

The Influence of Metacognitive Scaffolding on Learning Academic Writing Online

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Abstract

The pandemic has caused a big wave of change in the way teaching is done. One of the many areas of concern is that the teaching that was previously done not only face-to-face but also using hands-on; coupled with one-to-one or group by group conferences, is now done online. How can that be done online? In the traditional face-to-face classroom, the writing teacher monitors the working memory of the writers (planning, translating and reviewing) by marking and making comments of the learners' drafts. The comments and recommendations for changes made by the teachers acted as scaffolds to the learners to guide them to improve on their writing. When online learning hits the classrooms, writing teachers need to incorporate creative language teaching into the online classrooms. This study explores the use of metacognitive scaffolding on learning academic writing online. Learners were taught metacognitive scaffolding during online classes. They responded to the survey. Findings revealed interesting implications for teaching and learning of academic writing online.

Keywords: academic writing, online learning, planning, monitoring and evaluation

1. Introduction

Going online has a different connotation today than it had many years back. Previously going online was seen as non-academic. According to Carolan, & Kyppö (2015), the internet used to be blamed for distracting people from doing their work; however, the internet is now used as a medium to facilitate many tasks, even academic ones. Online teaching and learning is not a new concept anymore, especially in this era of pandemic. For teachers, teaching online is not just imparting content knowledge to learners. They (the teachers) need to incorporate technology into their “classroom” activities (Rapanta, Botturi, Goodyear, Guardia, & Koole, 2020; Marcus, 1978). So, online teaching has opened a whole new world of teaching and learning.

Even in face-to-face classes, academic writing has been rather difficult to teach. Some aspects of the writing are more difficult to grasp by students than others (Rahmat, 2019). This difficulty in writing can affect students’ motivation to learn writing. According to Budjalemba and Listyani (2020), motivation for writing is influenced by two factors. The two factors were internal and external. Internal factors consisted of self-motivation, self-confidence, lack of knowledge and feeling under pressure. External factors consisted of the teacher’s teaching style, classroom atmosphere, materials, and writing aspects.

Contrary to popular belief (who thinks that writing is difficult only for those who are not “fluent” writers), all types of writers’ face difficulties at different stages in the writing process. According to Flower & Hayes (1981), writers go through three main stages (a) planning, (b) translating and (c) reviewing (figure 1). The first stage is the planning stage. This is where the writer uses information from his/her long-term memory (such as knowledge of the topic) to generate ideas. The process of generating ideas is facilitated by the task environment (writing assignment and external sources).

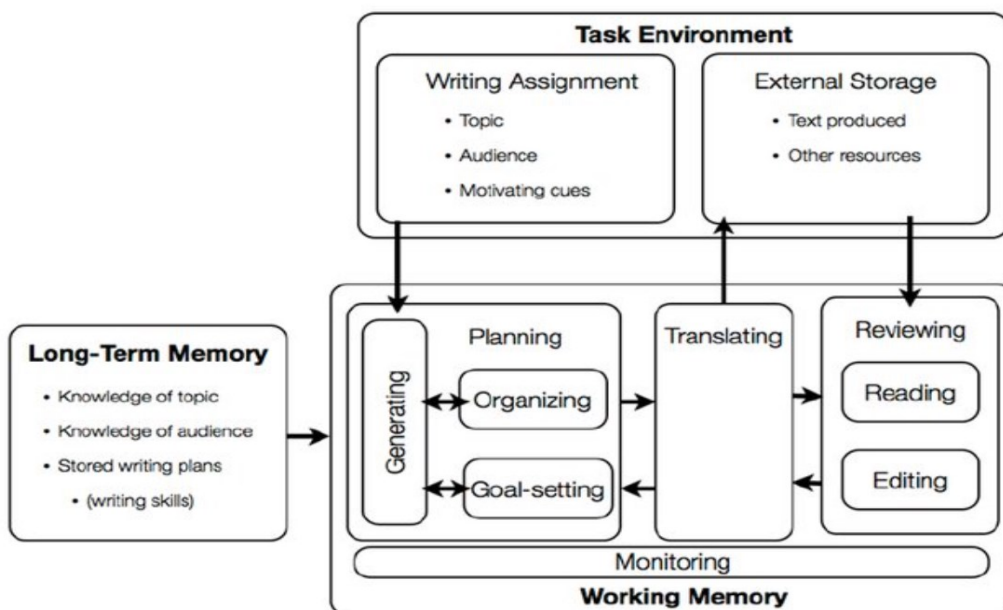


Figure 1. The Cognitive Process of Writing Source: Flower & Hayes (1981)

These cognitive processes (figure 1) in writing are facilitated by writing teachers who monitor the stages in the writing classroom. Traditionally, writing teachers depended on checking students' drafts, conferencing with writers and showing areas that needed improvements. However, online classrooms can no longer do the face-to-face writing activities that teachers used to depend on. For those who have found it difficult to teach writing in general, would find teaching writing online challenging. Monitoring writing via online classes is not as straightforward as in figure 1. The teaching of stages like planning, translating and reviewing become more challenging as they can no longer be done face-to-face with the learners.

With reference to figure 1, in the traditional face-to-face classroom, the writing teacher monitors the working memory (planning, translating and reviewing) by marking and making comments of the learners' drafts. The comments and recommendations for changes made by the teachers acted as scaffolds to the learners to guide them to improve on their writing. The task environment back then was to make sense of the writing assignments as well as using external sources for support.

Nevertheless, scaffolding in teaching writing can be possible if the teachers make careful planning. According to Jumaat and Tasir (2014), scaffolding in an online learning environment refers to the support provided by teachers or instructors via technology. There is a growing interest in integrating scaffolded instructions in online teaching. As described earlier, scaffolding online learners are devoid of the physical presence of teachers. Thus, prior to supporting students in an online learning environment, researchers are encouraged to map out well-structured instructional components such as (1) student's need, (2) learning objectives, (3) support forms and (4) types of scaffolding appropriate to student's needs.

This study is done to explore the use of scaffolding in the teaching of writing. Specifically, this study is done to answer the following:

- 1) How does the teacher's presence influence the learning of online academic writing?
- 2) How do Planning scaffolds influence the learning of online academic writing?
- 3) How do Monitoring scaffolds influence the learning of online academic writing?
- 4) How do Evaluation scaffolds influence the learning of online academic writing?

2. Literature Review

2.1 Introduction

When it comes to learning academic writing, (a) learners' attitude towards writing plays a major part in determining the success of the learning process. (b) Online learning has changed the way how presence can be felt throughout the lesson. One way to increase online presence in online writing classrooms is through the use of (c) metacognitive scaffolding planned by the teachers.

2.2 Attitudes towards Writing

Learners' attitude towards writing influences the way they perceive the writing activities; be it face-to-face or virtual. The study by Rahmat (2021), investigates how writers' attitude /prophecies influence writers' own- self-imposed belief about learning writing. This belief is then affected by other imposed expectations.

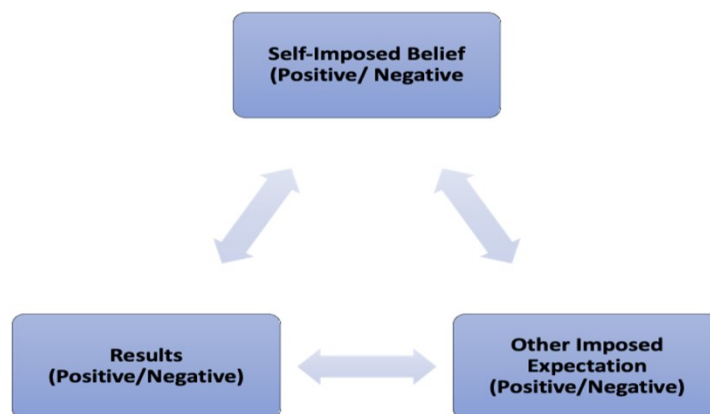


Figure 2. Learners' Beliefs about Writing (Source; Rahmat, 2021)

Figure 2 depicts how learners' beliefs about writing affects their expectation and the beliefs snowball into the end result of that writing process. If they begin with a negative belief, this negative belief causes them to impose negative expectations of the writing activities which will affect the end result of the writing product.

2.3 Learners' Presence in the Online Classroom and Group Interaction

Online learning is beginning to force its way through the education system. Among the many worries concerning online learning is the lack of social presence. According to Lowenthal & Dennen (2017), social presence is one of the many reasons why learners lose the sense of identity in online learning. In addition to that, Byun & Cardenas (2013) worry about the absence of online presence influencing student's performance. Fortunately online presence can be increased through carefully grouping online activities.

The benefits of group interaction goes beyond the learning of the content with peers. Classroom discussions encourage collaborative communication. According to Marcus (1978), learners still benefit from the group interaction even if their participation is not as much as the other team members. According to Hew & Cheung (2010), these collaborative discussions can promote critical thinking skills and the long-term retention of information. Group interactions can also encourage students to focus on in-depth discussion (Qui, Hewitt, & Brett, 2014). In addition to that, according to Vygotsky (1978), through group interactions, students develop higher-level thinking skills. This is because when scaffolding occurs with a peer of higher capabilities, conflicts would then take place between students allowing them to think

constructively at a higher level.

2.4 Metacognitive Scaffolding

Scaffolding refers to the guided support teachers provide for learners in the teaching-learning process. It is a symbolic representation of the teacher “holding the hands” of the learners in the hope that the learning is understood by the learners. Scaffolds may take the form of prompts, questions, guides or sequenced interactions. In the online learning environment there may be multiple sources of scaffolding (instructors, peers, technology) Scaffolding helps learners solve problems or carry out tasks they find difficult to accomplish on their own (Vygotsky, 1978). One common model for defining and describing scaffolding includes contingency, fading, and transfer of responsibility. In addition to that, according to, Jumaat & Tasir (2014) and Wahid, Ab Wahab, and Idris, (2017) metacognitive scaffolding promotes higher order thinking. It assists students to reflect on what they have learnt, and assess their progress. In online learning, the teaching strategies that the teacher plans should include students’ interactions to encourage the use of metacognitive strategies.

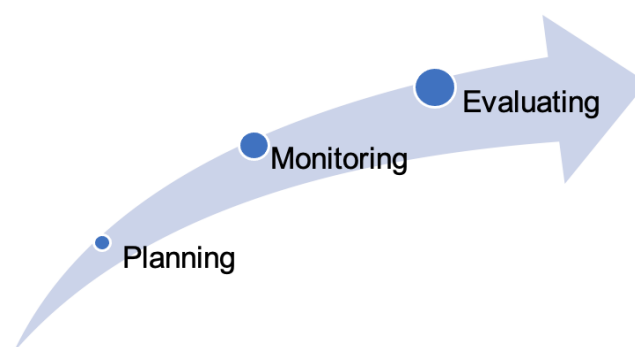


Figure 3. Metacognitive Scaffolding Source: Vygotsky (1978)

One of the many types of scaffolding in learning is metacognitive scaffolding. This type of scaffolding (figure 3) supports the learners to develop thinking and also manage their learning. It prompts learners to think about what they are learning throughout the process. Metacognitive can be divided into three main categories and they are (a) Planning scaffolding. This refers to the guide prepared by the teacher to establish learning goals. The second type of metacognitive scaffolding is (b) monitoring scaffolds and this is done by the teacher to track the learners’ progress. The last type is (c) evaluation scaffolding. This stage allows learners the opportunities to determine the effectiveness of the learning process.

2.5 Past Studies

There are some reported reasons why students find academic writing unfavourable. Another study by Budjalemba and Listyani (2020) looked at some factors that contribute to students’ difficulties in an Academic Writing course based on the students’ perceptions. This study used a qualitative method. The instruments used were open-ended questionnaires and interview

protocol. The participants were 22 students who were taking Academic Writing class in a university in Central Java, Indonesia. Based on the findings, there were two factors that caused students' difficulties in writing academically. The two factors were internal and external. Internal factors consisted of self-motivation, self-confidence, lack of knowledge and feeling under pressure. External factors consisted of the teacher's teaching style, classroom atmosphere, materials, and writing aspects.

Writing is negatively seen by many beginning writers. The study by Ismail, Hussin and Darus (2012), investigates ESL tertiary students' writing attitude and the learning problems they face in an academic writing course at a public university in Malaysia. The participants in the study were 60 diploma students taking Academic Writing, and 4 writing instructors who have been teaching this course for more than 5 years. The students were given a set of needs analysis questionnaires, and the lecturers were interviewed. Findings showed that the lecturers felt the majority of the students have a negative attitude towards writing. The findings from the participants also revealed that they perceive writing in English as difficult and they disliked it. The researchers said that writing teachers included some online writing activities for the students to improve their writing skills. Students also found that they preferred non-face-to-face (online activities) writing activities so they could choose when they can participate.

When it comes to writing, some students prefer help that is non-face-to-face. The study by Aghajani., & Adloo (2018) investigated the use of an application to supplement their writing activities. A total of 70 university ESP learners were involved. Telegram, as the treatment in this study was compared to a conventional method; face-to-face in the cooperative writing activities. First of all a pre-test was administered to all students and based on the preliminary results; students were divided into Telegram and face-to-face Cooperative writing groups. After using both approaches, a post-test was given to participants. Then, a questionnaire was given to the students in order to investigate the effect of Telegram on the attitudes of ESP vocabularies and expressions by the ESP learners. The data were then analysed using independent t-test and paired sample t-test. From the findings, it was found that participants in Telegram Cooperative writing groups displayed slightly higher scores compared to face-to-face Cooperative writing groups. When comparison was made within each group, this study found that there were significant differences for overall writing performance, content, organization, vocabulary, language use and mechanics. The results also indicated that the students had positive attitudes toward using non-face-to-face Cooperative learning.

The success of group work in the classroom depends on several factors. Rahmat (2020) found that conflicts in group work can occur due to opposing views on the topics or even among personalities. This quantitative study explores the perception of learners on discussion and conflicts during class interactions. 164 students were chosen to respond to a 32 -item questionnaire. The instrument used is a questionnaire of 32 items Section A is the demographic profile. Section B looks at learners' perception on "competing", section B looks at learners' perceptions on "accommodating", section D looks at learners' perception on "avoiding", while section E looks at learners' perceptions on "compromising and collaborating". Findings of this study reveal interesting pedagogical implications in the use of class discussions as part of

teaching-learning activities.

2.6 Conceptual Framework

The conceptual framework (figure 4) is built on the idea that online teaching depends first of the teacher’s planning. This Online teacher presence is made possible by the teachers. He/she is responsible for planning group writing activities to help learners use metacognitive scaffolding as part of the online class activity.

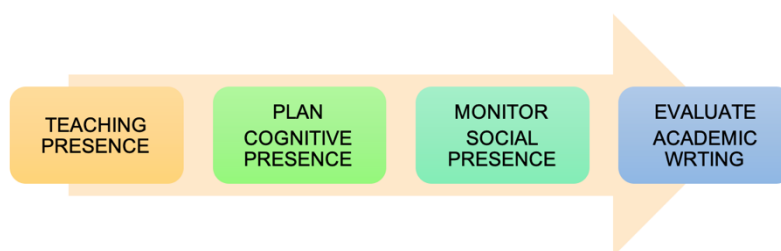


Figure 4. Conceptual Framework of the Study: Teaching Academic Writing online using Metacognitive Scaffolding Source: Zhou and Lam (2019); Garrison & Arbaugh (2007)

This framework is rooted from “online presence” Garrison & Arbaugh (2007). Online learning depends on the careful planning of the writing teacher so learners are guided to use metacognitive scaffolding to benefit from group work. The metacognitive scaffolding is adapted from Zhou and Lam (2019) to reveal three important stages and they are (a) planning, (b) monitoring and (c) evaluating.

3. Methodology

This quantitative study is done to explore yet another online group activity in the writing class. 57 participants were purposely chosen to respond to the instrument (a survey). The instrument used is a survey with 4 sections. Section A is about demographic profile. Section B has 13 items on teaching presence, section C has 9 items on social presence and section D has 12 items on cognitive presence.

Table 1. Breakdown of Items in the Survey

Section	Heading	No. of Items
A	Section A-Demographic Pfile	4
B	Section B-Teaching Presence	13
C	Section C-Social Presence	9
D	Section D-Cognitive Presence	12

Table 2. Reliability Statistics for Instrument

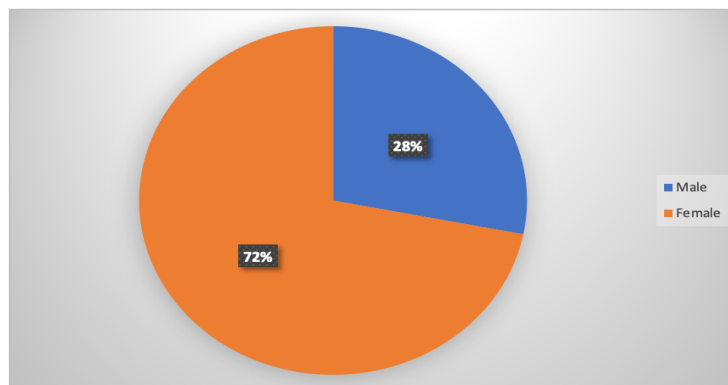
Reliability Statistics	
Cronbach's Alpha	N of Items
.971	45

Table 2 shows the result of the reliability test for the instrument. It shows an alpha value of .971 thus revealing a good reliability. Data from the survey is also analysed using SPSS version 26 to show the mean scores. The findings are presented in the form of percentages in pie charts for the demographic profile and mean scores in bar charts for the variables.

4. Results

This section presents findings for the study. The report begins with findings for the demographic profile and then the answers to the research questions.

4.1 Findings for Demographic Profile

**Figure 5.** Percentage for Gender

Data from the findings (figure 5) showed that 28% of the respondents are male while 72% are female.

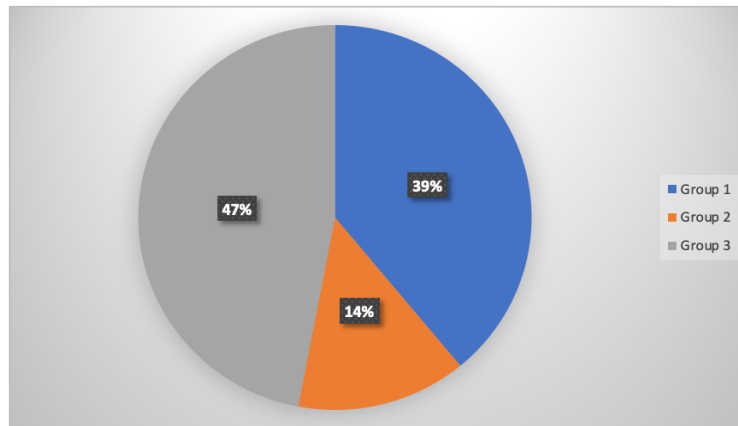


Figure 6. Percentage for Writing Groups

Figure 6 presents the percentage for writing groups. 39% is from group 1 , 14% is from group 2 and 47% is from group 3.

4.2 Findings for Teacher’s Presence

This section attempts to answer research question no 1:

How does the teacher’s presence influence the learning of online academic writing?

Whether it is face-to-face or online classes, the teacher’s presence is still very important and much needed by students. Students look up to their teachers to make the most of the lesson.

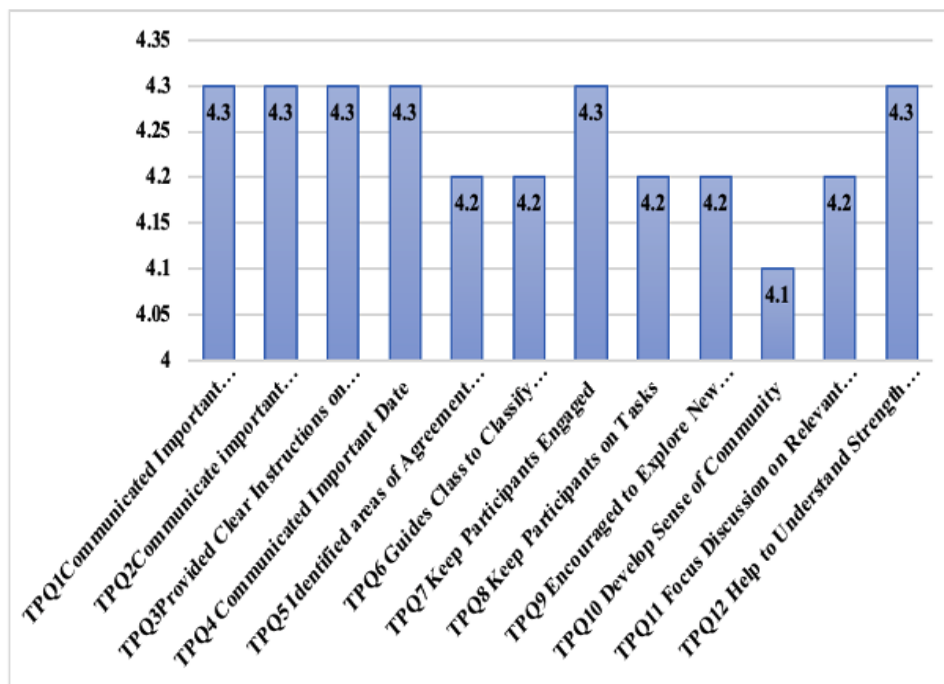


Figure 7. Mean Score for Teaching Presence

The mean scores for teaching presence is presented in figure 7. Generally, all the items had high mean scores. The highest mean score is 4.3. The respondents reported that the students expected the teachers to communicate important course topics, course goals and important dates. They also wanted the teachers to provide clear instructions on activities. They wanted the teacher to keep the participants engaged. Finally, they needed help from the teachers to understand their strengths and weaknesses. Next, with a mean score of 4.2 are responses on how they wanted the teacher to identify areas of agreement and disagreement, to guide the class to classify thinking, to keep them on tasks, to encourage them to explore new learning, and also to help them focus the discussion on relevant issues. They also wanted the teacher to help them develop a sense of community in the online classes (mean=4.1).

4.3 Findings for Planning Scaffolds via Cognitive Presence

How do Planning scaffolds influence the learning of online academic writing?

In order for the students to gain maximum benefits from metacognitive scaffolding, the teacher’s presence is depended on to make plans for the students. The plans made involve the use of teaching materials to develop a meaningful cognitive presence to the online lesson.

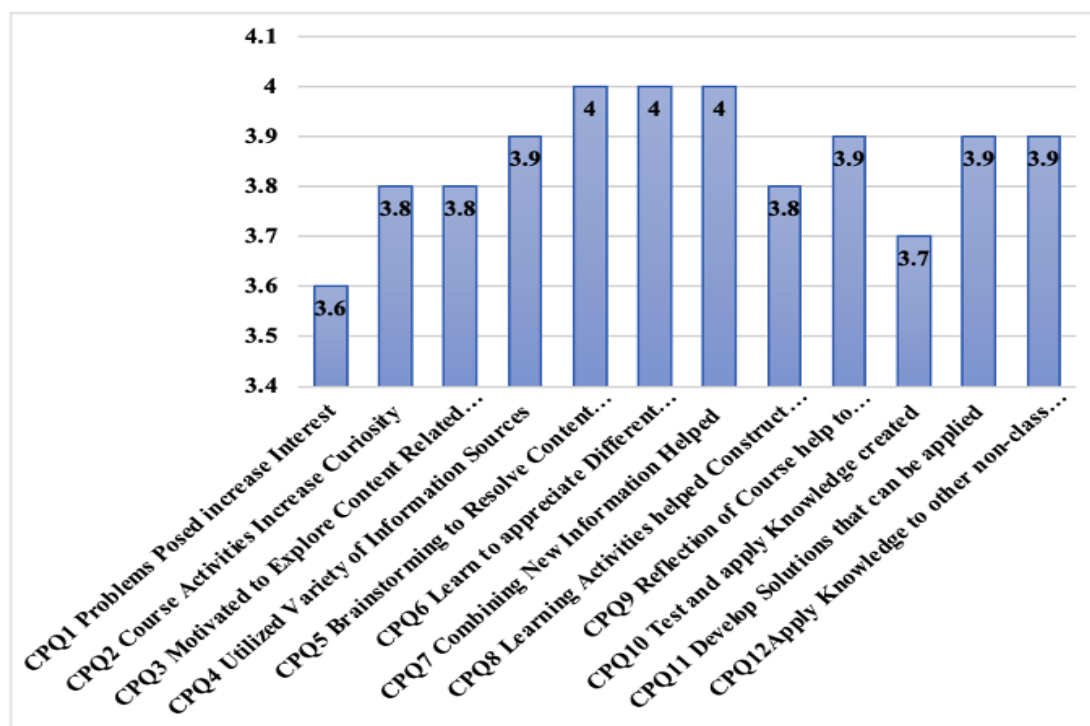


Figure 8. Mean Score for Planning Scaffolds via Cognitive Presence

Figure 8 presents the findings for planning via cognitive presence. Cognitive presence involves the use of content-related material in the online class. Through planning scaffolding, the cognitive presence is facilitated by the teacher through proper planning of online class

activities. The highest mean at 4 is for items ‘brainstorming to resolve content related questions’, ‘learn to appreciate different perspectives’ and combining new information helped’. Respondents also felt that the teacher should make plans so they can utilize a variety of information sources (3.9). The teacher should also plan so students can reflect on the course to understand important concepts (3.9), develop solutions that can be applied (3.9) and apply knowledge to other non-class activities (3.9).

4.4 Findings for Monitor Scaffolds via Social Presence

How do Monitoring scaffolds influence the learning of online academic writing?

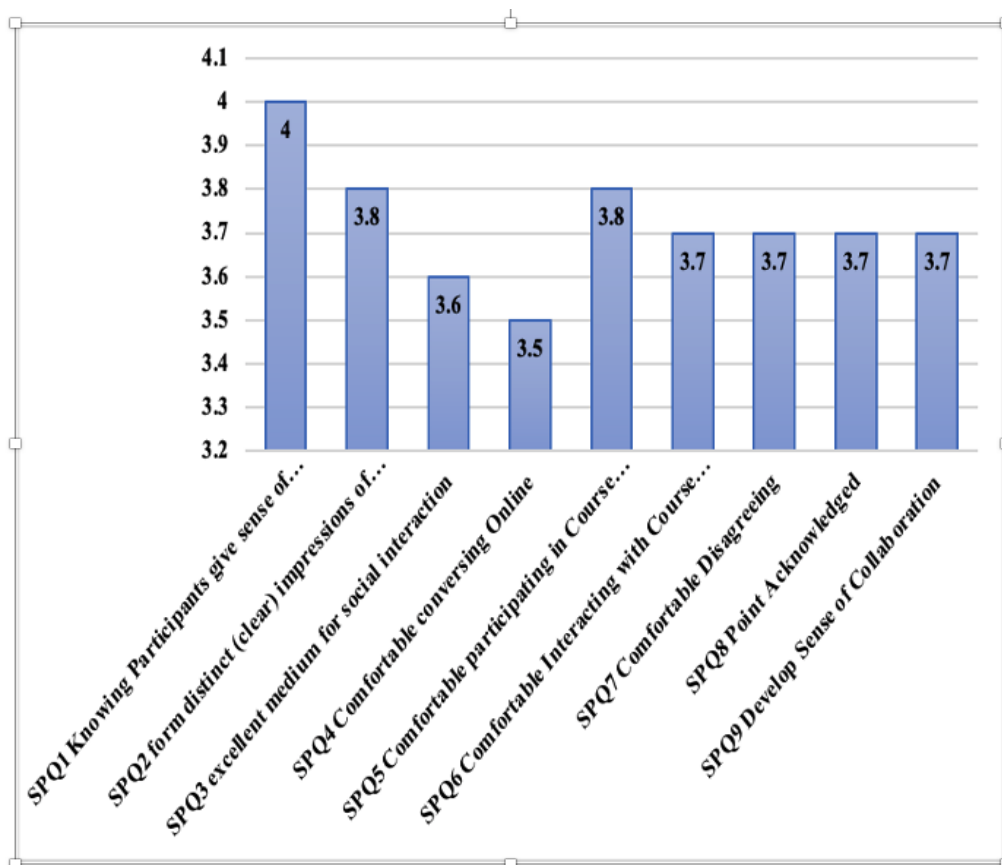


Figure 9. Mean Score for Monitor Scaffolds via Social Presence

The findings for monitoring scaffolds via social presence is presented above in figure 9. The highest mean (mean=4) is for the item “knowing participants gives a sense of belonging”. Next, the learners also felt that the social presence helped to form clear impressions of some course participants (3.8), and also made them feel comfortable participating in course discussion (3.8).

4.5 Evaluation Scaffold via Online Group Academic Writing

The end product of the online writing scaffolded activities is the group writing. This section

presents the answer to research question 4;

How do Evaluation scaffolds influence the learning of online academic writing?

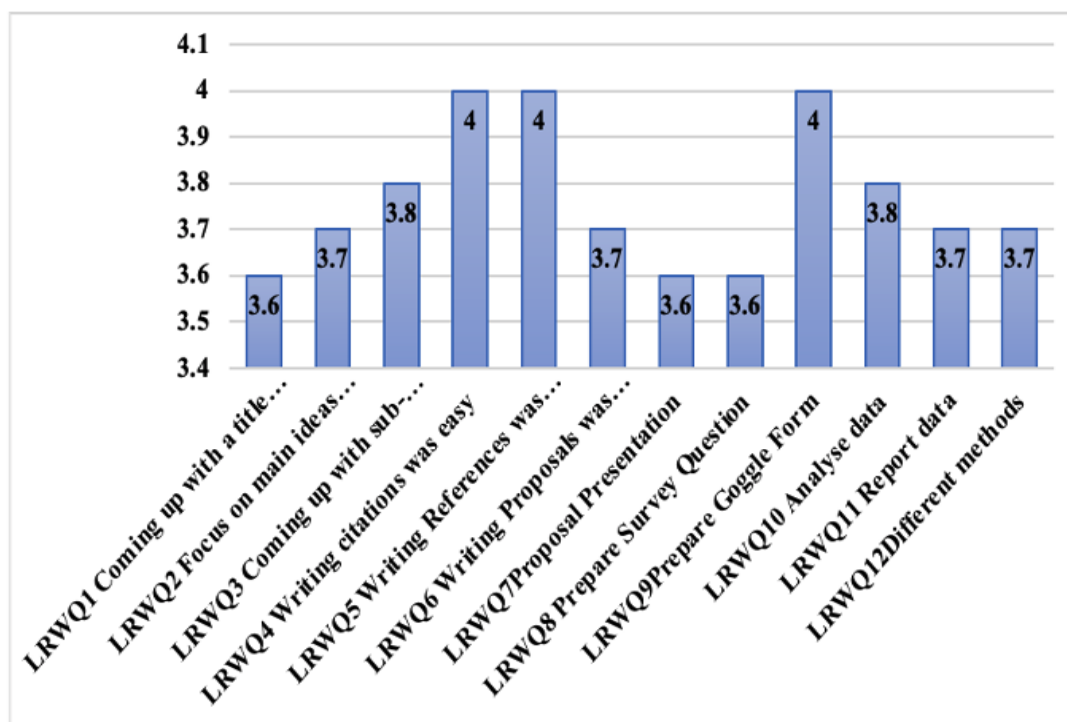


Figure 10. Mean Score for Evaluation Scaffolds via Academic Writing

The findings for evaluation scaffolds via online group academic writing is presented in figure 10. The highest mean is 4 for “writing citations was easy”, “writing references was easy” and “preparing google form was easy”. Next, respondents reported that it was easy to come up with the sub-points (mean=3.8), and analyse data (mean=3.8) when it is done as a group.

5. Conclusion

5.1 Summary of Findings

This study has revealed interesting findings in the learning of writing via online and also group writing done online. The learners found that many writing-based activities that were once seen as difficult became easier with the help of team members -even if they met online. The social interaction among learners became a good evaluation scaffold for learners to value writing positively. This is also agreed by Rahmat (2020) who found that group work allows learners to share the burden of learning. Next, learning online was also facilitated because teachers planned the scaffolding activities to suit the needs of the online environment. These findings are in accordance with the study by Aghajani., & Adloo (2018) who investigated the

use of applications to supplement writing activities. When writing activities are scaffolded with activities that students can identify with, learning becomes less stressful and fun. Nevertheless, this study also found that the learners depended a lot on the teachers' online presence to guide them. Budjalemba and Listyani (2020) also discovered that external factors that include the teachers' teaching style definitely helps learners feel the presence of the teachers in the online classrooms.

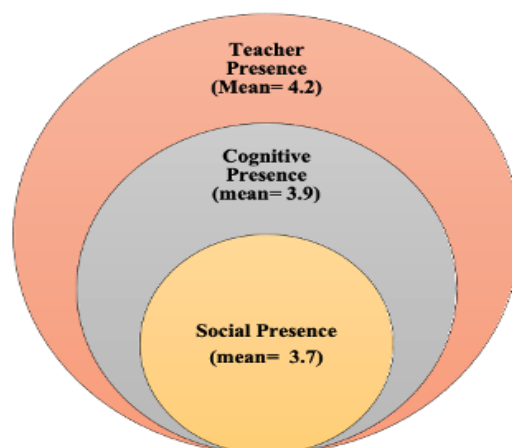


Figure 11. Summary of Findings

5.2 Discussion

Many years ago, when people talked about online learning, there were rumours that teachers could be replaced with technology. However, many similar findings have found that teacher's presence is still needed to make the online classes successful. If at all, the role of teachers before and during online classes has multiplied. Firstly, teachers need to plan the materials to suit online mode. Next, teachers need to plan activities so that learners get maximum cognitive presence of the content of the lesson. Finally, teachers have to upskill themselves to teach online effectively.

The findings in this study can be summarised into figure 11. Although metacognitive scaffolding is a useful way to learn group writing online, teachers' presence is considered the most important factor (total mean= 4.2). The teachers are then expected to plan activities well using the teaching materials to create a meaningful cognitive presence (total mean = 3.9) to the students. Finally, when the online classroom can give the learners a sense of teacher and cognitive presence, they would learn to communicate well through social presence to maximise their learning online.

5.3 Pedagogical Implications and Future Research

Teaching writing is definitely not made easier on online platforms and it requires creativity by the teachers. It depends on the writing teachers to plan well so students not only learn to

write but enjoy the activities planned. One interesting way to teach writing in this online environment is using whatsapp (Haron & Rahmat, 2020). The whatsapp application allows learners to improve their writing performance, and also increase their classroom engagement. The online discussion improves students' writing skills as well as online communication skills. Next the use of colour codes in the teaching on writing (Rahmat, 2018) can add fun to the learning as well help writers focus on one aspect at a time in writing. Sukimin, Rahmat, Mok, Arepin, Zainal Abidin, & Haron, (2021) felt that learners need confidence in online learning so they can get the most out of it. Future research can look in depth into possibilities of different ways of teaching writing online that are not only engaging but meaningful. Qualitative studies can be done to interview teachers and students on how to improve online learning.

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