated improvements of grammar and spelling; with more advanced students' writing serving as a model for those with a lower level of language proficiency (Shih, 2011). These results corroborate the findings of another study (Bailey, Park, & Haji, 2017) which proved that Facebook was a suitable platform for teaching students with mixed levels of language proficiency as less competent students were scaffolded by more advanced students; their writing benefited from borrowing/mirroring vocabulary, grammar structures and other text features from more accurate and sophisticated writing.

These findings accord with other research in which Facebook was utilised as a means of discussing grammar issues experienced by low-intermediate EFL students (Ahmed, 2016; Dizon & Thanyawatpokin, 2018; Suthiwartnarueput & Wasanasomsithi, 2012). Due to Facebook affordances, students were able to collaborate, negotiate, comment on and share ideas and co-construct knowledge. It was found that learning grammar through students' interaction with their peers, teacher and other Facebook users was effective; students advanced in grammar accuracy and complexity.

In contrast to the previous findings, however, no evidence of significant improvements in terms of lexical richness and grammatical accuracy was detected in Dizon's (2016) study conducted with Japanese EFL students. The absence of built-in marking tools on Facebook posed difficulty understanding the teacher's corrective feedback and hindered the revision process. However, students demonstrated higher writing fluency in the post-test. This result concurs with the findings of another study where university students learning Chinese as a foreign language used Facebook to post entries and comments (Wang & Vasquez, 2014). Wang and Vasquez's (2014) findings showed that Facebook could positively influence writing fluency: students in the experimental group produced more Chinese characters than their peers from the control group in the writing assignments they did after Facebook posting activities. A note of caution is due here since it is not clear whether the increased fluency was the result of Facebook writing or can be attributed to computer typing.

Technology impact on pragmatic competence

The reviewed literature on the potential of Web 2.0 technologies to improve students writing, namely, its pragmatic aspect, reported contradictory results. For example, blog environments open to the public encouraged students to be more critical of their own writing, strengthened their perception as authors and sharpened their sense of audience (Amir et al., 2011; Arslan & Şahin-Kizil, 2010; Lee, 2010). Considering that their posts could be read by others, students extensively reviewed and revised their blog entries (Grami, 2012; Huang, 2016; Sun, 2010; Montero-Fleta & Pérez-Sabater, 2010). Peers' and the teacher's comments also contributed to students'

understanding of themselves as writers, promoted their reflective thinking and illustrated the knowledge gap they needed to fill; they felt that their writing was meaningful (Huang, 2016; Iyer, 2013; Mabuan, 2018; Sun, 2010).

However, blog openness to a wider audience sometimes increased learners' writing anxiety and lowered their productivity; they were unwilling to post longer texts or comments and thus did not demonstrate any significant improvement in writing (Groom et al., 2013; İnceçay & Genç, 2014). This proves the importance of motivation for learning; motivated students are likely to be actively involved in learning and achieve better learning outcomes (Anwaruddin, 2013).

Blogs can expand learning beyond the traditional classroom by providing students with multiple opportunities to improve their writing skills. For example, drafts posted in blogs could be viewed and commented on by several students, something which could not be done in the traditional classroom (Arslan & Şahin-Kizil, 2010). This improved students' writing in terms of content, structure and rhetorical features. By viewing other students' blogs, learners were exposed to multiple language input, which led to the production of more coherent and structured texts (Arslan & Şahin-Kizil, 2010; Huang, 2016; Sun, 2010; Zulfany et al., 2015; Sulistyono et al., 2019).

Concerning Google Docs and wikis, the research attested to their positive impact on the development of students' writing skills. The collaborative nature of the tools has the potential to aid students' writing at different stages of the process, from brainstorming, planning, drafting, and editing through to revising. In the studies conducted by Abrams (2019), Alsubaie and Ashuraidah (2017), Bikowski and Vithanage (2016), Jeong (2016) and Strobl (2014), students practiced various genres and organisation patterns in essay writing, revised, edited and received teachers' feedback and peers' comments. Writing collaboratively in a technology-enhanced environment, students paid more attention to meaning than form; their writing demonstrated more cohesive features and was longer and richer in content as opposed to individual working, where these language issues were not so effectively resolved (Aydin & Yildiz, 2014; Bikowski & Vithanage, 2016; Elola & Oskoz, 2010; Kessler, 2009). It could be argued that these positive results were achieved due to collective planning, recursive revision and peer review phases. Writing in Google Docs and wikis promoted students' reflection on their performance; they analysed it from the reader's perspective and could see areas for improvement (Alshumaimeri, 2011; Chen & Brown, 2012; Montero-Fleta & Pérez-Sabater, 2011). Moreover, giving students the liberty to govern their learning, the technologies also preserved their autonomy, making the process more student-centred (Jeong, 2016; Wang, 2015).

The research on the potential of Facebook to improve the pragmatic aspect of students' writing yielded the most dissimilar results compared to those of the other Web 2.0 technologies discussed earlier in this section. On the one hand, due to its social and interactive nature, Facebook enables its users to construct knowledge by learning together and from each other, and thus could be regarded as an appropriate tool for learning and writing practice (Ahmed, 2016; Miftah, 2017; Wang & Kim, 2014; Wichadee, 2013). It was found that discussions on Facebook offered students adequate language practice and were acknowledged to be particularly effective for pre-writing processes such as brainstorming and planning (Ahmed, 2016; Al-Tamimi et al., 2018; Bailey et al., 2017; Yunus & Salehi, 2012). Photos, multimedia and links to useful resources that students shared functioned as stimuli to generating new ideas and, as a result, eased the writing process (Yunus et al., 2012).

Students were also able to develop their awareness of the rhetorical functions of the target language by writing extensively on any topic and in any genre and style (Ahmed, 2016; Rodliyah, 2016; Yen, Hou, & Chang, 2015). Being responsible for their writing, learners assumed various roles: a reporter of social events, a researcher providing topics for discussion and a reflective writer sharing their personal reaction to a phenomenon (Rodliyah, 2016). As such, they practiced a variety of functional language: expressing agreement/disagreement, giving suggestions, asking question and showing empathy. This contributed to their linguistic and pragmatic competences. Moreover, having their peers and teacher as a responsive audience ready to give instant feedback promoted students' sense of authorship and made their writing more meaningful (Bani-Hani, Al-Sobh, & Abu-Melhim, 2014; Saeed & Ghazali, 2017).

However, the social features of Facebook can also pose a number of challenges. Students often do not consider the SNS as a learning environment or an educational tool; for them, Facebook is a socialising platform and writing on Facebook is merely informal communication (Kabilan, Ahmad, Jafre, & Abidin, 2010). As such, they do not view it as a serious activity capable of improving their writing skills. Moreover, social ties play a crucial role in communication on Facebook (Bailey et al., 2017). It was observed that students who did not have established relationships with their classmates were less involved in Facebook activities. They received fewer replies and thus were not challenged to post more comments. Consequently, the amount of writing they produced was significantly less compared to the number of posts and replies made by the students who had established friendship with their classmates.

Additionally, some students tended to get distracted when using Facebook for their writing tasks; they were more engaged in socialising than in doing assignments (Yunus & Salehi, 2012). Moreover, the informal language, short forms and abbreviations commonly used in Facebook could not serve as appropriate examples

of formal or academic writing. Conversely, Rodliyah (2016) and Ahmed (2016) suggest that the informality of the language used on Facebook promotes genuine communication and makes the process of writing more social and informal and thus more engaging. As such, it could be regarded as a platform able to bridge formal and informal learning (Ahmed, 2016).

DISCUSSION

Consistent with the literature, this study indicates that Web 2.0 technologies, with their interactive and participatory features, can be effectively harnessed to develop students' writing competence. The use of Web 2.0 tools generally has a positive impact on students' writing in terms of its linguistic and pragmatic competences. The research, supporting the work of previous studies in this area, confirms that the affordances of Web 2.0 technologies allow students to co-construct knowledge and scaffold their learning through interaction with their teacher, peers and a wider audience, for example, other users of Facebook, bloggers, etc. The findings explicitly warn that despite its potential for promoting students' writing competence, technology itself cannot teach; its effect on students' writing skills depends on specific factors which might either enhance or diminish the effectiveness of the technology.

This study is subject to a number of limitations. The scope of this literature review was restricted to an analysis of the most frequently used Web 2.0 technologies employed for teaching SL/FL writing: blogs, wikis, Google Docs and Facebook. Evaluation and comparison of other Web 2.0 tools could have added to our understanding of their ability to improve students' writing skills.

One more issue with the current study is that it has examined the potential of Web 2.0 technologies to enhance students' writing skills only in terms of their effect on linguistic and pragmatic competences. However, the influence of the tools on students' motivation, engagement, higher order and metacognitive skills, which in turn might impact on students' writing performance, was not explored in the study.

CONCLUSION

This literature-based study focused on the use of Web 2.0 technologies in teaching SL/FL writing in HE settings. It aimed to explore the potential of a number of tools, namely, blogs, wikis, Google Docs and Facebook, to improve SL/FL students' writing skills. The findings have filled the gap identified in the literature in this field. Specifically, this literature review, covering articles published between 2009 and 2019, reflected on various practices for teaching writing in a technology-enhanced environment that have been developed and enriched over the last decade due to technological advances and the emergence of new tools and their rapid integration into HE. The research into the effectiveness of Web 2.0 technologies before 2009 was in its infancy, and thus investigating recent changes and developments in the area was both necessary and timely. The analysis of new experiences and evidence that an international cohort of teachers and researchers have obtained through their practices and empirical studies has enhanced our understanding of the role of Web 2.0 technologies in teaching SL/FL writing. The research findings have also contributed to the researcher's professional development and will be of interest to other teachers working in SL/FL contexts.

This study has thrown up several questions in need of further investigation. As it was mentioned in the Discussion section, technology does not teach; its effectiveness is determined by a number of factors. Further work with more focus on identifying these factors needs to be done.

Another possible area of future research would be to explore the links between different types of Web 2.0 technologies and writing in various genres and styles. Knowledge about what type of technology could be most effective for writing in a certain genre, at which stage(s) of the writing process and in which mode (face-to-face or online), would add to our understanding of technology usability.

Moreover, the use of Web 2.0 technologies should be theoretically grounded. Learning theories supporting technology integration into teaching writing was not within the scope of this study, yet it was noticed that social constructivism was frequently used in the reviewed studies as a theoretical framework to ground research. Mapping Web 2.0 tools and their functions under other theoretical frameworks would be also worthwhile.

Overall, the study could open new opportunities for teachers to encourage them to consider integrating Web 2.0 technologies into their teaching practice to create a highly interactive learning environment, optimise their writing instruction and improve students' writing skills.

REFERENCES

1. Abrams, Z. (2016). Exploring collaboratively written L2 texts among first-year learners of German in Google Docs. *Computer Assisted Language Learning*, 29(8), 1259-1270. <https://doi.org/10.1080/09588221.2016.1270968>
2. Abrams, Z. (2019). Collaborative writing and text quality in Google Docs. *Language Learning & Technology*, 23(2), 22-42.
3. Ahmed, M. A. (2016). Using Facebook to develop grammar discussion and writing skills in English as a foreign language for university students. *Sino-US English Teaching*, 13(12), 932-952.

4. Allwardt E., D. (2011). Teaching Note Writing with Wikis: a Cautionary Tale of Technology in the Classroom. *Journal of Social Work Education*, 47(3), 597-605. <https://doi.org/10.5175/JSWE.2011.200900126>
5. Alshumaimeri, Y. (2011). The effects of wikis on foreign language students writing performance. *Procedia - Social and Behavioral Sciences*, 28, 755-763. <https://doi.org/10.1016/j.sbspro.2011.11.139>
6. Alsubaie, J., & Ashuraidah, A. (2017). Exploring Writing Individually and Collaboratively Using Google Docs in EFL Contexts. *English Language Teaching*, 10(10), 11-30. <https://doi.org/10.5539/elt.v10n10p10>
7. Al-Tamimi, M. F., Al-Khawaldeh, A. H., & Mohammad, H. I. (2018). The effect of using facebook on improving English language writing skills and vocabulary enrichment among University of Jordan sophomore students. *Journal of Social Sciences (COES&RJ-JSS)*, 7, 187-214.
8. Amir, Z., Ismail, K., & Hussin, S. (2011). Blogs in language learning: Maximizing students' collaborative writing. *Procedia - Social and Behavioral Sciences*, 18, 537-543. <https://doi.org/10.1016/j.sbspro.2011.05.079>
9. Anderson, P. (2007). What is Web 2.0? Ideas, technologies and implications for education. *JISC Technology and Standards Watch [En Línea].*, (Febrero), 14-26. <https://doi.org/www.jisc.ac.uk/publications/reports/2007/twweb2.aspx>
10. Anwaruddin, S. M. (2013). Web 2.0 and Language Learners' Motivation: An Action Research Study. *Canadian Journal of Action Research*, 14(1), 51-68.
11. Arslan, R. Ş., & Şahin-Kizil, A. (2010). How can the use of blog software facilitate the writing process of English language learners? *Computer Assisted Language Learning*, 23(3), 183-197. <https://doi.org/10.1080/09588221.2010.486575>
12. Aydin, Z., & Yildiz, S. (2014). Using wikis to promote collaborative EFL writing. *Language Learning and Technology*, 18(1), 160-180.
13. Bailey, D., Park, I., & Haji, S. A. (2017). An investigation of Facebook for language learning: Better understanding perceptions and participation. *Call-Ej*, 18(2), 14-30.
14. Bani-Hani, N. A., Al-Sobh, M. A., & Abu-Melhim, A.-R. H. (2014). Utilizing Facebook Groups in Teaching Writing: Jordanian EFL Students' Perceptions and Attitudes. *International Journal of English Linguistics*, 4(5), 27-34. <https://doi.org/10.5539/ijel.v4n5p27>
15. Bikowski, D., & Vithanage, R. (2016). Effects of web-based collaborative writing on individual 12 writing development. *Language Learning and Technology*, 20(1), 79-99.
16. Brodahl, C., Hadjerrouit, S., & Hansen, N. K. (2011). Collaborative Writing with Web 2.0 Technologies: Education Students' Perceptions. *Journal of Information Technology*, 10(1), 73-103. Retrieved from <http://jite.org/documents/Vol10/JITEv10IIPp073-103Brodahl948.pdf>
17. Celik, S. S., & Aydin, S. (2016). Wiki effect on English as a foreign language writing achievement. *Global Journal of Foreign Language Teaching*, 6(4), 218-227. <https://doi.org/10.18844/gjflt.v6i4.1674>
18. Chang, C.-W., Pearman, C., & Farha, N. (2010). Second Language Acquisition: Implications of Web 2.0 and Beyond. *Critical Questions in Education*, 3(2), 52-64.
19. Chen, J. C., & Brown, K. L. (2012). The effects of authentic audience on English as a second language (ESL) writers: a task-based, computer-mediated approach. *Computer Assisted Language Learning*, 25(5), 435-454. <https://doi.org/10.1080/09588221.2011.606224>
20. Chun, D., Smith, B., & Kern, R. (2016). Technology in Language Use, Language Teaching, and Language Learning. *Modern Language Journal*, 100, 64-80. <https://doi.org/10.1111/modl.12302>
21. Collier, S., Foley, B., Moguel, D., & Barnard, I. (2013). Write for your life: Developing literacies and writing pedagogy in teacher education. *Contemporary Issues in Technology and Teacher Education*, 13(3), 262-284.
22. Conole, G. (2010). Facilitating new forms of discourse for learning and teaching: Harnessing the power of Web 2.0 practices. *Open Learning*, 25(2), 141-151. <https://doi.org/10.1080/02680511003787438>
23. Creswell, J. W., Hanson, W. E., Clark Plano, V. L., & Morales, A. (2007). Qualitative Research Designs: Selection and Implementation. *The Counselling Psychologist*, 35(2), 236-264. <https://doi.org/10.1177/0011000006287390>
24. Cumming, A. (2006). Teaching writing: Orienting activities to students' goals. *Current trends in the development and teaching of the four language skills*, 473-491.

25. Dizon, G. (2016). A comparative study of Facebook vs. paper-and-pencil writing to improve L2 writing skills. *Computer Assisted Language Learning*, 29(8), 1249-1258. <https://doi.org/10.1080/09588221.2016.1266369>
26. Dizon, G., & Thanyawatpokin, B. (2018). Web 2.0 tools in the EFL classroom: Comparing the effects of Facebook and blogs on L2 writing and interaction. *The EuroCALL Review*, 26(1), 29-42.
27. Domalewska, D. (2014). Technology-supported classroom for collaborative learning: Blogging in the foreign language classroom. *International Journal of Education and Development using ICT*, 10(4), 21-30.
28. Ducate, L. C., & Lomicka, L. L. (2008). Adventures in the blogosphere: From blog readers to blog writers. *Computer Assisted Language Learning*, 21(1), 9-28. <https://doi.org/10.1080/09588220701865474>
29. Elola, I., & Oskoz, A. (2010). Collaborative writing: Fostering foreign language and writing conventions development. *Language Learning and Technology*, 14(3), 51-71.
30. Fageeh, A. I. (2011). EFL learners' use of blogging for developing writing skills and enhancing attitudes towards English learning: An exploratory study. *Journal of Language and Literature*, 2(1), 31-48.
31. Grami, G. M. A. (2012). Online Collaborative Writing for ESL Learners Using Blogs and Feedback Checklists. *English Language Teaching*, 5(10), 43-48.
32. Groom, N., Lin, M. H., & Lin, C. Y. (2013). Blog-Assisted Learning in the ESL Writing Classroom: A Phenomenological Analysis. *Educational Technology & Society*, 16(3), 130-139.
33. Huang, H. Y. C. (2016). Students and the Teacher's Perceptions on Incorporating the Blog Task and Peer Feedback into EFL Writing Classes through Blogs. *English Language Teaching*, 9(11), 38-47.
34. Hyland, K. (2019). *Second language writing*. Cambridge, UK: Cambridge University Press.
35. İnceçay, G., & Genç, E. (2014). University Level EFL Students' Self Blogging to Enhance Writing Efficacy. *Procedia - Social and Behavioral Sciences*, 116, 2640-2644. <https://doi.org/10.1016/j.sbspro.2014.01.627>
36. Iyer, P. (2013). Effects of Collaborative Effects of Collaborative Blogging on Communicative Skills in Writing of Thai University EFL Students. *English for Specific Purposes World*, 14(39), 1-14.
37. Jeong, K. O. (2016). A study on the integration of google docs as a web-based collaborative learning platform in EFL writing instruction. *Indian Journal of Science and Technology*, 9(39), 1-7. <https://doi.org/10.17485/ijst/2016/v9i39/103239>
38. Kabilan, M. K., Ahmad, N., & Abidin, M. J. Z. (2010). Facebook: An online environment for learning of English in institutions of higher education? *The Internet and Higher Education*, 13(4), 179-187. <https://doi.org/10.1016/j.iheduc.2010.07.003>
39. Kessler, G. (2009). Student-initiated attention to form in wiki-based collaborative writing. *Language Learning & Technology*, 13(1), 79-95.
40. Kessler, G., & Bikowski, D. (2010). Developing collaborative autonomous learning abilities in computer mediated language learning: Attention to meaning among students in wiki space. *Computer Assisted Language Learning*, 23(1), 41-58. <https://doi.org/10.1080/09588220903467335>
41. Kessler, G., Bikowski, D., & Boggs, J. (2012). Collaborative writing among second language learners in academic Web-based projects. *Language Learning & Technology*, 16(1), 91-109.
42. Kitchakarn, O. (2012). Using blogs to improve students' summary writing abilities. *Turkish Online Journal of Distance Education*, 13(4), 209-219.
43. Kost, C. (2014). Investigating Writing Strategies and Revision Behavior in Collaborative Wiki Projects. *CALICO Journal*, 28(3), 606-620. <https://doi.org/10.11139/cj.28.3.606-620>
44. Kuteeva, M. (2011). Wikis and academic writing: Changing the writer - reader relationship. *English for Specific Purposes*, 30(1), 44-57. <https://doi.org/10.1016/j.esp.2010.04.007>
45. Lee, L. (2010). Fostering reflective writing and interactive exchange through blogging in an advanced language course. *ReCALL*, 22(2), 212-227.
46. Li, M. (2013). Individual novices and collective experts: Collective scaffolding in wiki-based small group writing. *System*, 41(3), 752-769. <https://doi.org/10.1016/j.system.2013.07.021>
47. Li, M., & Storch, N. (2017). Second language writing in the age of CMC: Affordances, multimodality, and collaboration. *Journal of Second Language Writing*, 36(May), 1-5. <https://doi.org/10.1016/j.jslw.2017.05.012>

48. Lin, M. (2017). The untold story: A language teacher's experience in a blog-assisted writing classroom. *International Journal of Humanities and Social Sciences*, 9(5), 1-6.
49. Liu, S. H., & Lan, Y. (2016). International Forum of Educational Technology & Society Social Constructivist Approach to Web-Based EFL Learning: Collaboration, Motivation, and Perception on the Use of Google Docs. 19(1), 171-186.
50. Mabuan, R. A. (2018). Using Blogs in Teaching Tertiary ESL Writing. *Journal of English Education*, 6(2), 1-10. <https://doi.org/10.25134/erjee.v6i2.1238>.Received
51. Miftah, M. Z. (2016). Increasing EFL students' writing abilities using peer response activities via Facebook. *Indonesian EFL Journal: Journal of ELT, Linguistics, and Literature*, 2(2), 1-27.
52. Montero-Fleta, B., & Pérez-Sabater, C. (2010). A research on blogging as a platform to enhance language skills. *Procedia - Social and Behavioral Sciences*, 2(2), 773-777. <https://doi.org/10.1016/j.sbspro.2010.03.100>
53. Montero-Fleta, B., & Pérez-Sabater, C. (2011). Knowledge construction and knowledge sharing: A wiki-based approach. *Procedia - Social and Behavioral Sciences*, 28, 622-627. <https://doi.org/10.1016/j.sbspro.2011.11.118>
54. Özdemir, E., & Aydin, S. (2015). The effects of blogging on EFL writing achievement. *Procedia - Social and Behavioral Sciences*, 199(2015), 372-380. <https://doi.org/10.1016/j.sbspro.2015.07.521>
55. Pham, V. P. H., & Usaha, S. (2016). Blog-based peer response for L2 writing revision. *Computer Assisted Language Learning*, 29(4), 724-748.
56. Razak, N. A., Saeed, M., & Ahmad, Z. (2013). Adopting Social Networking Sites (SNSs) as Interactive Communities among English Foreign Language (EFL) Learners in Writing: Opportunities and Challenges. *English Language Teaching*, 6(11), 187-198.
57. Reinhardt, J. (2019). Social media in second and foreign language teaching and learning: Blogs, wikis, and social networking. *Language Teaching*, 52(1), 1-39. <https://doi.org/10.1017/S0261444818000356>
58. Richardson, W. (2010). *Blogs, wikis, podcasts, and other powerful web tools for classrooms*. Thousand Oaks, CA: Corwin Press.
59. Rodliyah, R. S. (2016). Using a Facebook closed group to improve EFL students' writing. *TEFLIN Journal - A Publication on the Teaching and Learning of English*, 27(1), 82-100. <https://doi.org/10.15639/teflinjournal.v27i1/82-100>
60. Saeed, M. A., & Ghazali, K. (2017). Asynchronous group review of EFL writing: Interactions and text revisions. *Language Learning and Technology*, 21(2), 200-226.
61. Seyyedrezaie, Z. S., Ghonsooly, B., Shahriari, H., & Fatemi, A. H. (2016). A mixed methods analysis of the effect of google docs environment on EFL learners' writing performance and causal attributions for success and failure. *Turkish Online Journal of Distance Education*, 17(3), 90-110. <https://doi.org/10.17718/tojde.34418>
62. Shih, R. C. (2011). Can Web 2.0 technology assist college students in learning English writing? Integrating Facebook and peer assessment with blended learning. *Australasian Journal of Educational Technology*, 27(5), 829-845.
63. Solomon, G., & Schrum, L. (2007). *Web 2.0: New tools, new schools*. Washington, DC: ISTE.
64. Steel, C. H., & Levy, M. (2013). Language students and their technologies: Charting the evolution 2006-2011. *ReCALL*, 25(3), 306-320. <https://doi.org/10.1017/S0958344013000128>
65. Storch, N. (2013). *Collaborative writing in L2 classrooms* (Vol. 31). Bristol, UK: Multilingual Matters.
66. Strobl, C. (2014). Affordances of Web 2.0 Technologies for Collaborative Advanced Writing in a Foreign Language. *CALICO Journal*, 31(1), 1-18. <https://doi.org/10.11139/cj.31.1.1-18>
67. Sulisty, T., Mukminatien, N., Cahyono, B. Y., & Saukah, A. (2019). Enhancing Learners' Writing Performance through Blog-Assisted Language Learning. *International Journal of Emerging Technologies in Learning (IJET)*, 14(09), 61-73. <https://doi.org/10.3991/ijet.v14i09.9535>
68. Sun, Y. C. (2010). Extensive writing in foreign-language classrooms: A blogging approach. *Innovations in Education and Teaching International*, 47(3), 327-339. <https://doi.org/10.1080/14703297.2010.498184>
69. Suthiwartnarueput, T., & Wasanasomsithi, P. (2012). Effects of using Facebook as a medium for discussions of English grammar and writing of low-intermediate EFL students. *Electronic Journal of Foreign Language Teaching*, 9(2), 194-214.

70. Suwantarathip, O., & Wichadee, S. (2014). The effects of collaborative writing activity using Google docs on students' writing abilities. *Turkish Online Journal of Educational Technology*, 13(2), 148-156.
71. Usó-Juan, E., Martínez-Flor, A., & Palmer-Silveira, J. C. (2006). Towards acquiring communicative competence through writing. *Current trends in the development and teaching of the four language skills*, 29, 383-400.
72. Vie S. (2008). Digital Divide 2.0: «Generation M» and Online Social Networking Sites in the Composition Classroom // *Comput. Compos.* 2008. T. 25. № 1. C. 9-23.
73. Vurdien, R. (2013). Enhancing writing skills through blogging in an advanced English as a Foreign Language class in Spain. *Computer Assisted Language Learning*, 26(2), 126-143. <https://doi.org/10.1080/09588221.2011.639784>
74. Wang, Y. C. (2014). Using wikis to facilitate interaction and collaboration among EFL learners: A social constructivist approach to language teaching. *System*, 42(1), 383-390. <https://doi.org/10.1016/j.system.2014.01.007>
75. Wang, S., & Vasquez, C. (2014). The Effect of Target Language Use in Social Media on Intermediate-level Chinese Language Learners' Writing Performance. *CALICO Journal*, 31(1), 78-102. <https://doi.org/10.11139/cj.31.1.78-102>
76. Wang, Y. C. (2015). Promoting collaborative writing through wikis: a new approach for advancing innovative and active learning in an ESP context. *Computer Assisted Language Learning*, 28(6), 499-512. <https://doi.org/10.1080/09588221.2014.881386>
77. Warschauer, M. (2010). Learning to Write in the Laptop Classroom. *Writing & Pedagogy*, 1(1), 101-112. <https://doi.org/10.1558/wap.v1i1.101>
78. Yen, Y., Hou, H., & Chang, K. E. (2015). Applying role-playing strategy to enhance learners' writing and speaking skills in EFL courses using Facebook and Skype as learning tools: a case study in Taiwan. *Computer Assisted Language Learning*, 28(5), 383-406. <https://doi.org/10.1080/09588221.2013.839568>
79. Yunus, M. M., & Salehi, H. (2012). The effectiveness of Facebook groups on teaching and improving writing: Students' perceptions. *International Journal of Education and Information Technologies*, 1(6), 87-96.
80. Yunus, M. M., Salehi, H., & Chenzi, C. (2012). Integrating social networking tools into ESL writing classroom: Strengths and weaknesses. *English Language Teaching*, 5(8), 42-48. <https://doi.org/10.5539/elt.v5n8p42>
81. Zhang, H., Song, W., Shen, S., & Huang, R. (2014). The effects of blog-mediated peer feedback on learners' motivation, collaboration, and course satisfaction in a second language writing course. *Australasian Journal of Educational Technology*, 30(6), 670-685.
82. Zou, B., Wang, D., & Xing, M. (2016). Collaborative tasks in Wiki-based environment in EFL learning. *Computer Assisted Language Learning*, 29(5), 1000-1016. <https://doi.org/10.1080/09588221.2015.1121878>
83. Zulfany, D. H., Sudarsono, Y., & Sutapa, Y. G. (2015). A study of how students utilize weblogs in developing writing skill. *Jurnal Pendidikan Dan Pembelajaran*, 4(6), 1-17.