

# Getting Through ZPD in Collaborative Writing: The Case for Online Learning

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## Abstract

The writing process is a development that progresses as a problem-solving activity by the writer to make the best decisions to convey his/her ideas to the audience. Writing uses both oral and written language to complete. One addition to online writing is collaborative writing. However, transitioning from individual writing to group writing will put the learners in the zone of proximal development. In addition to that, the emergence of online mode has made collaborative work problematic. This study is done to investigate the perception of language learners on online group writing. Specifically, this study is done to explore how online collaborative writing can reduce the zone of proximal development in learning. The sample chosen was undergraduates who attended a semester of academic writing course. They were taught to write collaboratively via online mode. At the end of the semester, they responded to the survey prepared. The survey has 38 items (not including the demographic profile in the survey. Section A has 13 items on Technology and Tools, section B has 13 items on Knowledgeable others section D has 12 items on Interaction. Findings revealed the zone of proximal development (ZPD) is facilitated through the inclusion of technology and tools, the presence of more knowledgeable others and also through interactions. Findings of this study have interesting implications in the teaching of collaborative writing via online.

**Keywords:** Academic Writing, Online Learning, Technology, More Knowledgeable Others, Interaction.

## Introduction

### Background of Study

Writing is a process and it involves more than just transferring oral thoughts into written thoughts. Smith (2022) defines academic writing as "writing which communicates ideas, information and research to the wider academic community". It needs to be (a) structured, (b) evidenced, (c) critical, (d) balanced, (e) precise, (f) objective and (g) formal. It has a clear structure. One cannot claim to have completed academic writing if he/she does not follow a clear structure (perhaps it is then just called personal, creative or simply-writing!). Opinions and arguments should be supported by evidence. Academic writing needs to do more than just re-tell or describe. The academic writer needs to analyse and evaluate the information that is written. Next, academic writing needs to be balanced. This includes giving fair

consideration to all sides of an issue. Academic writing needs to be precise. This is done through the use of clear and precise language to ensure the audience gets the message intended. Academic writing needs to be objective, which means the emphasis of the writing is placed on the argument and information, rather than on the writer's opinion. Finally, academic writing is formal and uses language expressions that are deemed to be conventionally appropriate.

The nature of the writing process is the discovery of knowledge. Grabe and Kaplan (1996) defend that writing is a process of discovery. The writing process is a development that progresses as a problem-solving activity by the writer to make the best decisions to convey his/her ideas to the audience. Writing uses both oral and written language to complete. According to Brown (2000), writing is a process of thinking. Writers go through the writing task by making many decisions on the task, the content and also on how to go about writing what he/she has. Flower and Hayes (1980) further support that the composing process is a process that is interactive, intermingling, and potentially simultaneous. That is why when writing is done as a teamwork, writers get the opportunity to express their ideas and thoughts.

It is common to have conflicts during class interactions; however, these interactions are a natural part of the learning process. With reference to Figure 1, Rahmat (2020) reports that class interaction may begin with disagreement, or the team members may compete to get their ideas accepted. Overtime, due to the constraints of time and the requirements of the task, the members may learn to accommodate the view of others to avoid further disagreement. Finally, when the group is focused on completing the task, they end up compromising and collaborating on making the task a success.

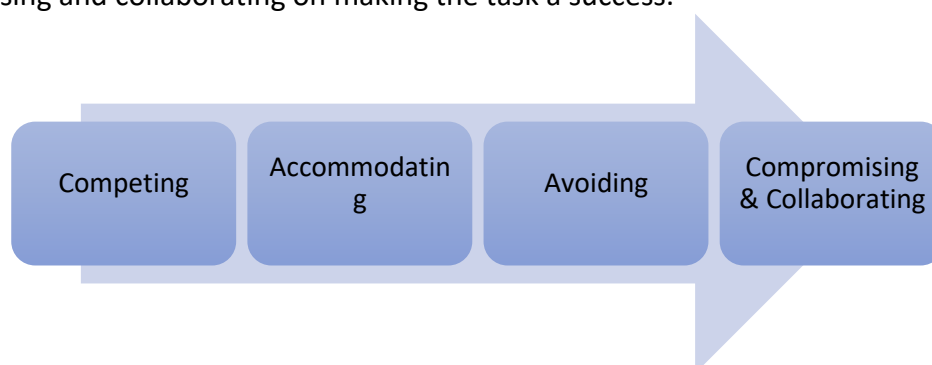


Figure 1- Benefits of Class Interaction (source: Rahmat, 2020)

### Statement of Problem

Ideally, collaborative writing has been proven to help writers in the past. The study by Rahmat (2019) found that undergraduates chose to solve rhetorical problems by having group discussion. Learners found that solving problems was easier done in a group than alone. Next, the study by Dobao (2012) has also found that collaborative writing works. Learners were more focussed on the writing task when they wrote as a group. In addition to that, Abdulsalam (2016) found that collaborative work improves learners' motivation to complete their writing task on time.

Nevertheless, the emergence of online mode has made collaborative work problematic. According to Bolsunovskaya and Rymanova (2020), sometimes in online interaction, learners lack the ability to initiate the writing process. In addition to that, Baczek et.al. (2021) felt that online learning deprived the learners of interaction with peers. So, this study is done to explore (a) collaborative writing done via (b) online. According to Brown (2000), one of the

many issues of academic writing is that teachers need to see writing as a composing activity and that it is a product of thinking. The best activity to encourage that would be through group interactions. Next, the online mode can be challenging to practice collaborative writing; thus, this study hopes to investigate how collaborative writing is done online. Generally, this study is done to investigate the perception of language learners on online group writing. Specifically, this study is done to explore how online collaborative writing can reduce the zone of proximal development in learning. This study is thus done to answer the following questions;

- How does the inclusion of technology and tools influence online collaborative writing?
- How does the presence of knowledgeable others influence online collaborative writing?
- How does interaction influence online collaborative writing?

### **Literature Review**

#### **Zone of Proximal Development, Scaffolding and Online Collaborative Writing**

The use of collaborative writing tasks in the online mode serves many benefits to the learners. To begin writing academic essays is not an easy task; especially for undergraduates. The switch from narrative and descriptive essays in secondary school to academic essays in the higher institutions can be difficult for many undergraduates. One way to reduce the burden of academic writing is to introduce collaborative writing.

Nevertheless, transitioning from individual writing to group writing will put the learners in the zone of proximal development. According to Vygotsky (1978), zone of proximal development (ZPD) is the distance between the actual development level as determined by independent problem solving and the level of potential development as determined through problem-solving under adult guidance, in collaboration with more capable peers. One way to get through the zone easily is by doing collaborative work. Another way to get through the zone is by using scaffolding. In learning, scaffolding consists of activities provided by the instructor to support the learner as he/she is led through the zone of proximal development. In online learning, technology and technology-related activities act as scaffolds and they support the learning process.

Technology is considered as a scaffold for learners to get through the zone of proximal development. According to Rahmat et.al (2021), online learning tools are scaffolds to help learners to close the gap for ZPD. Figure 2 presents how learning takes place through ZPD (Vygotsky, 1978) and scaffolding. According to McLeod (2018), the inner circle (Figure 2) shows what the learner can achieve when he/she is on his/her own. The outer circle represents what he/she can learn from peers. This circle can be further enhanced through interaction with knowledgeable others and also through the use of technology and tools.

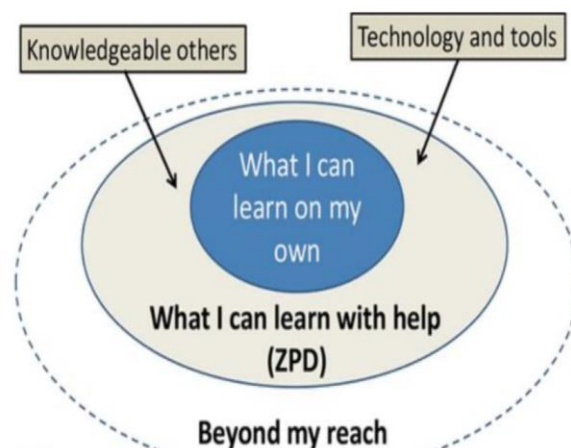


Figure 2- ZPD and Learning Online (source- McLeod, 2018)

### Past Studies

Mubarak (2017) explored various challenges encountered by English Language students in academic writing in an ordinary graduation project. The quantitative study focussed on identifying the problems faced by the Arts Colleges within the University of Al Imam Al Mahdi, Sudan. Data is collected from 15 graduation projects through a survey. The findings of this research revealed the most problematic area faced by the students. Some of the problems include the use of articles, punctuation, prepositions, irregular verbs, poor expressions, consistency, unparalleled structures and also verb tense. In addition to that, the findings also revealed that many undergraduates lacked formal writing experience. Many had a negative attitude towards academic writing.

The study by Baczek et.al (2021) was done to investigate the perception of online learning among Polish medical students. The instrument used is a questionnaire. 804 students responded to the questionnaire after 8 weeks of online learning. Findings revealed how students perceived online learning. According to the respondents' answers, the main advantages of online learning were the ability to stay at home (69%), continuous access to online materials (69%), learning at your own pace (64%), and comfortable surroundings (54%). The majority of respondents chose lack of interactions with patients (70%) and technical problems with IT equipment (54%) as the main disadvantages. There was no statistical difference between face-to-face and online learning in terms of opinions on the ability of the learning method to increase knowledge ( $P = .46$ ). The findings also showed that E-learning was considered less effective than face-to-face learning in terms of increasing skills ( $P < .001$ ) and social competences ( $P < .001$ ). Students assessed that they were less active during online classes compared to traditional classes ( $P < .001$ ). E-learning was rated as enjoyable by 73% of respondents.

Next, Dobao (2012) investigated the benefits of collaborative writing activities. This study compares the performance of the same writing task by groups of four learners ( $n = 15$ ), pairs ( $n = 15$ ), and individual learners ( $n = 21$ ). The study examined the effect of the number of participants on the fluency, complexity, and accuracy of the written texts produced, as well as the nature of the oral interaction between the pairs and the groups as they collaborate throughout the writing process. The analysis of interactions was focused on language-related episodes (LREs). The findings revealed that although both groups and pairs focused their attention on language relatively often, groups produced more LREs and a higher percentage

of correctly resolved LREs than pairs. As a result, the texts written by the groups were more accurate not only than those written individually, but also than those written in pairs.

Abdulsalam (2016) conducted a mixed mode study to explore the role of motivation in online collaboration from an active learning perspective. Data is collected from group interviews with grade 12 students who were involved in online projects. Themes that were generated by these interviews were used to develop a questionnaire that aimed at analyzing the students' perceptions about online collaboration. The participants were 32 female students at Al Shumoukh High school. The findings of this study indicated a positive role for motivation in online collaboration: all grade 12 students were involved in English collaborative on-going assessment projects. However, the findings also indicated an essential role for the teacher in promoting and sustaining the students' motivation to collaborate online.

Another study was done by Rahmat et.al. (2021) to investigate how online interaction affects the learning of Mandarin in language classrooms. 173 participants responded to a 28 items (5 Likert scale) instrument. Findings reveal that the learners appreciated the opportunity to interact in many ways. The interactions encouraged more discussions among them thus enabling more meaningful interactions. The interactions helped deepen students' understanding of the content. However, they suggested structured rather than unstructured discussions. More knowledgeable others refer to both peers and their instructors. The presence of more knowledgeable others sometimes comes in the form of a post-formal learning environment. Learners are given the opportunity to communicate in a more informal setting. Interaction with a more knowledgeable other can allow learners to learn more than he/she already knows. The more knowledgeable others allow learners to practice their pronunciation skills in a less threatening environment for the learners. Findings reveal that although learners are positive towards online learning, they preferred to have some form of interaction with the content. The learners were positive towards using mobile devices. Findings reveal how online learning influences interaction, encourages participation of more knowledgeable others, and improves interaction with content among learners.

### Conceptual Framework

This study is mainly rooted from Vygotsky's (1978) zone of proximal development. The transition from writing individually to writing collaborative via online mode has put learners in the zone of proximal development. With reference to figure 3, in the context of this study, the transition is facilitated with the use of (a) technology and tools. In group work, the interaction in group exchanges encouraged communication with (b) more knowledgeable others. It is hoped that the (c) interaction would lead to a better writing product (compared to when it is done alone).

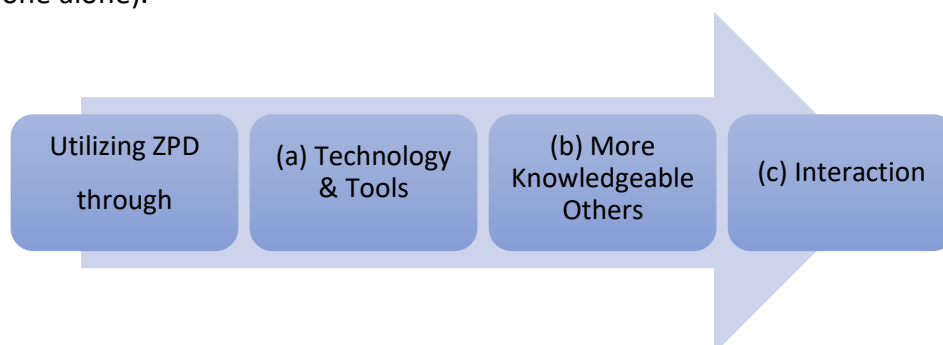


Figure 3- Conceptual Framework of the Study

Utilizing ZPD through Collaborative Online Writing (source-Vygotsky, 1978)

## Methodology

Prior to the collection of the data, the approval from the ethics committee was obtained. 30 students participated in this pilot study. This quantitative study is done to investigate the perception of learners on learning collaborative writing online. The sample chosen was undergraduates who attended a semester of academic writing course. They were taught to write collaboratively via online mode. At the end of the semester, they responded to the survey prepared. The survey has 5 Likert scales; 1 is for Strongly Disagree, 2 is Disagree, 3 is Neutral, 4 is Agree and 5 is Strongly Agree.

With reference to table 1, there are 38 items (not including the demographic profile in the survey. Section A has 13 items on Technology and Tools. These items were adapted from (Loan, 2021; Hamzah, 2020; Baczek et.al., 2021). Section B has 13 items on Knowledgeable others and the items were adapted from (Rahmat, 2022; Farah, 2015). Section D has 12 items on Interaction. The items were adapted from (Dabao, 2012; Abdulsalam, 2016). Data is analysed using SPSS version 26.

Table 1

### *Distribution of Items in Survey*

SECTION	Variable/Construct	NO. OF ITEMS
B	Demographic Profile	3
C	Technology and Tools	13
D	Knowledgeable Others	13
E	Interaction	12
Total		38

Table 2 shows the reliability statistics for the survey. SPSS analysis revealed a Cronbach alpha of .975; thus, showing a high reliability for the survey.

Table 2

### *Reliability Statistics*

<b>Reliability Statistics</b>	
Cronbach's Alpha	N of Items
.975	38

## Findings

*Findings for Demographic Profile*

Table 3

*Demographic Profile*

<b>Demographic Profile</b>		
Gender	Male	40%
	Female	60%
	<b>Total</b>	<b>100%</b>
<b>Disciplines</b>		
Disciplines	Engineering	3%
	Business Studies	97%
	<b>Total</b>	<b>100%</b>
<b>IT Skills</b>		
IT Skills	High	0%
	Moderate	97%
	Low	3%
	<b>Total</b>	<b>100%</b>

Table 3 presents the demographic profile of the respondents in the study. It shows that 40% of the respondents are males and 60% are females. 3% of the respondents are from the Engineering discipline while 97% are from Business Studies. In terms of the level of IT skills, the respondents claim that 97% of them have moderate skills in IT and the rest of them have low IT skills.

*Findings for Inclusion of Technology and Tools*

This section presents data to answer research question No 1: How does the inclusion of technology and tools influence online collaborative writing?

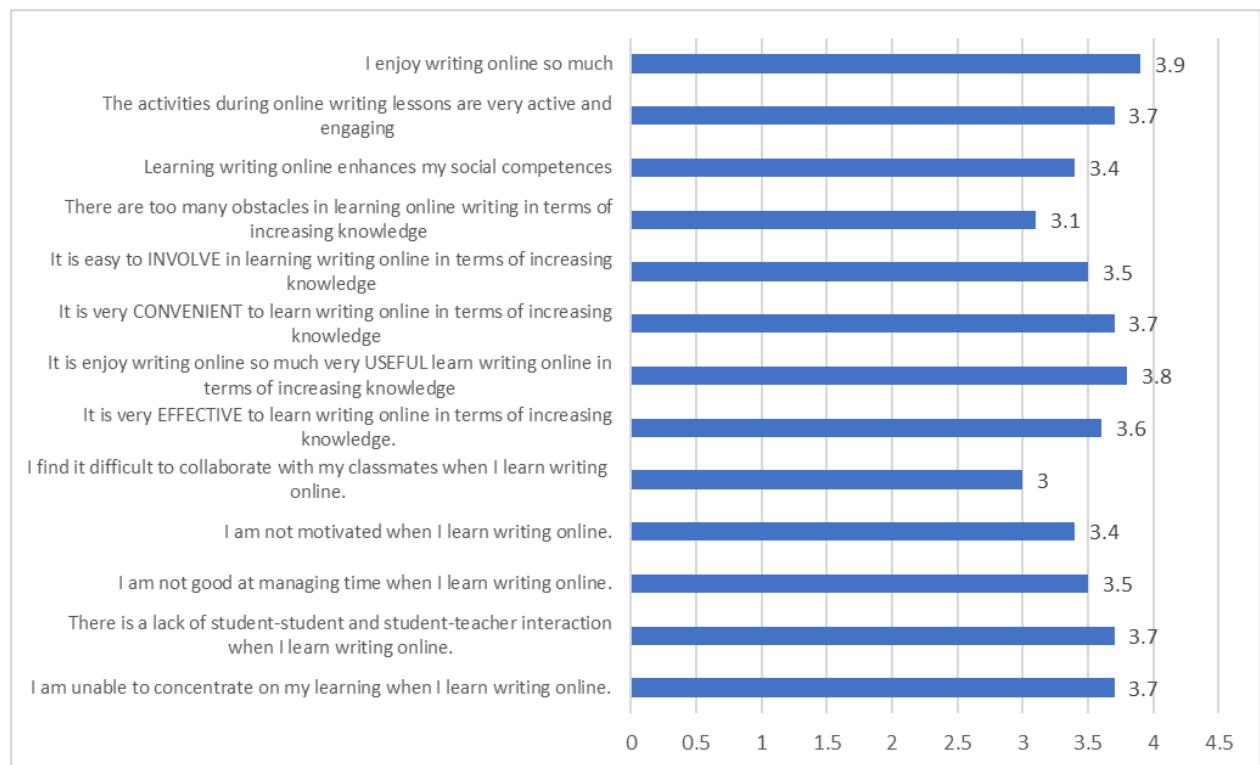


Figure 7- Mean for Technology and Tools

Figure 7 presents the mean for technology and tools. The highest mean at 3.9 is for “enjoy writing online so much”. This is followed by the mean of 3.8 for “enjoy writing online so much”. Four items had a mean of 3.7 and they are “unable to concentrate on my learning when I learn writing online”, “a lack of student-student and student-teacher interaction when I learn writing online”, “very convenient to learn writing online in terms of increasing knowledge” and also “activities during online writing lessons are very active and engaging”. The lowest mean at 3 is for “find it difficult to collaborate with my classmates when I learn writing online”.

#### Findings for the Presence of Knowledgeable Others

This section presents data to answer research question No 2: How does the presence of knowledgeable others influence online collaborative writing? According to Rahmat (2022) and Farah (2015), online collaborative writing improves (a) Interaction and (b) Work.



(a) Improve Interaction

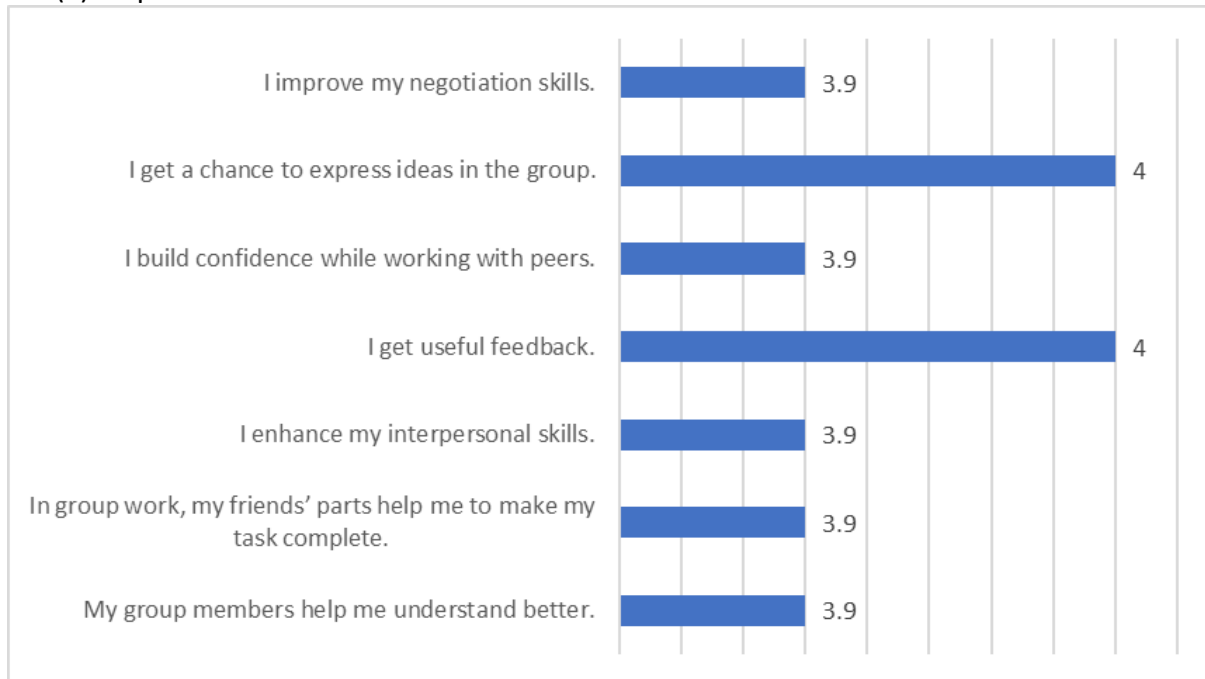


Figure 8- Mean for the Presence of Knowledgeable Others- Improve Interaction

Figure 8 presents the mean for the presence of knowledgeable others in terms of improving interaction. Two items had the highest mean of 4 and they are “get useful feedback” and “get a chance to express ideas in the group”. Next, five items had similar mean of 3.9 and they are “group members help me understand better”, “group work, my friends’ parts help me to make my task complete”, “enhance my interpersonal skills”, “build confidence while working with peers”, and “improve my negotiation skills”.

(b) Improve Work

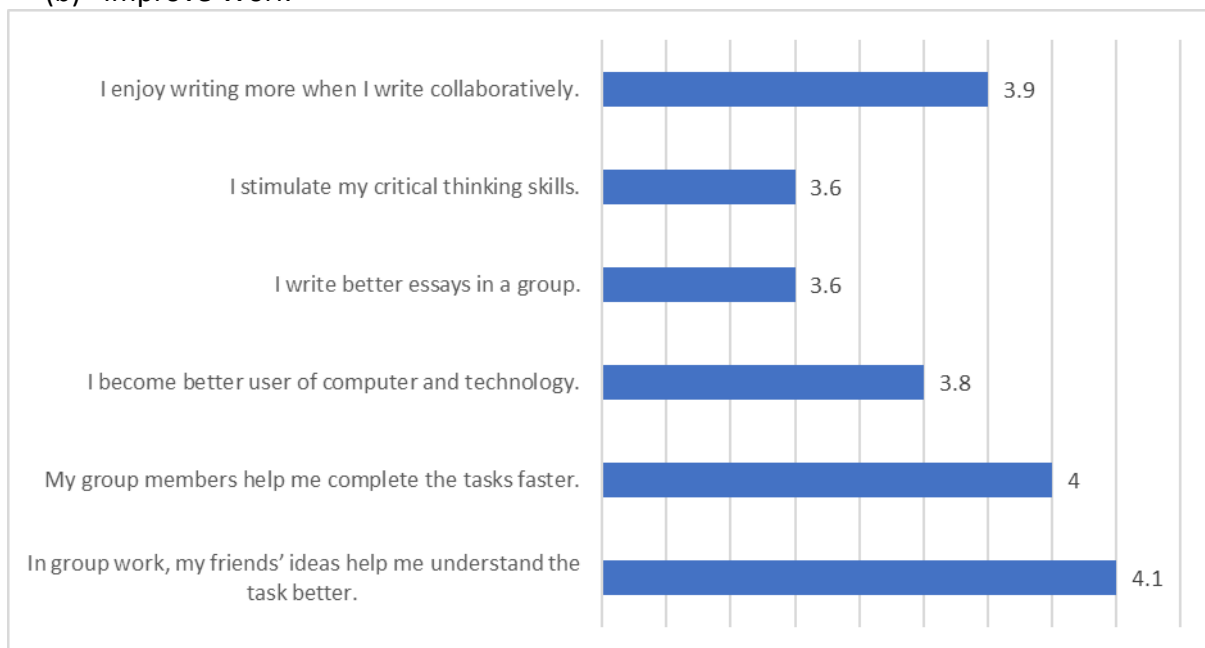


Figure 9- Mean for the Presence of Knowledgeable Others- Improve Work

Figure 9 shows the mean for presence of knowledgeable others in terms of improving work. The highest mean at 4.1 is for “in group work, my friends’ ideas help me understand the task better”. This is followed by a mean of 4 for “group members help me complete the tasks faster”. The item “enjoy writing more when I write collaboratively” had a mean of 3.9.

### Findings for Interaction

This section presents data to answer research question No 3: How does interaction influence online collaborative writing?

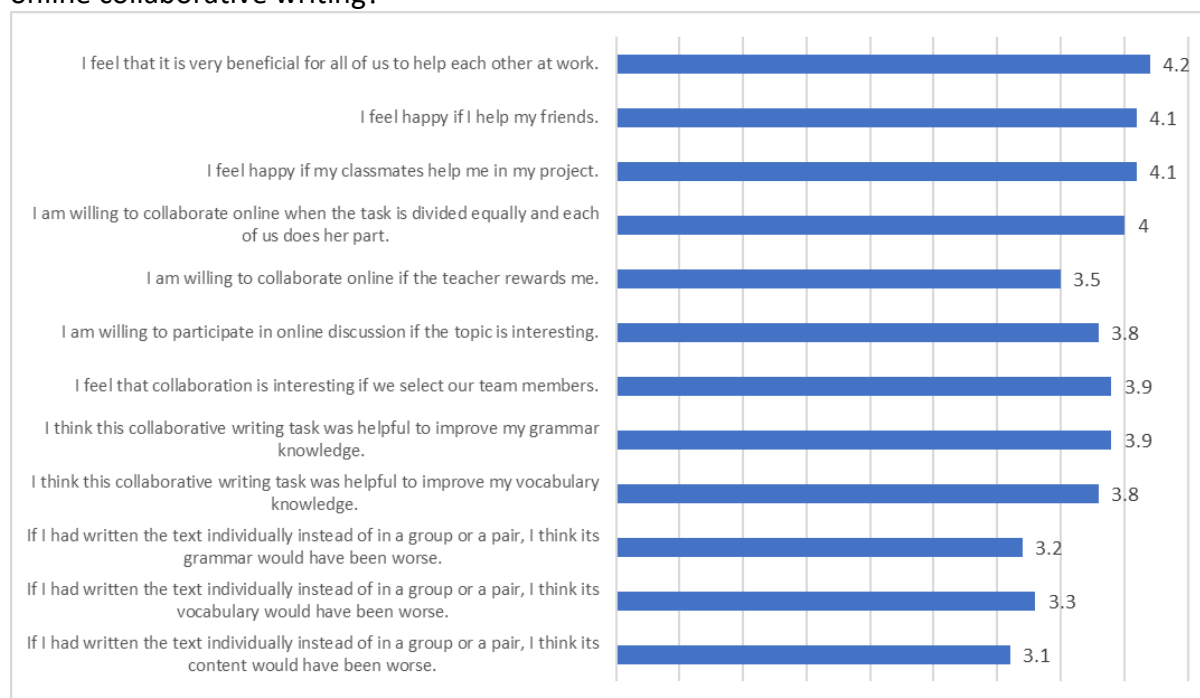


Figure 10- Mean for Interaction

Figure 10 shows the mean for interaction. The highest mean is 4.2 for “feel that it is very beneficial for all of us to help each other at work”. Two items share the same mean of 4.1 and they are “feel happy if my classmates help me in my project” and “feel happy if I help my friends”. Next, the item “willing to collaborate online when the task is divided equally and each of us does her part” had a mean of 4. The lowest mean is 3.1 for the item “If I had written the text individually instead of in a group or a pair, I think its content would have been worse”.

## Conclusion

### Summary of Findings and Discussion

This section summarizes and discusses the findings in this study. In the context of this study, the zone of proximal development (ZPD) is facilitated through the inclusion of technology and tools, the presence of more knowledgeable others and also through interactions. Findings in this study revealed that the respondents did enjoy learning writing online. However, some reported they could not concentrate during online learning. The study by Baczek et.al (2021) also found that learners preferred face-to-face interaction when they wanted to focus on the lesson. Next, the findings also found that the presence of more knowledgeable others kept the discussion going. This is also in accordance with the studies by Abdulsalam (2016); Rahmat et. al (2021) who found that the presence of more knowledgeable others helped the team

stay motivated. This is also reported by Dobao (2012) who found that collaboration helped learners write better in terms of quantity and quality.

### *Pedagogical Implications and Suggestions for Future Research*

The present study shed some light on the teaching and learning of collaborative writing as online learning is here to stay. Academic writing teachers need to be more creative when it comes to teaching writing online. Online interaction can be improved if writing teachers plan activities that require learners to interact more with the team members to complete the writing tasks. This is because academic writing can be a tough task to be done alone. So, where possible, make writing a collaborative effort. When writers interact and discuss ideas, conflicts will occur. The conflicts will encourage problem solving skills and learners learn to defend their ideas better in their writing tasks. It is also essential for academic writing educators to provide continuous guidance and assistance where necessary to aid and ease the collaborative work.

Although this study provides some insights into the potential benefits of online collaborative writing, it also has several limitations that future researchers need to consider. Firstly, a small number of participants were selected as this is a pilot study. Therefore, future research could conduct the study on a bigger sample of various disciplines to generalize the findings. Second, the responses were gathered only through a questionnaire to elicit the respondents' perception of online collaborative writing. Future studies should also employ qualitative methods, such as interviews, observations and journal entries or logs, which could provide further insights into the process of collaboration from the beginning until the end.

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