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Inquiry into online learning communities: potential for fostering collaborative writing

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Abstract: This study used a community of inquiry (CoI) framework to investigate the potential in terms of fostering collaborative writing of integrating online learning communities (OLCs) with English language learning. The aim was to examine the possible impacts of out-of-class OLCs (guided by teachers) on students' collaborative English writing outcomes and learning satisfaction. In accordance with the CoI framework, an experiment was conducted and both quantitative (end-of-semester group essay scores) and qualitative (interviews and field notes) data were collected. The results indicate the teacher-guided out-of-class OLC approach to be more effective than the lecture-based approach when it comes to fostering English learners' collaborative writing. More specifically, the online approach helps students to write better group research essays, develop higher levels of satisfaction concerning their learning experiences and devote more time to the learning process. The results suggest that future studies of OLCs should examine the provision of safe and supportive learning environments intended to foster autonomous learning. Moreover, the results have a number of implications with regard to enhancing students' learning motivation in out-of-class OLCs.

Keywords: autonomous learning; collaborative English writing; community of inquiry framework (CoI); online learning communities

1 Introduction

Research suggests that the collaborative writing process offers many advantages, including higher quality documents and enhanced working relationships among group members (e.g. Colen & Petelin, 2004; Mulligan & Garofalo, 2011). However,

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not all group work results in positive learning outcomes. The success of collaborative work depends on both the shared goals and the positive interdependence of group members (Lee & Song, 2020). To date, little interest has been shown in researching how tertiary students plan and engage in collaborative writing when left alone to work on group essays. Moreover, there has been a lack of inquiry into their resulting levels of positive interdependence. Although online learning communities (OLCs) have repeatedly been reported to be effective in terms of enhancing learners' autonomy (e.g. Gao, 2007), research into how such community learning could enhance students' English writing remains rare. Furthermore, many teachers do not possess sufficient pedagogical knowledge regarding how second language (L2) collaborative writing could (or should) be taught (Renandya & Jacobs, 2017).

Following the outbreak of the Covid-19 pandemic in early 2020, all universities and schools in Hong Kong of China have switched to the use of online teaching methods for safety reasons. Interestingly, it has been suggested that learners are more focused in both online and offline environments when they engage in collaborative tasks (Egbert, 2020). As low levels of motivation in relation to students' English writing have previously been identified (Leki, Cumming, & Silva, 2008), collaborative learning could represent an effective means of increasing students' engagement in group essay writing in online settings.

The present study sought to address the above-mentioned issues by adding two key components to the community of inquiry (CoI) framework developed by Garrison, Anderson, and Archer (2010): English writing pedagogy and OLCs. Based on the amended framework, a teacher-guided out-of-class OLC approach was implemented and its effectiveness measured.

This study applied a mixed-methods approach. An experimental design was adopted to determine the extent to which students can learn L2 collaborative writing. The experimental period spanned one semester. The study design comprised an out-of-class online learning approach in an online environment that was delivered through a teacher-guided intervention. This study also examined whether teacher-guided OLC approaches can help students to learn L2 collaborative writing, whether students are receptive to such an approach and whether students' productivity increases following such an approach when compared with traditional lecture-based approaches.

2 Literature review

2.1 Collaborative writing

Collaborative writing can provide students with a higher level of motivation, valuable feedback from co-writers and opportunities for the less experienced to

improve their writing by working with more experienced writers (Mulligan & Garofalo, 2011; Qiu & Lee, 2020). Consequently, requiring students to write collaborative essays has become a prominent means of assessment in many tertiary institutions in Hong Kong of China and elsewhere. However, it has been reported that English writing can be extremely challenging for L2 learners (Santangelo, Harris, & Graham, 2007; Sun & Wang, 2020). Moreover, it has been found that English as a second language/English as a foreign language (ESL/EFL) students generally do not have sufficient confidence or interest in English writing (Leki et al., 2008; Lo & Hyland, 2007). In addition, when compared with individual writing, collaborative writing can prove more challenging because it requires the application of social interaction skills (Colen & Petelin, 2004), which many students have not yet sufficiently developed.

2.2 Online learning community

OLCs are increasingly being employed for the professional development of teachers, for creating knowledge-sharing settings (e.g. medical support groups or corporate helpdesks) and for formal education purposes (Chang, 2003; Person, 1998).

Rooted in social constructivism and benefiting from the availability of appropriate technology (Herrington & Oliver, 2000; Palloff & Pratt, 1999), OLCs represent a key feature of online learning because they facilitate interaction during (and engagement in) collaborative learning (Jiang & Zhang, 2020). Furthermore, OLCs have been suggested to provide learners with valuable opportunities to meet on a regular basis, collaborate with fellow students and improve their knowledge through real interactions (Wu, Hsieh, & Yang, 2017). Haythornthwaite, Kazmer, Robins, and Shoemaker (2000) asserted that learners feel less isolated in learning communities that incorporate online learning contexts. Additionally, Dede (1996) stated that membership of a community promotes support from other learners, speedy information exchange, collaborative learning among group members, dedication to achieving group goals and satisfaction with the efforts and procedures of the group.

As suggested by Wenger (1998), strong learners cooperate with weaker learners in OLCs, which allows them to progress together in different respects. In a learning community, “newcomers” become more proficient in things they practice through collaborative learning with others who also belong to the community. Wenger’s (1998) view is rooted in a social learning perspective, which considers learning to take place when people observe others in the group (Merriam & Caffarella, 1991). Moreover, from Wenger’s (1998) perspective, the input of recognised

experts is paramount when it comes to building a sustainable community of practice because they can help to nurture less experienced group members.

2.3 Community of inquiry framework

The CoI framework has been widely employed by researchers to examine and evaluate learning communities (Garrison, et al., 2010; Garrison, et al., 2010). Consistent with the approach of Dewey (1959), who stated that education represents a collaborative reconstruction of experience, Garrison (2011) has described a CoI as “a group of individuals who collaboratively engage in purposeful critical discourse and reflection to construct personal meaning and confirm mutual understanding” (p. 2). There are three key elements within the traditional CoI framework, namely social presence, cognitive presence and teaching presence (see Figure 1).

According to Garrison, et al. (2000), social presence refers to an individual’s perception of themselves as a socially and emotionally real person within a community. Through students’ emotional expressions, group cohesion and open communication, social presence can be exhibited in a virtual community.

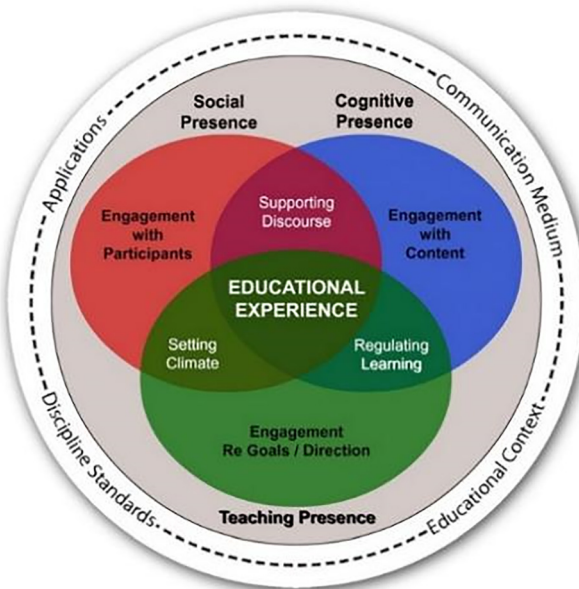


Figure 1: Community of inquiry framework (Athabasca University, 2021).

Furthermore, social presence is considered a key element of collaboration because it can serve to instigate, sustain and support critical thinking within learner communities (Garrison & Anderson, 2003). By contrast, cognitive presence represents the extent to which individuals are able to construct meaning through reflection-related activities and inquiry within a community (Garrison, 2011). From triggering an event through to exploration, integration and, finally, identifying a resolution to a situation or problem, learners can achieve meaningful and deep learning within a community (Garrison, et al., 2010). Moreover, Kanuka and Garrison (2004) claimed that cognitive presence is the core element of higher learning. Finally, teaching presence pertains to the capacity to design, facilitate and direct social and cognitive processes in order to achieve educationally meaningful and personally worthwhile learning outcomes (Anderson et al., 2001). In addition, it is commonly accepted that teaching presence plays an important role in engendering feelings of community, satisfaction and perceived learning (Garrison, 2007).

As can be seen in Figure 1, the three types of presences in the CoI framework overlap and are interdependent. Furthermore, prior studies have indicated that appropriate teaching presence and social presence levels can result in higher levels of cognitive presence, which can lead to the attainment of learning outcomes (e.g. Garrison, et al., 2010; Shea & Bidjerano, 2009).

Previous studies have reported the educational value of OLCs in terms of enhanced class participation and improved academic outcomes (e.g. Lai, 2015). A limited number of studies have also indicated that successful implementation of an OLC relies on an experienced “recognised expert” (often a teacher or facilitator), as highlighted by Gao (2007) and Wu et al. (2017). Although many researchers have emphasised the importance of recognised experts in relation to OLCs (e.g. Sun, Franklin, & Gao, 2015), few empirical studies have clearly demarcated the role of teachers within OLCs beyond the classroom (Lai, 2015). In addition, it is important to investigate why teachers should spend time on out-of-class OLCs as well as what strategies they could adopt to facilitate the sustainable development of OLCs beyond the classroom. Unfortunately, only a very limited body of research in the field of English language education has involved the rigorous study of whether (and how) a teacher’s influence can enhance students’ collaborative English writing skills by engaging them within an OLC.

Despite sporadic evidence existing in a few studies concerning language education (e.g. Shea, Li, & Pickett, 2006; Wu & Ma, In press; Wu et al., 2017), no conclusive or generalisable findings regarding the question of whether OLCs can foster academic English writing can be retrieved from the prior literature. Therefore, there exists a pressing need to investigate whether OLCs could yield benefits for English writing as well as to determine the extent to which a teacher’s influence

could enhance the learning community. Accordingly, in the present study, an OLC for academic English learners was implemented at a post-secondary institution in Hong Kong of China in order to examine its pedagogical potential in relation to fostering collaborative writing, which represents a valuable contribution to the research on OLCs.

The research questions that guided this study were as follows:

- 1) Will the implementation of an OLC help students to improve their collaborative writing?
- 2) What were the students' perceptions of their learning experiences in the out-of-class OLC?
- 3) What is the teacher's role in terms of scaffolding collaborative academic writing in an OLC?

3 Methodology

3.1 Research design

This study adopted a mixed-methods approach to examine the impacts of implementing OLCs on students' collaborative English academic writing, with a particular focus on engaging students in online learning beyond the classroom through teachers' guidance and instruction. Both qualitative and quantitative data were collected in order to gain insights into the experiences of English language learners within OLCs. The independent variable was the employed learning approach, which included two different formats of instructional designs: an experimental group of 25 students who experienced an OLC and a control group of 26 students who experienced a traditional lecture-based approach. Moreover, the dependent variable was the students' collaborative English writing performance (as measured using an end-of-semester group essay). In addition, the students' learning perceptions were measured through semi-structured interviews, an end-of-semester questionnaire, instructor field notes and weekly update emails.

3.2 Participants

The participants in this study ($N = 51$) were recruited from two full classes of science students who were taking a compulsory academic English course at a post-secondary institution in Hong Kong of China. The students met weekly for two 120-min periods via Microsoft Teams, with each student having access to at least one digital device (e.g. a smart phone, personal computer or iPad) at home. The

students were recommended to use their own digital devices for the classes. All of the participants were first-year science majors aged between 18 and 20 years who had learned English for an average of 12 years. None of the participants had any OLC experience prior to taking part in this study.

Prior to the instructional intervention, all of the enrolled students had taken the Hong Kong Diploma of Secondary Education Examination (HKDSE) in English, which measured their receptive skills. The results revealed that all of the participants (100%) had achieved level 2 in terms of their English writing. According to the Hong Kong Examinations and Assessment Authority (HKEAA) (2012), an overall International English Language Testing System (IELTS) band 5 score is equivalent to a level 2 score in English on the HKDSE. This indicated that all 51 participants (100%) were upper-intermediate English language learners at the IELTS band 5 level. As there were no significant group differences with regard to the participants' English proficiency levels, the students were randomly assigned to the experimental and control groups and the original class size was maintained. With approval from the college, the students were allowed to transfer to a different group. Ultimately, however, all of the students stayed in the group to which they were originally assigned.

An out-of-class OLC was specifically implemented for the experimental group. The students mainly used WhatsApp with their smart phones, supplemented with Moodle, Microsoft Teams and WhatsApp calls to engage in the OLC outside of class. As WhatsApp has been widely adopted in Hong Kong of China (Davis, 2018), the students were considered to be familiar with the nature of participation in the WhatsApp groups. In addition, as prior research has shown the WhatsApp medium to have the potential to enhance language learning (Mackay, Andria, Tragant, & Pinyana, 2021), WhatsApp has been recommended by teachers as the main platform for forming OLCs with mobile devices (e.g. smart phones). The class instructor provided instructions to assist the students in the setting up and sustaining the out-of-class OLC. Details of the instructor's guidance can be seen in Table 1. In class, both groups participated in task-based learning activities and completed the end-of-semester group essays.

3.3 Procedure

As shown in Table 1, this study was conducted over a period of 13 weeks, with the study period being divided into three phases: (1) a preparation phase for group formation (Stage I), (2) an instruction phase for the implementation of the OLC beyond the classroom (Stages II–V) and (3) an evaluation phase for the overall assessment of the teaching and learning (Stage VI).

Table 1: Research phases and procedures.

	Experimental group (with OLC)	Control group (without OLC)
Stage I	N = 25	N = 26
Preparation phase	<ul style="list-style-type: none">Conduct in-class ice-breaking games to help students learn more about others in the classBrief group research essay guidelinesIntroduce effective group formation tips	<ul style="list-style-type: none">Conduct in-class ice-breaking games to help students learn more about others in the classBrief group research essay guidelinesIntroduce effective group formation tips
Weeks 1–3		
Stage II	N = 25	N = 26
Instruction phase	<ul style="list-style-type: none"><u>Implement teacher’s guidance in OLC beyond the classroom</u>Discuss the strengths and weaknesses of modified group essay samples from previous classesAdminister group essay outline submission<u>Discussion of the essay samples among group members is recommended in the OLC</u>	<ul style="list-style-type: none">Discuss the strengths and weaknesses of modified group essay samples from previous classesAdminister group essay outline submission<u>Discussion of the essay samples among group members is recommended in class</u>
a) Group essay outline submission		
Weeks 4–7		
Stage II	N = 25	N = 26
Instruction phase	<ul style="list-style-type: none">Upon request, private group essay outline consultation is provided by teacher to each group via Microsoft Teams beyond the classAdminister group essay first draft submission	<ul style="list-style-type: none">Upon request, private group essay outline consultation is provided by teacher to each group via Microsoft Teams beyond classAdminister group essay first draft submission
b) Group essay first draft submission		
Weeks 8–9		
Stage II	N = 25	N = 26
Instruction phase	<ul style="list-style-type: none">Each student comments on their peers writing in class with a detailed checklist related to format, organisation, structure and APA styleUpon request, private collaborative draft essay consultation is provided by teacher to each group via Microsoft Teams beyond classAdminister group essay second draft submission (optional)	<ul style="list-style-type: none">Each student comments on their peers writing in class with a detailed checklist related to format, organisation, structure and APA styleUpon request, private collaborative draft essay consultation is provided by teacher to each group via Microsoft Teams beyond classAdminister group essay second draft submission (optional)
c) Group essay second draft submission		
Weeks 10–12		
Stage II	N = 25	N = 26
Instruction phase	<ul style="list-style-type: none">Upon request, private collaborative essay consultation is	<ul style="list-style-type: none">Upon request, private collaborative essay consultation is
d) Group essay final		

Table 1: (continued)

	Experimental group (with OLC)	Control group (without OLC)
version submission	provided to group(s) via Micro-	provided to group(s) via Micro-
Weeks 12–13	soft Teams beyond class	soft Teams beyond class
	– Administer group essay final	– Administer group essay final
	version submission	version submission
Stage III	<i>N</i> = 25	<i>N</i> = 26
Evaluation phase	– End-of-semester survey	– End-of-semester survey
Week 13 and beyond	– Interviews	– Interviews

For both groups, the preparation phase took place during the first three weeks of the intervention. Moreover, in this phase, both groups received group formation tips from the instructor. The instructor emphasised the importance of collaborative writing in Week 1 of the semester and also informed the students that they were required to form the groups for their group essay project by Week 3. The students understood the goals in terms of producing the group essay. For both groups, ice-breaking games were played during the first class to enable the students to gain a better understanding of their peers’ personalities. From Week 2 until the end of the semester, the instructor used synchronic Microsoft Teams meetings to deliver the scheduled lessons in accordance with the syllabus, allowing the students to choose their own group colleagues and exchange WhatsApp numbers to facilitate communication beyond the scheduled synchronic Teams meetings. Detailed sub-tasks and a suggested action plan with a timeline (see Appendix I) were introduced to the students prior to the group formation. The instructor monitored the progress of each essay group and used phone calls, Teams meetings and Moodle to facilitate student engagement. The guidelines concerning the formation of effective groups were adapted from the case study learning resources which were developed by Professor Claire Davis (2001), and their importance was emphasised to the students during the Teams meetings.

The conditions created for the control group (CG) comprised a traditional lecture-based programme that involved task-based learning activities in class and the completion of an end-of-semester group essay, which was the same as in the experimental group (EG). The learning materials presented to the CG were the same as those given to the EG. In addition, the requirements and marking rubrics for the group essays were the same for the two groups. The main difference between the EG and the CG was the provision of a teacher-guided OLC outside class time for the former. The differences between the two groups are underlined in Table 1.

Table 2: Summary of instructional design for both groups.

	Experimental group (with OLC) (N = 25)	Control group (without OLC) (N = 26)
Online teaching	Identical materials delivered in weeks 1–13	Identical materials delivered in weeks 1–13
Teacher-guided out-of-class OLC	Group formation, outline and draft consultation, revision (Weeks 4–13)	N/A
Duration of out-of-class OLC	Weeks 4–13	N/A
Digital tools involved	Microsoft Teams, Moodle, mobile-assisted WhatsApp	Microsoft Teams, Moodle, mobile-assisted WhatsApp
Content delivery	In-class and out-of-class materials delivered mainly online via synchronic Microsoft Teams	In-class materials delivered mainly online via synchronic Microsoft Teams

Table 2 provides a summary of the study’s instructional design based on the two sets of instructions given to the two study groups (EG and CG). The data collected during the experimental phase included the end-of-semester research essay assessments, end-of-semester student feedback surveys, instructor field notes and weekly updates. Finally, the participants in both groups were invited to take part in follow-up interviews on an individual basis after they had received their grades.

3.4 Data collection and analysis

The data collection and analysis methods used in the present study are briefly described in the following sub-sections.

3.4.1 End-of-semester collaborative research essay

The group research essay task was designed to assess the students’ ability to use English effectively in academic contexts. It was also designed to assess their teamwork skills. In the spirit of collaboration and mutual support, each group completed a series of steps, including choosing a subject area related to science and technology on which to focus, writing an essay outline, researching for primary and secondary information and developing the research findings and ideas into a complete academic essay. The final version of each group research essay was independently assessed by one of the authors of this paper and another lecturer

who taught the same course using the same marking rubric, which was designed by all lecturers who taught the English course. Pre-marking exercises and internal moderations were conducted to ensure both fairness and consistency. The highest possible score for each research essay was 100 points. The submission of the completed sub-tasks (such as the essay outlines) was also recommended; however, no marks were deducted if a group did not submit any of the recommended sub-tasks on time.

3.4.2 Field notes and weekly updates

To answer the third research question (What is the teacher's role in terms of scaffolding collaborative academic writing in an OLC?), one researcher-author maintained teaching notes and sent out weekly update emails to the students in both groups throughout the semester to record the teacher's activities with regard to assisting the students' collaborative academic writing. The weekly updates and reminder emails were intended to guide the students and regulate their learning, while also providing the students with a chance to keep up with the main content learned during the previous week and a list of the major tasks they would face in the coming week. Instructions regarding the running and maintenance of the OLC were sent on a weekly basis to the EG through Moodle emails.

3.4.3 Study experience questionnaire

A 25-item modified CoI survey was administered to the students in both groups at the end of the course in order to gauge their experiences throughout the whole semester. The questionnaire responses were analysed by the research team to evaluate the students' learning experiences and their satisfaction regarding both the course and their instructor. The questionnaire mainly comprised a series of five-point Likert scale items (items Q1–Q23). The first part of the questionnaire (items Q1–Q7) invited the students to rate their level of satisfaction with the subject learning. The second part (items Q8–Q18) asked the students about their experiences with the lectures, while the third part (items Q19–Q23) asked the students about their experiences with the tutorials. The final part of the questionnaire (items Q24–Q25) contained open-ended questions intended to determine the students' attitudes concerning the course.

3.4.4 Semi-structured interview

To elicit the students' perceptions of the collaborative writing experience, the researchers invited students from both groups to attend interviews. The aim was to

further understand their perceptions concerning the learning. Six students from the EG agreed to be interviewed, whereas no responses were received from the CG. Therefore, interviews were only conducted with participants from the EG. The semi-structured interview questions are available in Appendix II. A stratified sampling strategy was adopted for recruiting the interviewees. Based on the course's assessment record, two students who were awarded an A or B+ as their overall grade, two who were awarded B grades and two who were awarded C grades were invited to serve as the focal participants, with the aim being to ensure that different groups of students were equally represented. After the subject grades were released, the six focal participants were invited to voluntarily take part in the follow-up interviews. Each interview lasted for approximately 40–50 min and was audio-recorded for subsequent transcription and analysis purposes.

With regard to the data analysis methods, the quantitative data (i.e. the research essay scores of the two groups) were analysed using Statistical Package for the Social Sciences (SPSS) version 26 statistical software. The qualitative data (i.e. the six interview transcripts, responses to the open-ended items from the questionnaire, field notes and weekly updates) were coded based on the steps commonly used when analysing qualitative data to generate possible themes related to the research questions (Creswell, 2012). These analytical results were also triangulated across all of the data sources and then verified using a member-checking technique to ensure the research was reliable and valid (Birt, Scott, Cavers, Campbell, & Walter, 2016).

4 Results

An overall analysis of the comparison between the two groups' end-of-semester collaborative research essay scores, student experience survey results, semi-structured interview responses, instructor's field notes and weekly update emails revealed the following. The use of WhatsApp as an OLC beyond the classroom platform for facilitating collaborative academic writing fostered a collaborative online learning environment. Furthermore, it stimulated students toward improved time management and enhanced learning motivation as they were urged to complete the optional learning tasks on time and to seek teacher consultation where necessary. The results of the study will now be presented in relation to the research questions.

Table 3: Independent samples *t*-test of the research essay scores for the experimental and control groups.

	Group	Mean	<i>df</i>	<i>t</i>	<i>p</i>
Research essay scores	Control group	62.48	52	1.84	0.038 ^a
	Experimental group	69.91			

^a*p* < 0.05.

4.1 Will the implementation of an OLC help students to improve their collaborative writing?

This question sought to determine whether the use of OLCs could help students to improve their academic writing performance. The end-of-semester collaborative research essay scores served as the primary measurement. Table 3 presents the independent samples *t*-test results concerning each group’s research essay scores.

From the table, it can be observed that the mean research essay score for the EG was higher than that for the CG (69.91 and 62.48, respectively). Furthermore, the *t*-test demonstrated that the difference between the two groups was significant (mean difference = 7.43; *p* < 0.05). This suggests that the EG (who experienced the out-of-class OLC approach) performed better in relation to the group research essay than the CG (who experienced a traditional lecture-based approach), even though the average of both groups’ writing performance on the HKDSE was the same and both groups received the same teaching instructions and consultation opportunities. Taken together, these results suggest that the OLC approach facilitated the students’ academic writing when compared with the traditional lecture-based approach.

4.2 What were the students’ perceptions of their learning experiences in the out-of-class OLC?

The purpose of this question was to examine the students’ perceptions of their learning experiences within the OLC. To achieve this aim, data from the semi-structured interviews, study experience questionnaire (Q1–Q4 and Q6), instructor field notes and weekly update emails were used. Moreover, the students’ responses to the questionnaire-related items were analysed as representative of their perceptions of the subject and their satisfaction level as associated with their learning experiences.

From the data, 93.4% of the participants from the EG expressed satisfaction with the subject learning, which is considered a fairly high rate. Despite the loss of face-to-face interactions during the semester, the out-of-class OLC approach was well received by the participants.

The results of the qualitative analysis of the interview data, field notes and weekly update emails were used as the main data when answering the second research question. Based on the analyses of the semi-structured interviews (which explored participants' perceptions of their study experiences within the OLC), field notes and weekly update emails, five closely related recurring themes were identified: 1) engagement with the OLC; 2) effectiveness of the OLC approach in terms of the learning outcomes; 3) lively interaction and constructive feedback in the OLC; 4) perceived support in the OLC; and 5) autonomous learning.

4.2.1 Engagement with the OLC

When compared with traditional lecture-based instruction, which involves most of the class time being spent listening to lectures (with limited time available for questions and answers), the interview participants reported far more engagement and more effort exerted in relation to the OLC approach. Indeed, one A-grade student noted, "I spent more time in the OLC approach as I was pushed to look for different answers by myself. I could not receive instant feedback from the instructor, so I had to look for solutions by myself first". Another B-grade student reported, "I spent more time in learning because I saved some time in traffic. In addition, I was more attentive because I didn't feel sleepy". The field notes indicated that the students who always raised questions during the synchronic Microsoft Teams meetings were the most active in the out-of-class OLC. Moreover, some of them voluntarily acted as liaisons for their research essay groups. Furthermore, by spending more time and exerting more effort in the out-of-class OLC, their groups received higher (i.e. more satisfying) scores for the group essays.

4.2.2 Effectiveness of the OLC approach in terms of the learning outcomes

With regard to cognitive presence within the OLC, the interview participants reported that although the conventional lecture-based approach might prove more helpful in improving their listening comprehension, the OLC approach enhanced their writing skills more effectively and efficiently. One B-grade student noted, "Through WhatsApp, we can spot grammatical and spelling mistakes, which is helpful for my writing". Other students mentioned that they mainly used English when discussing the group essays over WhatsApp; hence, they improved their grammar and sentence-writing skills. The two students who were awarded a grade

C overall expressed missing the days when they could see their lecturers in person because they were then pushed by the lecturers to do exercises. However, they agreed that their writing had improved steadily. These two students' group essay scores were satisfactory,¹ as they had good group colleagues and were pushed to learn by peer pressure.²

4.2.3 Lively interaction and constructive feedback in the OLC

During the interviews, with regard to social presence, the students mentioned that they enjoyed interacting with their peers in the OLC, as most of their fellow students were active online. One B-grade student noted, "I asked my teammates when I didn't understand and also asked their opinions when doing projects. It is useful and inspiring having different perspectives from group mates. I think most of their points were constructive". Another A-grade student commented, "Working with a group is a process of learning. It is not so easy to arrange a team meeting. We need to think of some methods to do the work. Sometimes there are free-rider problems". It is worth noting that the two students who received an overall grade C did not mention whether they were active in the OLC during their interviews, although the field notes indicated that they attended all of the consultations with their peers.

4.2.4 Perceived support in the OLC

In terms of teaching presence, all of the interview participants agreed that a supportive learning environment was essential in the OLC, which could emanate from the teacher or from peers. An interviewee who was awarded an overall grade C noted, "I welcome support as I am sad and pained when I missed something, especially something related to an assignment. I like support, especially when it is related to an assignment". One student who received an overall grade B indicated that some rather introverted students from other classes were helpless when faced with problems during the online learning. Thus, peer and tutor support were important for their success. Finally, all of the interview participants mentioned that timely support in the OLC was extremely important when it came to maintaining learner curiosity.

¹ According to the college's quality control team, achieving a grade C in the English subject is equal to achieving level 3 in English in the HKDSE (W. Tsang, personal communication, February 10, 2021).

² (65/100, grade B) (or even very good, as they achieved 74/100 in their group essay, which is grade B+).

4.2.5 Autonomous learning

The four students who received an overall grade B or higher regarded themselves as autonomous learners because they took responsibility for their own learning activities. One interviewee from this group of four noted, “I stayed behind after class to ask questions and review notes to solve the confusing stuff when I was involved in the OLC approach”. Another student stated that he was influenced by a peer who was highly proactive, which resulted in him being more willing to engage in the writing project in order to complete the assignment. Furthermore, the two students who received an overall grade C mentioned that they did not act as autonomous learners during face-to-face learning sessions; however, when the OLC necessitated the maintenance of social distance in terms of teaching and learning, they could still hand in their assignments on time (even without pressure from the teacher). In addition, they could even complete some non-compulsory writing tasks with help from their OLC colleagues. In other words, they became more responsible for their group essays. With regard to the reasons for this, they confessed that it was because peers in their OLC groups invited them to join the voluntary online consultations with the instructor and they did not want to be considered a “free rider”.

4.3 What is the teacher’s role in terms of scaffolding collaborative academic writing in an OLC?

With regard to teaching presence, the qualitative data revealed a clear trend in that all of the interview participants welcomed well-structured and timely instruction and feedback from their instructors during online learning. One interviewee noted, “I prefer comments from teachers. When doing projects, we did check the others’ writing, but that was all. We seldom edited others’ writing too much as we wanted to show respect. All we can do for peers is just remind them. Such peer support is not helpful in achieving improvement as we are all of a similar level”. In a similar vein, Ma (2020) revealed that peers tend to provide more positive than negative comments in an effort to maintain politeness when writing collaboratively.

Another student mentioned that as the teacher had divided the group writing project into different stages, they knew what they needed to accomplish each week. In addition, to enjoy the benefits of the consultations provided to those groups that had completed the sub-tasks, this student and his peers forced themselves to plan their time well. Timely feedback from teachers also helped the students to monitor their progress in relation to collaborative writing, resulting in them feeling more confident about their group’s final essay submission.

Furthermore, the teaching notes showed that the instructor needed to act as a facilitator in both the scheduled Teams meeting and the out-of-class OLC. The students enjoyed the ice-breaking games, which were designed by the teacher, while most students in the EG were willing to switch on their microphones and answer questions in English during the scheduled classes, which were delivered via Teams. By contrast, only a few extroverted students from the CG were willing to talk in English during the synchronic Teams meetings. Sometimes, students from the EG sent text messages to the instructor privately when they found their group mates were not contributing proportionally and the instructor got involved to help solve the problem. Due to receiving a request for help, the instructor had to assist one group of students in the EG by hosting the first and second online meetings and monitoring the progress of each group member to ensure the out-of-class OLC was operating continuously. In terms of the CG, although the instructor was also willing to provide assistance outside of the class setting, only a few students sent emails and only one group completed two optional essay consultations. The instructor felt frustrated when only a few students asked question in and after class. It appears that the students in the CG were not interested in English learning because the interaction between them and the instructor was limited.

5 Discussion and conclusion

The aim when guiding students to engage in an OLC beyond the classroom was to enhance students' collaboration and interaction in relation to the group essay writing process and help them to improve their writing. Due to the Covid-19 pandemic, face-to-face teaching has been suspended, meaning that additional threats to learning success such as fewer interactions have emerged (Moorhouse, Li, & Walsh, 2021). For this reason, collaborative learning has become more challenging than ever. The present study documented how English teachers can guide an out-of-class OLC with easily available technological tools (such as WhatsApp) and also investigated how the OLC can be used as a strategy for fostering collaborative English writing. The results of this study indicate that despite the challenges posed by discontinued face-to-face interactions, out-of-class OLCs could be adopted as an effective strategy for enhancing learners' motivation, provided instructors are able to scaffold the continuous operation of OLCs. Given the specific context of this study and the limited sample size, it is not intended that the findings be generalised. Instead, the major strength of this study lies its innovative use of a beyond-classroom OLC approach designed by the instructors to enhance students' collaborative writing.

This study contributes to the literature by presenting three phases of teacher instruction (see Table 1) through out-of-class OLCs using the CoI framework. The findings of the study indicate that when building an OLC, teaching presence plays an important role in facilitating collaborative learning, especially when social presence (e.g. ice-breaking games) is deployed. Furthermore, in line with the findings of other studies (e.g. Bai, 2018; Zhang, Gu, & Hu, 2008), this study highlights the positive relationship between learners' adoption of language learning strategies and their L2 proficiency. Drawing on the findings of this study, we suggest that it would prove worthwhile for language educators to become involved in out-of-class OLCs because doing so would allow students to gain more social interaction opportunities and experience higher levels of satisfaction during the learning process. Similarly, it would allow the language instructors to gain a higher level of job satisfaction, which should compensate for the extra time they would have to spend on the out-of-class OLSSs.

To the best of our knowledge, this is the first study to examine the application of mobile-assisted WhatsApp groups to collaborative English writing within a CoI framework. The findings indicate that learners became more connected through the out-of-class WhatsApp groups, which makes them more willing to interact with their teacher. In this study, when engaged in the OLC, the students showed a high level of learning motivation because they voluntarily joined in with the draft submission and consultation work. This meant that they could be cultivated as autonomous learners. This finding is consistent with the study by Merriam and Caffarella (1991), who noted that learning takes place when people observe others in the group, a practice that helps students to learn more effectively or gain new skills. Furthermore, as discussed in the finding section, the students in the EG submitted their outline, first draft and second draft of the essay in order to benefit from the non-compulsory consultations with the teacher, whereas only one group in the CG finished their draft in time to join the writing consultation. As shown in Table 1, the ice-breaking games conducted during Week 1 provided an opportunity for the students to learn more about their peers. After forming groups, they exchanged WhatsApp messages and made phone calls, which helped them to perceive themselves as real people in the OLC—a place where they felt safe to express and exchange their views. As described in the framework introduced by Garrison et al. (2000), this type of social presence plays a positive role in an OLC. Moreover, the interactions via WhatsApp messages and phone calls reassured the students that they were in a safe and supportive environment in which they could learn from their peers. Cognitive presence was also demonstrated in the out-of-class OLC. The end-of-semester research essay scores indicate that the students in the EG achieved better learning outcomes in terms of collaborative essay writing, even though their overall performance in English on the HKDSE was exactly the

same as that of the students in the CG. The findings illustrate the interdependence of the teaching, social and cognitive presences in online collaborative English writing communities. In addition, they indicate that a combination of appropriate teacher scaffolding and positive contact with peers can result in better learning outcomes. These findings extend prior research regarding the application of CoI frameworks in educational contexts (e.g. Garrison et al., 2000). Given the positive impacts of such a pedagogical approach on collaborative writing, language educators may apply it to other aspects of language teaching, thereby enhancing the overall satisfaction and performance of students.

The findings of this study are timely. In fact, the findings concerning the OLC approach embodied in the collaborative draft writing and communication via WhatsApp in this study are in accordance with the findings of previous studies (e.g. Lotze, 2019) that OLCs can foster autonomous learning. Many studies have shown that a willingness to learn is an important predictor of satisfactory learning outcomes (e.g. Fung, 2010; Yu, 2021). Accordingly, to achieve better learning outcomes, we suggest that learners need to exhibit a high level of motivation in relation to distance learning, as “students studying off campus need to take more responsibility for their own learning” (Hagel & Shaw, 2006). An OLC provides a useful domain in which members can become more motivated, especially when recognised experts (or strong learners) are available and when the OLC is active and sustainable.

Educators in the 21st century experience a variety of contexts, such as traditional face-to-face classroom settings, computer-based learning and a blend of the physical classroom and online environment. New technologies and pedagogies need to be adopted to meet the changes taking place in the new century. With teacher guidance and appropriate social interactions, an OLC could be a promising approach for fostering collaborative learning. Future studies can build on the findings of this study and investigate the effects of cultivating social presence through positive contact, interpersonal attraction (Garrison, 2016), intimate relationships (Lee & Song, 2020) or simple chit-chat in order to enhance the autonomous learning of language learners. The implementation of different types of OLCs combined with other innovative pedagogies could also contribute to the knowledge base concerning English language teaching, thereby helping this area to grow in both depth and breadth.

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Appendix I

The suggested action plan (with a timeline) is as follows:

1. After forming groups, the students need to outline, plan and craft their first drafts. Each group is required to submit a detailed outline to the instructor in Week 7.
2. Within a week of receiving each group's essay outline, the instructor will provide detailed comments on its "unity", "coherence" and "support".
3. Individual essay outline consultations will be provided to each group via Teams in Week 8. Major revisions will be required for any problematic group(s).
4. A modified group essay from a previous year's group will be provided through Teams along with a brief group discussion of its strengths and weaknesses. Discussion among group members is recommended in the online learning community via a mobile-assisted WhatsApp group.
5. Each group will write their first draft and submit it to the instructor after three weeks of outline consultation. A few group(s) might need to revise their drafts because the specific details cannot support the topic sentences. Group members will need to discuss the solution among themselves and ask for the instructor's clarification when necessary.
6. In Week 9, during the synchronous Teams meeting, each person will comment on their group mates' writing. They should be reminded that the group essay will be assessed as ONE essay and that each member of the group will receive the same grade for the assessment, so helping others to improve the quality of the group essay is actually helping themselves.
7. Detailed checklists will be provided to each group to help the students during the peer reviewing process check that the correct format, organisation of ideas, essay structure and American Psychological Association (APA) referencing style have been used.
8. Based on comments from peers in the group, each group will be given a week to review their second draft and submit a third draft to the instructor for comments (Week 10).
9. The instructor will check the second draft and point out any structure, organisation and/or style errors, although they will leave the language errors for peer evaluation (Weeks 10–11).
10. Based on the instructor's feedback, each group will revise its third draft and submit a final version for grading (Week 13).
11. Each group will receive a grade based on the overall effort and the quality of the essay (Week 15 or beyond).

Appendix II: Semi-structured interview questions

1. Comparing your experience with the lecture-based teaching approach in language learning to the mobile-assisted online learning community approach you had in AEII, Sem II, 2019/20, could you describe your own learning experiences by answering the following 5 sub-questions:
 - 1.1. How much time and how many efforts you spent on a traditional lecture-based language learning? How much time and how many efforts you spent on a mobile-assisted online learning community approach?
 - 1.2. How was your learning outcome of a traditional lecture-based language learning? How was your learning outcome of a mobile-assisted online learning community approach?
 - 1.3. What is the teaching method of a traditional lecture-based language learning? What is the teaching method of a mobile-assisted online learning community approach?
 - 1.4. Are you an autonomous learner (self-directed learning, be responsible for your own learning outcomes) with a traditional lecture-based language learning approach? Are you an autonomous learner (self-directed learning, be responsible for your own learning outcomes) with a mobile-assisted online learning community approach?
 - 1.5. Lecture-based teaching approach versus mobile-assisted online learning community approach you had in AEII, which one do you prefer?
2. What was something specific (e.g. course content, course activity, discussion with other participants, teacher's presence, problem solving, self-reflection) that you enjoyed about this learning experience?
3. What were some specific concerns or difficulties that you had during this learning experience?
4. Did you observe any changes in your or others' attitudes toward this learning experience? What are some specific examples? How did they happen, and why?
5. How did you communicate with your peers when you were doing your group research project? Have you ever encountered any problems?
6. In your opinion, is a supportive learning environment important in an online learning? Why/why not? Please provide evidence to support your view.
7. In your view, what support would you like to receive from your teacher and peers in an online learning community for improving writing?
8. Is there any other important information that you would like to share with us?

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