

ARTICLE



Social media as an e-portfolio platform: Effects on L2 learners' speaking performance

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Abstract

In the past few years, there has been an increase in the use of social media for language pedagogy. While some high-profile social media platforms have been extensively studied, their potential as an electronic portfolio (e-portfolio) is under-researched, particularly in the area of L2 (i.e., English) speaking. Thus, this study fills in the vacuum by investigating the effects of social media as an e-portfolio platform for the speaking performance of L2 students whose L1 is Chinese. Using a quasi-experimental design, the findings demonstrate the viability of a social media-based e-portfolio for significantly improving college students' speaking performances. These results were linked to three factors, namely the (a) social pressure from high visibility, (b) sense of captive audience, and (c) increased level of engagement due to the interactive features of the platform. Some technical and learner/learning-related challenges were also reported by students. Implications for L2 speaking pedagogy, assessment, and future studies are discussed.

Keywords: Social Media, Electronic Portfolio, QQ, Portfolio Assessment

Language(s) Learned in This Study: English

APA Citation: Zheng, Y., & Barrot, J. S. (2022). Social media as an e-portfolio platform: Effects on L2 learners' speaking performance. *Language Learning & Technology*, 26(1), 1–19.
<https://hdl.handle.net/10125/73487>

Introduction

In the past few decades, the use of information and communication technology (ICT) in education has been exponentially increasing. One recent development in this area is the integration of social media into the teaching and learning process. Social media is defined in this paper as any web-based technology that allows users to generate and share content, interact, and collaborate for a more dynamic and interactive web experience (Barrot, 2021a; Greenhow & Lewin, 2016; Wiafe et al., 2020). Some of these social media platforms include Facebook, Instagram, Twitter, YouTube, and QQ. The massive popularity of social media has sparked the interest of many educators and scholars to explore its different affordances as a language learning environment (Arndt & Woore, 2018; Barrot, 2018, 2021b; Erarslan, 2019; Hattem & Lomicka, 2016; Manca, 2020), especially in the teaching of speaking (Barrett & Liu, 2019; Fouz-González, 2017; Mompean & Fouz-González, 2016; Sun & Yang, 2015; Sun et al., 2017). However, their potential as an electronic portfolio (e-portfolio) is under-researched, particularly in the area of L2 speaking.

Given its flexible affordances, popularity, and wide reach, social media could potentially be a viable platform for showcasing students' speaking performances, especially in today's information-driven society where content sharing plays a vital role. This assumption requires empirical validation, and the factors that determine the viability of social media as an e-portfolio platform need to be well understood. Thus, this study fills in this vacuum by investigating how a social media-based e-portfolio impacts L2 students' speaking performances and how the elements of audience and interactive features may contribute to this impact. In this study, we used QQ as the e-portfolio platform for Chinese students' speaking performances for three reasons. First, it is an under-explored social media platform for language pedagogy despite its many affordances. Specifically, this study explored QQ's video posting, group chat/interaction, and

comment/feedback features to facilitate students' development of their speaking performance. Second, other high-profile social media platforms are unavailable in China. Finally, QQ is a popular and flexible social media platform which shares similar features with other high-profile social media platforms (e.g., Facebook and Twitter). These similarities include instant messaging, content development, information sharing, video chatting, gaming, and social networking. Given this, the findings of this study could be generalized to other contexts.

Electronic Portfolios

Technological advancement has presented new opportunities for learning. One such opportunity L2 scholars and practitioners have turned their attention to is e-portfolios for improving the efficiency of instructional delivery and assessment (Barrot, 2016, 2021c; Hall & Townsend, 2017; Meyer et al., 2010; Nicolaidou, 2013). E-portfolios are paperless tools that display students' work or performances. They are typically delivered using Web 2.0 (i.e., second-generation technologies that allow users to create and share content on the web) to make the output more accessible to a wider audience (Barrot, 2021c; Händel et al., 2020). Unlike the conventional portfolio, e-portfolios are highly stimulating because of their flexibility, interactive features, cost efficiency, accessibility, and compatibility with the learning style of 21st-century learners (Chye et al., 2013; Meyer et al., 2010). In fact, several studies reported that the use of e-portfolios promotes self-directed learning (Beckers et al., 2016), reflection (Morris, 2003), peer feedback (Chang et al., 2013), and language learning (Barrot, 2016, 2021c; Hall & Townsend, 2017; Meyer et al., 2010; Nicolaidou, 2013). However, e-portfolios are not without limitations. Their use confronts some challenges such as institutional financial support, infrastructure requirements, users' privacy, and users' technical skills. Because of these problems, educators resort to the use of social media which requires zero to minimal cost and infrastructure, contains privacy features, and is easy to use.

During the last two decades, the use of e-portfolios has been gaining momentum as an effective approach for promoting learner-centered assessment practices, particularly in the L2 speaking context. For example, Chang et al. (2005) reported that 8th-grade students from a Taiwanese junior high school showed a preference for the use of an e-portfolio over traditional assessment. Students were given opportunities to record their own learning process, to reflect on their learning, and to produce their own webpage. However, some students experienced problems during the creation of their e-portfolios. These included students' limited technical and computer skills, and low self-esteem. The same findings were reported by Yastibas and Cepik (2015) who found that while teachers had a positive attitude toward the implementation of e-portfolios in speaking classes, students reported some implementation challenges such as the complexity of the procedure which caused frustration for some of them.

Unlike the first two studies which relied heavily on self-reported data, Huang and Hung (2010) employed a quasi-experimental design on the effects of e-portfolios on EFL learners' oral performances. Thirty Taiwanese EFL students participated in the study. The students from the control group recorded their speeches and saved them on a compact disc to be submitted to their teachers. The students from the experimental group used a free blog publishing system as their e-portfolio platform. After the experiment, the findings revealed that the experimental group outperformed the control group in terms of language quantity (word count) and lexical richness (type/token ratio). These findings were attributed to additional speaking practice and a heightened sense of audience for the participants when using e-portfolios. Conversely, no difference was observed in the syntactic complexity (coordination index) of the two groups. Such a finding was linked to the lack of students' focus on linguistic forms.

QQ as an Educational Tool

Tencent QQ (also known as QQ) is a social media platform that allows its users to send messages, share photos and videos, video chat, and post microblogs through computers and smartphones. It is considered one of the most popular social media platforms in China with over 700 million active users as of 2020. QQ is famous for its interactive features, simplicity, convenience, and rapid information sharing tools. It has several functionalities such as QQ games, QQ-based emails, QQ personal blog, QQ-zone and forums, QQ

chat rooms, and QQ groups. QQ also rolled out its online Chinese language courses and K-12 curricula in China for L1 Chinese speakers. The platform offers live tutoring, tutorial videos, and micro-courses for literature, reading, and writing. These features make QQ a viable alternative educational tool for territories that have limited access to other popular social media. Because of its potential, several scholars and educators have explored QQ as a learning environment in various fields of interest such as tourism education (Ma & Au, 2015), sciences (Xu et al., 2010), and education (Liu & Cheng, 2012; Xu & Jia, 2013).

The educational use of QQ extends to English language teaching contexts (e.g., Li, 2013; Ruan, 2013; Zhao, 2018). For instance, Ruan (2013) investigated the impact of QQ's instant messaging feature in improving the critical literacy of EFL learners in China. The students in this study utilized QQ's comprehensive communication functions such as instant messaging, video/voice chat, QQ group interaction, web-blog, and online/offline file sharing and transmission. The findings revealed that QQ was a conducive learning environment for developing critical literacy and encouraged deep content-based discussions on the subject matter. Results also showed that QQ was primarily used for online communication purposes and exposed students to a wide range of reading materials. Finally, students considered QQ as a powerful rhetorical space for the exchange of ideas and language learning.

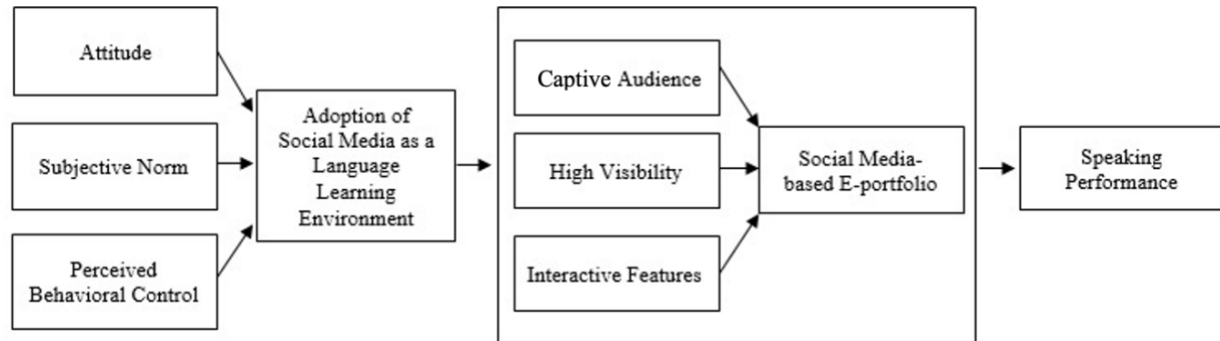
Another study that explored the viability of QQ from the perspective of EFL students was Li (2013). Specifically, an EFL learning community was set up using QQ's free messaging tool. This online community aimed to develop students' multicultural awareness and English proficiency training through interactions between the mentors and the trainees. After administering surveys and conducting observations, results revealed that the EFL learning community helped students improve their English proficiency, interest in learning, and collaboration. The findings further showed that students in the online context were more open in revealing their real identity than in a face-to-face setting. It means that they used their real names and showed their faces during speaking activities, rather than using different titles and icons to hide their identity. Nonetheless, students reported some problems during online learning, such as poor Internet connection, unsuitable instructional design, limited administrative support, and limited information about the other students.

More recently, Zhao (2018) looked into the ways teachers use QQ and WeChat as a tool for teaching English as a foreign language (EFL) in a higher education context. Using a questionnaire and in-depth interviews, findings showed that the participants primarily used these two technologies for academic purposes, such as class administration, sharing learning resources, assessment, and communication. Although participants used WeChat more frequently than QQ, the former was primarily used for personal purposes, such as bill payment. Meanwhile, students preferred to use QQ for academic purposes because of its more flexible features regarding class administration. Teachers indicated that the two platforms promoted student participation, constructed learning communities, and motivated them to observe effective teaching practices. While interesting insights were reported by Zhao (2018), the conclusiveness of results was limited because of the descriptive nature of the study.

As reviewed above, previous studies indicate that social media can serve as a rhetorical space for language learning, promote students' interest and collaboration, and facilitate class administration. However, the research has yet to explore its viability as an e-portfolio platform for speaking performances. Thus, the current study was undertaken.

The Conceptual Framework

The current study adopted the following conceptual framework (see [Figure 1](#)).

Figure 1*Social E-portfolio Model*

The social e-portfolio model is theoretically anchored on the social constructivist theory which emanated from the sociological perspective of constructivism. This learner-centered theory highlights the key role of social interaction and socially engaging environments in constructing knowledge and facilitating the learning process (Adams, 2006; Chu, 2020; Dede, 2008; Fosnot, 2013; Greenhow et al., 2019). This means that students are guided and supported in constructing their understanding within a sociocultural context or community of practice, engage in active learning, and collaborate with one another to achieve the desired learning outcomes (Laurillard, 2002; Yilmaz, 2008). Some recent studies on the educational use of social media that adopted this theory include Manca (2020), who examined the use of social media in higher education; Al-Rahmi et al. (2018), who investigated the factors affecting college students' learning performance through the use of social media; Aydin and Ozdemir (2019), who explored the foreign language learners' experience in using Facebook as a learning environment; and Balakrishnan and Gan (2016), who studied the effects of students' learning styles on their use of social media for learning.

The decision to adopt social media as an e-portfolio platform is based on the Decomposed Theory of Planned Behavior (DTPB) by Taylor and Todd (1995). DTPB stipulates that the adoption of any ICT tool is influenced by three multidimensional constructs: (a) subjective norms, (b) attitude toward the behavior, and (c) perceived behavioral control. In this case, *subjective norms* refer to the pressure from other stakeholders (e.g., administrators, colleagues, and students) to adopt social media as a language learning environment. *Attitude* refers to the degree of favor that an individual attaches to the use of social media. This construct includes the perceived usefulness, perceived ease of use, and compatibility. Finally, there is *perceived behavioral control*, which relates to the situations in which one perceives a lack of control over their own behavior. This includes self-efficacy and facilitating conditions.

However, students' speaking performance is not just influenced by their attitude, subjective norms, and perceived behavioral control but also by the captive audience (i.e., presence of a specific group of viewers as students deliver their speeches) and high visibility (i.e., a large quantity of diverse viewers that may range from hundreds to thousands) of their performances. Note that the two variables are interrelated as both relate to audience. However, their impact on speaking performance is different. The captive audience promotes a sense of audience (or the speaker's awareness of their audience when delivering the speech), while high visibility exposes students to social pressure.

Students' sense of audience is reinforced by the fact that social media is a social platform that allows users to meaningfully interact with people within their network. Based on recent studies, having a sense of audience helps learners experience more meaningful learning (Zheng & Warschauer, 2015), become reflective learners (Barrot, 2016), and become mindful of the topic and language they use for communication (Chen & Brown, 2012). Meanwhile, social pressure that results from the high visibility of students' speaking performance is anchored on Dornyei's (2005) L2 motivational self system. This theory argues that the three main sources of motivation in learning a second language include a vision of oneself as an effective L2 learner, positive learning experience, and social pressure. Dornyei (2005) defines social

pressure as the image which the learner perceives he should become.

Moreover, we added a third variable which relates to the interactive features of social media. A gamut of studies (e.g., Carpenter et al., 2016; Hew, 2011; Lomicka & Lord, 2016; Manca & Ranieri, 2016; Tang & Hew, 2017) on computer assisted language learning has confirmed the positive impact of social media's interactive features on the language performance of students. In the context of e-portfolios, at least two studies (e.g., Aydin, 2014; Barrot, 2021c) provided initial data that the interactive features of social media would increase students' level of engagement and motivation, which in turn led to better language performance.

Research Questions

This study investigated the viability of social media (i.e., QQ) based e-portfolios in enhancing the speaking performance of L2 students. Specifically, the following research questions are addressed:

Research Question 1: What differences in speaking performance, if any, are evident between the pretest and the posttest of students who used QQ as an e-portfolio platform (the treatment group)?

Research Question 2: What differences in speaking performance, if any, are evident between the treatment group and the control group?

Research Question 3: What features of QQ influenced the speaking performances of students in the treatment group?

The study sought to provide empirical support on how social pressure from high visibility, sense of audience from the captive audience, and increased level of engagement from social media's interactive features could influence the speaking performance of L2 learners. It is also hoped that the findings will provide insights on how a social media platform could be systematically integrated into the speaking process and how it could be a useful learning environment for speaking pedagogy.

Materials and Methods

Participants

This quasi-experimental study involved 45 L2 English students (3 males and 42 females) from a polytechnic university in China. These participants were second-year English majors enrolled in two different English classes and whose ages ranged from 17 to 19. One intact group was assigned to the treatment group ($N = 23$), while the other one was assigned to the control group ($N = 22$). Both groups were assessed with an intermediate English proficiency level (B1 level of Common European Framework of Reference) based on Gaokao English adopted by the university. Gaokao English is the English test component of the National College Entrance Examination. Several recent studies (e.g., Du et al., 2016; Farley & Yang, 2020; Yang, 2014) have shown the strong predictive power of Gaokao for predicting the academic performance of university students. Moreover, students' speaking performance from both groups was assessed prior to the treatment. The findings showed that their speaking performance was not significantly different ($p = 0.925$). Note that the researcher served as the teacher for both groups to control for the differences in instructors.

Both groups had been using QQ and similar platforms for at least four years. All of the participants had a similar L1 background, that is, English as a foreign language and Chinese as their native language. As such, they used Chinese as their primary language at home and of instruction in subjects other than the English courses. None of them had lived or studied in any English-speaking country. To ensure that the control group's performance would not be influenced by what the treatment group was doing, both groups were advised not to discuss with each other anything about the class activities. Consent was also sought from the participants prior to conducting the study.

Speaking Pre- and Post-test

Each participant was asked to take the pretest during the second week of classes and the posttest during the

last week to determine if their speaking performance improved after the intervention. Prior to administration, these tests were validated by two English language teaching research experts. The first week of classes was used to orient the participants to the course and activities for the whole term, including the completion of the informed consent form. The administered pretests and posttests were controlled. Specifically, the two tests were similar in terms of setting (classroom setting), speech type (persuasive speech), speaking instructions, and allotted time for speaking (three minutes for each speech). Participants were not allowed to use any audiovisual aids (e.g., PPT and multimedia tools) during their performances. However, they were allowed to choose their own topic related to any social issue because topic familiarity and topic control would influence student's speaking performance (Lumley & O'Sullivan, 2005; Qiu, 2020). A different social issue was used during the posttest to avoid recycling the same content used during the pretest. The prompt used for both the pretest and the posttest is as follows: *Choose one current social issue you are most familiar with. In no more than three minutes, deliver a persuasive speech on the said topic by stating your position and the arguments that support it. You are not allowed to use any audiovisual aids during your speech.* Lucas's (2019) demonstration assessment scale for public speaking performances was used (see [Appendix](#)). The rubric uses five scores assigned to each of the 30 indicators related to introduction, body, conclusion, delivery, and overall evaluation. The pretest and the posttest were assessed by two raters separately using the designated rubric. The interrater agreement between the raters was high ($r = 0.90$).

Procedure

Preparatory Stage

The instructor, who acted as the administrator of the platform, set up one QQ class account for the treatment group. Students used this account as the online platform for their speaking performances. However, their performances were also viewable by people who were connected to each student's personal QQ account to capture a wider audience. Similar to Chang et al. (2005), students were given opportunities to record their own learning process, to reflect on their learning, and to produce their own e-portfolio using QQ. Using their pre-existing personal QQ account, students joined the QQ group upon approval of the administrator. They were required to use their real names for easy identification. To ensure efficiency in the use of the platform, general guidelines (i.e., procedure for publication, grading criteria, ethical considerations, components, format, and objectives of the e-portfolio) were uploaded to the QQ group for the students to follow. These guidelines were personally explained to the students during the first week of their classes.

Speaking Sessions

This study was conducted for one term in two English Public Speaking classes which lasted for two hours a week for 16 weeks. Both the control group and the treatment group used the same syllabus and time allotment for each topic. The two groups were also subjected to the same teaching approach. However, the treatment group used QQ as a platform for students' speaking performances and for peer feedback during practices.

The teaching approach used for the speaking classes covered eight phases: (a) preparation, (b) modeling, (c) planning, (d) collaborative speaking, (e) individual speaking, (f) practicing, (g) polishing, and (h) actual performance. The preparation stage involved the setting of the speech context by identifying the purpose, audience, persona of the speaker. It also involved students' schema activation and anticipation of the structural features of the speech. The second stage was modeling, which allowed students to view at least two sample speeches. Then, students analyzed the purpose, audience, language, and rhetorical features of these speeches. This was followed by the planning stage, which allowed students to collaboratively brainstorm, conduct preliminary research, and outline their speech. Thereafter, students formed groups of three to four members in which each of them delivered the speech and provided feedback to one another. During individual speaking, students repeated stages one to three (i.e., preparation, modeling, and planning) using a different topic but performed individually.

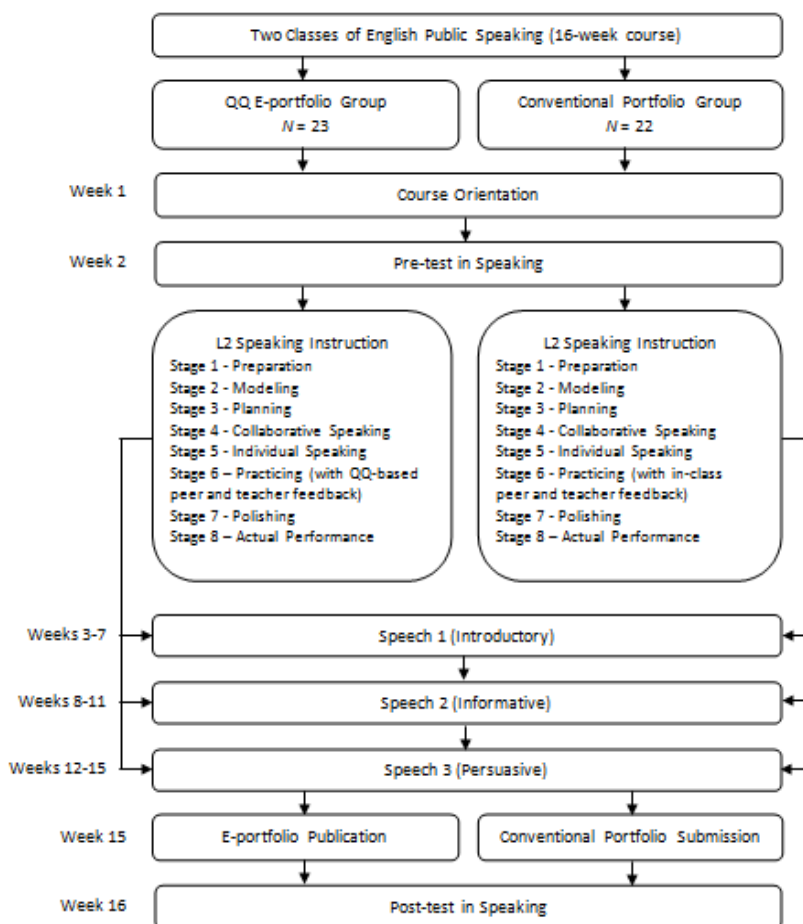
During the practicing stage, students were asked to record and view their own performance and perform

self-assessment using the rubric as a guide. Then, they recorded themselves again and sent the recorded performance to one of their classmates for feedback using the same rubric. During this stage, the teacher regularly monitored students' activities. Taking into consideration the feedback from their classmates, they recorded themselves again and sent the recorded performance to their teacher for final feedback prior to the final performance. Note that the QQ platform was used during the feedback phase of the treatment, while in-class feedback was employed in the control group. The polishing stage focused on enhancing the mechanical aspects of speech, which include pronunciation, enunciation, clarity of voice, and grammar. They did this either through self-assessment or with the help of a classmate.

The final stage of the session was the delivery of students' final speaking performances. The students from the control group had their in-class speaking performances with only their classmates and teacher as their audience. Conversely, the students from the treatment group recorded their in-class speaking performances and published them as a QQ-based e-portfolio which was viewable to a wider range of audiences. The primary audience of the e-portfolio was their classmates, teachers, and students from other English classes, while the secondary audience included their friends, family, and relatives who were connected to their QQ personal account. Note that only the people known to the students had access to the e-portfolio to protect the students' privacy. Figure 2 shows the schematic of the experimental procedure.

Figure 2

Schematics of the Experimental Procedure



E-portfolio Preparation and Publication

After the students compiled their recorded speeches, an in-class session was scheduled in week 15 to help them prepare and publish their e-portfolios. During this session, the teacher guided the students in formatting and organizing their e-portfolios, which contained the following components: course objectives, three recorded speeches, and a written reflection of their performances. Note that only the recorded speeches were published on QQ and not the two other components, which were submitted to the teacher for documentation purposes and grading of the completeness criterion. Because portfolio assessment adheres to the principle of delayed evaluation, students were informed that their speaking performances would only be graded when their e-portfolio had been published on QQ. To lower their anxiety, students were allowed to select audiences who they felt would provide constructive comments rather than criticisms. Both the e-portfolio and the conventional portfolio were graded by the teacher based on format and completeness of components (20%) and quality of speaking performances (80%). The score in the quality of speaking performances criterion is based on the average scores of students in the three speeches which were assessed using Lucas's (2019) rubric. Note that the scores received by the students in the pretest and posttest form part of the findings and not the scores that they received in the e-portfolio. Figure 3 shows the student's actual speech performance.

Figure 3

Sample Speech Performance Published on QQ



Data Analysis

To address the research questions, both quantitative and qualitative analyses were employed. All quantitative data were entered into SPSS Version 21 and were subjected to both descriptive and inferential statistics. Mean scores (M) and standard deviations (SD) were computed to determine the level of students' speaking performances. A paired t -test was used to compute the difference between the pretest and posttest scores in both groups, while the independent samples t -test was used to determine the difference between the scores of the treatment and control groups. To quantify the difference between groups, effect sizes were

calculated using Cohen's d statistic. It was also ensured that the assumptions of a parametric test such as normality, linearity, and homogeneity of variances were met before parametric statistical tests were used. Levene's Test and Kolmogorov-Smirnov Test of Normality were used to verify these assumptions.

The teacher gave a researcher-made questionnaire to the participants at the end of the experiment to supplement the quantitative data. Prior to its administration, this questionnaire was validated by the same two experts who validated the pretest and posttest in speaking. Students were also given 30 minutes to complete this open-ended questionnaire in class during their last session. All students from the treatment group responded to the questionnaire. The collected qualitative data was used to identify the features of QQ that either facilitated or impeded students' learning process and the challenges they experienced during the intervention. The following questions were asked to the students from the treatment group: (a) *How did QQ features help you improve your speaking skills?* (b) *How did some features of QQ impede your learning of speaking?* (c) *What other challenges have you experienced in using QQ in the speech class?* Students' responses were analyzed through content analysis (Birks & Mills, 2011). Specifically, the data were coded at the semantic level using the following predetermined categories (Barrot, 2016): instructional, technical, and learner and learning. The intercoder agreement between the two experts was examined to ensure the reliability of the analysis. These two experts separately analyzed the qualitative data using thematic analysis. An intercoder agreement of 88% was achieved. Disagreements between them were discussed and resolved.

Results

This study sought to identify whether students who used QQ as an e-portfolio platform would have a significant posttest gain in their speaking performances and whether there would be a difference in the posttest speaking performances between the treatment and the control groups. The impact of QQ affordances on students' speaking performances was also examined qualitatively.

Table 1 presents the mean score of students' speaking performances during the pretest and the posttest for both the control group and the treatment group. Although the mean score of the treatment group is higher than that of the control group during the pretest, the difference is not significant ($p = 0.925$) with a small effect size ($d = 0.028$). During the posttest, both the control group ($\bar{x} = 82.23$, $SD = 5.36$) and the treatment group ($\bar{x} = 86.91$, $SD = 6.07$) improved their speaking performance with gain scores of +2.28 and +7.22, respectively. The data further reveals that the difference between the pretest and the posttest for each group is significant with a large effect size ($p = 0.006$, $d = 0.65$ for control group; $p = <0.0001$, $d = 1.10$ for treatment group).

Table 1

Overall Gains by Paired T-test

	<i>Pretest</i>		<i>Gain</i>	<i>Posttest</i>		<i>p-value</i>
	\bar{x}	<i>SD</i>		\bar{x}	<i>SD</i>	
Treatment Group ($n = 23$)	79.70	5.51	+7.22	86.91	6.07	<0.0001
Control Group ($n = 22$)	79.55	5.08	+2.68	82.23	5.36	0.006

Table 2 shows the difference between the speaking performance of the treatment and control groups for the posttest. The data indicates that the speaking performance of students from the treatment group is significantly higher than those from the control group ($t[43] = 2.738$, $p = 0.009$) with a large effect size ($d = 1.10$).

Table 2

Difference between the Speaking Performances of the Treatment and Control Groups in the Posttest Using Independent Samples T-test

	Posttest		
	<i>t</i> -value	<i>df</i>	<i>p</i> -value
Speaking	2.738	43	0.009*

*significance level $p < .05$

Table 3 presents the responses of students from the treatment group to the open-ended questionnaire that supplemented the quantitative data. As shown, most of the students' responses in Q1 were related to technical (11 of 25) and learner/learning aspects (12 of 25). For the technical aspect, most of the comments focused on the use of specific QQ functions such as voice, chatting, and video recording functions. For the learner/learning aspect, most of the comments on how QQ helped them in their speech class revolved around information sharing, provision for feedback, and reflection. Very few (2 of 25) comments were related to instruction. For Q2, most of the students' claimed that it is the technical aspect of QQ that somehow impeded their learning (12 of 16). These include typing concerns, constant updating of the application, and data consumption of videos. Meanwhile, a few concerns were raised related to learner/learning (4 of 16) such as the students' self-esteem, the distraction that some of QQ's features have caused, and QQ's appropriateness as a platform. When asked about other challenges that they have experienced (Q3), students' responses were mainly related to learner/learning (11 of 17) and technical (6 of 17) concerns, with none on the instructional aspect. These include Internet connection and students' language proficiency and typing skills. Despite some technical and learning challenges experienced by students, overall findings suggest that they became more aware of their target audience and adjusted their speech delivery based on this audience awareness. Furthermore, the different affordances of QQ made their learning experience more engaging, reflective, convenient, and interactive.

Table 3*Summary of Qualitative Responses*

Groups	<i>f</i>	Sample Responses
Question 1 (<i>N</i> = 25): How did QQ features help you improve your speaking skills?		
Instructional	2	<i>I think QQ can help review some PPT used in class teaching and also some announcements would be informed immediately through QQ. (S15)</i>
Technical	11	<i>QQ voice function is more convenient, especially relatively long sentences can be directly used by voice function to save time. (S7) QQ chatting function including on-line chatting, voice-chatting and video-chatting, helps me feel more confident and open to talk with others, which in turns helps me deliver my speech in public. (S17)</i>
Learner/Learning	12	<i>We can learn from each other by sharing our speech videos in QQ group. We can get the feedbacks from uploading our speech drafts through QQ. We can find out our pronunciation problems, speech speed, etc. by recording function of QQ. (S1) For me, uploading a video of my speech in the qq group can give me information of my audience. I can get reflection on my speech by watching the video afterwards. Also, I can get the idea about whether the audience like my topic, or my speech and so on. (S4)</i>
Question 2 (<i>N</i> = 16): How did some features of QQ impede your learning of speaking?		
Instructional	0	-
Technical	12	<i>All the classmates' speech videos took too much space, which was inconvenient to view all of them, not to say save some. (S6)</i>
Learner/Learning	4	<i>All the speech videos uploaded, this may lead to uneasiness of those who didn't do a good job in their speaking performance. (S2)</i>
Question 3 (<i>N</i> = 17): What other challenges have you experienced in using QQ in the speech class?		
Instructional	0	-
Technical	6	<i>The challenge I encountered was that some video software for speeches occupied a little too much memory, which took a long time to send and receive. (S4) The biggest problem in using QQ is actually the network problem. (S12)</i>
Learner/Learning	11	<i>When accessed to QQ app on mobile phone, I will distract my concentration to read messages from my friends from focusing on our QQ group for speaking class. (S2) I would feel a little disappointed by failing to fulfill my purpose in speech completely. (S21)</i>

Discussion

The current study investigated the effects of social media-based e-portfolios on L2 students' speaking performances. Based on the findings, students who used this platform significantly improved their speaking performance during the posttest and outperformed those from the control group. With reference to earlier descriptive studies on QQ (i.e., Li, 2013; Ruan, 2013; Zhao, 2018) and e-portfolios (i.e., Chang et al., 2005; Yastibas & Cepik, 2015), the current study has complemented their methodological approach by using a quasi-experimental design in confirming the effectiveness of social media and e-portfolios as a language learning environment. By focusing on students' speaking performance, this study also extended previous reports on the positive impact of social media on students' writing performance (Barrot, 2016, 2020b), learning interest (Li, 2013), and critical literacy (Ruan, 2013) as well as language teachers' classroom

practices (Zhao, 2018). Finally, the current study theoretically advanced the previous studies by offering a framework for the use of social media as an e-portfolio platform.

Based on students' responses to the questionnaire, one possible reason for their speaking improvement is the high visibility of their performances which results in social pressure. As reported by some students, they experienced social pressure since their speaking performances would be viewed by people beyond their classroom such as their parents, friends, and schoolmates. The pressure they experienced may be rooted in their desire to preserve their ideal self that they project online (Back et al., 2010). For instance, S21 commented that he "would feel a little disappointed by failing to fulfill [his] purpose in speech completely." Similarly, S2 noted that "this may lead to uneasiness of those who didn't do a good job in their speaking performance." Nonetheless, all these anxieties that students experienced during the posting of their performances were enabling rather than debilitating.

It can also be posited that QQ's captive audience contributed to students' improved speaking performance. Unlike students from the control group whose audience was limited to their classmates and teacher, the students who used e-portfolios were aware of their 'real' audience who would appreciate, use, and provide feedback to their speeches. This awareness helped them polish and focus their speeches according to the needs and interests of the target audience. As S2 commented, "we can select the appropriate topic of speech. Then we can choose the right way of speech delivery according to our own topic." S14 added that "uploading my speech video on QQ will make me set my speech theme, content and language according to the audience."

The third factor that might have pushed the students to perform better in speaking is the interactive features of QQ. This study revealed that the interactive features of QQ have resulted in an increased level of engagement, motivation, and confidence in students. Specifically, S14 said that "I can also be inspired from the classmates' questions discussed in QQ group, which can help me better prepare for my speech." S17 expressed the same sentiment saying that "QQ chatting function including on-line chatting, voice-chatting and video-chatting, helps me feel more confident and open to talk with others, which in turns helps me deliver my speech in public." Several students also reported how these features facilitated peer and teacher feedback. For instance, S1 claimed that "We can learn from each other by sharing our speech videos in QQ group. We can get the feedbacks from uploading our speech drafts through QQ. We can find out our pronunciation problems, speech speed, etc. by recording function of QQ." S12 added that "QQ group can facilitate communication, also can get the teacher's evaluation, and we students can appreciate other's speech, which can help improve my speech ability." Other students claimed that QQ features helped them reflect more on their own performances. One of them is S2, who commented that "speech video uploading can help us realize our shortcomings in speech delivery, for example, some improper gestures, incorrect pronunciation, etc." These findings are in line with the earlier hypothesis that QQ's interactive affordances would increase students' level of engagement and motivation, which in turn contributed to the improvement in their speaking performances. The same findings were echoed by Chang et al. (2005), Li (2013), Ruan, (2013), and Zhao (2018) in their respective studies.

Like other social media platforms, the implementation of QQ as an e-portfolio platform in a speech class is not without challenges. Most of them are technical concerns, while few are related to learner/learning factors. The technical issues confronted by the students include video recording and uploading (S3, S7, and S9), typing (S3 and S4), constant system updates (S5), data memory requirement of videos (S4, S6, and S7), system incompatibility (S8), speech to text function (S13), frequent pop-ups (S15), Internet connection (S12), and storage/archiving (S13). In terms of learner/learning, some students reported concerns about distraction (S2, S12, S14, S15, S16, and S17), the appropriateness of QQ as a platform (S9, S10, and S21), their self-esteem (S2 and S9), the processing of instruction (S10), their current language skills (S8), and drafting processes (S11). These findings add up to the technical challenges reported by Li (2013) and Chang et al. (2005) in using social media as an e-portfolio platform. It is also worth noting that some participants are initially hesitant to post their performances not because of a lack of confidence but because of their sense of peer exclusivity. This means that they were not comfortable showing their work to people (family,

friends, and the general public) aside from their peers.

Conclusions

The current study investigated the viability of a QQ-based e-portfolio model in improving the speaking performance of L2 learners. The findings revealed that students who used this type of e-portfolio outperformed those from the control group. As such, QQ as an e-portfolio platform can be considered a viable alternative learning environment for L2 speaking classrooms. The results were mainly attributed to its captive audience, high visibility, and interactive features. Conversely, like any other social media as an educational tool, some challenges were reported based on how QQ was used in the study context. Thus, caution should be taken in interpreting the findings, especially when applied to other social media platforms.

Several theoretical and practical implications can be drawn from the findings. Theoretically, the findings expand the factors that may critically influence the success of any social media as a language learning environment, particularly as an e-portfolio platform. These are the captive audience, high visibility, and interactive features, which may need to be considered and manipulated to further boost the efficiency of any social media for educational purposes. On a practical note, this study provided specific procedures on how social media (i.e., QQ) can be systematically integrated into the teaching of L2 speaking as an e-portfolio platform and as a means for providing feedback and practicing self-assessment. With the use of QQ as a language learning environment, the issues of cost, required infrastructure, and government restrictions on the use of popular social media would be addressed. Nonetheless, systematic training for both students and teachers is imperative to address the reported implementation challenges. Moreover, the findings of this study provided some evidence on the need to go beyond the high-profile social media platforms (e.g., Facebook, YouTube, and Twitter) as a language learning environment, especially in territories where these platforms are prohibited.

Despite the interesting insights reported in this study, some limitations need to be acknowledged. First, the study used a limited number of participants from two English classes in a higher education context. As much as the researchers wanted to use more classes, only two English Public Speaking classes were available during the course of the study. The imbalance in the number of participants in terms of gender may have also influenced the results. Thus, future studies may expand the learning context to K-12, increase the sample size, and balance the number of participants in terms of gender to increase the generalizability of the findings. Since the study used intact groups, the possibility of differences due to chance is increased. To address this problem, future studies may use pure experimental research where samples are selected randomly for the treatment and the control groups. Finally, considering that the participants of this study are students, future studies may also focus on the perspective of teachers on using platforms such as QQ. In this way, a clearer picture of the efficiency of social media as an e-portfolio platform will be revealed. As a final note, it is undoubtedly true that Web 2.0 technologies are an essential component of any teaching-learning process nowadays. However, this technology is immaterial without pedagogy and content. Its usefulness lies not in the technology alone, but also in our ability to use it optimally.

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Appendix. Speech Evaluation Form (Lucas, 2019)

Speaker: _____

Topic: _____

Rate the speaker on each point: 5 – Excellent, 4 – Good, 3 – Average, 2 – Fair, 1 – Poor

						COMMENTS
INTRODUCTION						
Gained attention and interest	5	4	3	2	1	
Introduced topic clearly	5	4	3	2	1	
Established credibility	5	4	3	2	1	
Previewed body of speech	5	4	3	2	1	
Related topic to audience	5	4	3	2	1	
BODY						
Main points clear	5	4	3	2	1	
Organization well planned	5	4	3	2	1	
Sufficient evidence	5	4	3	2	1	
Evidence from qualified sources	5	4	3	2	1	
Reasoning clear and sound	5	4	3	2	1	
Language clear, concise	5	4	3	2	1	
Connectives effective	5	4	3	2	1	
CONCLUSION						
Prepared audience for ending	5	4	3	2	1	
Reinforced central idea	5	4	3	2	1	
Vivid ending	5	4	3	2	1	
DELIVERY						
Began speech without rushing	5	4	3	2	1	
Maintained strong eye contact	5	4	3	2	1	
Avoided distracting mannerisms	5	4	3	2	1	
Articulated words clearly	5	4	3	2	1	
Used pauses effectively	5	4	3	2	1	
Used vocal variety to add impact	5	4	3	2	1	
Presented visual aids well (optional)	5	4	3	2	1	
Communicated enthusiasm for topic	5	4	3	2	1	
Departed from lectern without rushing	5	4	3	2	1	
OVERALL EVALUATION						
Met requirements for assignment	5	4	3	2	1	
Topic challenging	5	4	3	2	1	
Specific purpose well chosen	5	4	3	2	1	
Speech adapted to audience	5	4	3	2	1	
Speech completed within time limit	5	4	3	2	1	
Held interest of audience	5	4	3	2	1	

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