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## Learning Group Writing Online: The Case for Cognitive Constructivism

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### Abstract

The advent of online mode has not made it any easier. Online learning has accelerated the need for writing teachers to be more creative when it comes to teaching academic writing online. Even during the days of the traditional writing classrooms, interactions at different stages in the writing process are much needed at different stages of the writing process. In a way, the online teaching mode has become a catalyst for more creative changes to be done in the way academic writing is to be taught. This study is done to explore yet another creative way of learning writing. This study is rooted from Piaget's (1953) idea of cognitive constructivism in the class. The learners underwent a semester of learning academic writing online in groups. The learning encourages cognitive constructivism among learners. The instrument used is a survey to investigate how learners perceive this approach to learning academic writing. There are 6 sections in the instrument. Section A has items on demographic profile. Section B has 8 items on Planning of writing, section C has 8 items on translating, section D has 7 items on Reviewing, section E has 13 items on graphic organisers, section F has 7 items on structure & group work and section G has 9 items on colour codes. Findings reveal that this method has in some ways reduced the fear writers have about academic writing. The activities designed in this study helped participants enjoy the writing process via online.

**Keywords:** Cognitive Constructivism, Academic Writing, Writing Process, Online Writing, Group Writing

### Introduction

#### Background of Study

I have taught academic writing for many years and one thing still remains; it does not get any easier. The advent of online mode has not made it any easier. Online learning has accelerated the need for writing teachers to be more creative when it comes to teaching academic writing online. Even during the days of the traditional writing classrooms, interactions at different stages in the writing process are much needed at different stages of the writing process. In a way, the online teaching mode has become a catalyst for more creative changes to be done in the way academic writing is to be taught.

### Statement of Problem

Academic writing is considered difficult by many. According to Bulqiyah, et.al (2021), there are two main categories of writing difficulties. The categories are (a) affective and (b) cognitive difficulties. The first category ; affective, refers to the difficulties that writers face because they did not like writing. This becomes like a cycle of self-fulfilling prophecy. According to Rahmat (2021), learners began with some beliefs about learning writing, The beliefs made them form expectations about the writing process. Their expectations then affect their behaviour towards learning writing. Eventually, the behaviour affects the results of the learning. This learning pattern of behavior becomes a vicious cycle (Rahmat, 2019).

In addition to that, writing teachers are faced with some teaching issues over the years. According to Graham (2019); Adas & Bakir (2013), among some of the issues are; writers do not get sufficient time to write. Next, they were also deprived of having frequent writing practices. Graham(2019) mentioned that there is an absence of the use of digital tools for writing.

The study by Adas & Bakir (2013) explored the teaching of group writing. The study reported that the teaching of writing requires communication. The writing process demands that interaction takes place. The study found that group effectiveness interaction encourages active learning'. During active learning, learners use a high level of thinking, analysis and synthesis. The study found that the use of technology supports group participation. Technology can be enhanced with the use of colours in learning to help reduce the cognitive load of learners (Rahmat et. al., 2022)

### Objective and Research Questions

This study is done to explore yet another creative way of learning writing. Specifically, this study is guided by several research questions below;

- How does learning writing online in a group influence learners' accommodation?
- How does learning writing online in a group influence schema?
- How does learning writing online in a group influence equilibrium?
- How does learning writing online in a group influence adaptation
- How does learning writing online in a group influence assimilation?

### Literature Review

#### Introduction

This section discusses the issues in teaching writing online, group interaction and also cognitive constructivism in learning. . Past studies are also presented before ending this section with the conceptual framework of the study.

#### *Teaching Writing Online and Group Interaction*

Teaching writing online has interestingly brought some issues up in the writing world. To begin with, Carolan & Kypoo (2015) made a comparison between (a) writing process and (b) process writing when it comes to the teaching of writing. Teaching the (a) writing process involves teaching the students how to write in a variety of genres and how to incorporate academic writing conventions into their texts. On the other hand, Carolan & Kypoo (2015) perceive the process of writing as focusing on content, fluency, personal voice and revision. This process of writing is usually taught by concentrating on three main stages: planning, translating and

reviewing (Flower and Hayes, 1981). How can a writing instructor successfully teach all the three stages in an online class? Selvarasu et.al (2021) explored the teaching of writing online by using online writing tools. Learners enjoy the lessons thoroughly and they welcome tools and applications that facilitate their writing process.

How can the process of writing (planning, translating and evaluation) be taught online? This process of writing is already exhausting to a writer when done alone in a normal face-to-face class. The writer needs to make plans for the essay, then the writer needs to translate his/her oral thoughts into written thoughts. The writer needs to go through endless drafts before sending it for evaluation. This tedious process of writing can be less overwhelming when done as a group. In an online mode, group interaction helps to camouflage the online communication into making it a normal face-to-face interaction. The presence of team members (although online) helps learners feel the presence of their friends so when they need to clarify issues, their team members are "close by". Group work does not only facilitate writing through sharing of tasks. According to Vygotsky (1978), group work facilitates learning by the construction of knowledge through social negotiation. Negotiations in group interaction are usually achieved after the group has resolved their conflicts. Conflicts enable learners to practice problem-solving skills as well. As such, the cognitive functions of learners are the products of social interactions.

#### *Cognitive Constructivism in the Online Writing Classroom*

Group interaction is a good platform for the construction of knowledge. In group interaction knowledge is constructed , rather than passively absorbed (Piaget, 1953). Based on the constructivist learning theory by Piaget (1953), each student is a unique individual who brings with them previous knowledge and background and this affects their ability to learn and influence others in the group.

How is constructivism portrayed online ? Learning is not a passive process, it is an active process in which one needs to engage in activities, reading and writing , as well as, discussions. The learner takes an active role. Next, teachers use social interactions to help students learn and maintain their knowledge. Knowledge is contextual, individuals learn from things they already know and believe from their surroundings. Knowledge is a personal phenomenon because each person has a different experience and prior knowledge to share. Mental experiences are essentially needed to retain knowledge. Finally, motivation is crucial for learning because it allows students to use their preexisting knowledge for making connections for new knowledge.

How is cognitive constructivism evident in the online class? Learners achieve cognitive constructivism through activities that encourage equilibrium, schema. adaptation, assimilation , and accommodation. Learners achieve equilibrium when they successfully fit old information to new ones. This enables new knowledge to be formed. Next, schemas are important not just in interpreting information, but also in decoding how that information is presented. In addition to that, behaviour (adaptation to the environment) is controlled through mental organizations called schemes that the individual uses to represent the world and designate. Learners achieve assimilation when they process their information to fit into the new environment-online mode. Finally, accommodation is the process of changing cognitive structures in order to accept something from the environment. Both processes are used simultaneously and alternately throughout life

### Past Studies

Fadda (2011) conducted a study to determine what difficulties King Saud University students encountered when they were learning to write academic English. The study was also done to differentiate between students' learning needs and objectives. The sample consisted of 50 postgraduate students enrolled in King Saud University during the academic year 2009-2010. The analysis of the data showed that English as a second language (ESL) students do face many difficulties in their academic writing. The difficulties are distinguishing between spoken and written English, making an outline before writing a draft, identifying the skills needed for successful writing, and also avoiding plague words and phrases.

The study by Adas & Bakir (2013) was done to investigate differences in student's achievement scores in paragraph writing. Two groups were identified for the study; the experimental and control group. 30 students of the sample studied the selected course with blended work and provided individual help. As for assessment, students in both groups were instructed to write as many paragraphs as possible in accordance with a rubric for writing provided at the beginning of the semester. Exam papers were graded, and returned to the students with comments on strengths and weaknesses, reinforcement comments were given, and answers were discussed in class and online. Results revealed that blended learning improves the sequence of details in writing a paragraph. In addition to that, blended learning activities influence cohesion in a paragraph.

Next, the qualitative study by Azhari et.al (2022) reported that some writers have to deal with their fear of writing. One of the major problems in writing is not the lack of linguistic competence of the writer. The source of difficulty is the lack of competence in composing. The study looks into the problems that writers face in their composing process. Three writers were asked about what their writing problems were. Data analyse are coded into specific categories to reveal different categories of difficulty faced by these writers.

Another study on writing fear is done by (Othman, et.al., 2022). The investigates how writing prophecies influence writers' own self-imposed belief and how this belief is affected by other imposed expectations and finally these impact the results of the writing activity. This quantitative study is done using a survey with 5 likert scale. The categories in the survey are (a) Planning,(b) Translating and (c) Reviewing stages of writing. The independent variables like Type A writer, Type B writers and Type C writers are added in the survey. Type A refers to the perceived belief that the writer who has self-imposed negative perception will have a negative writing belief. Next, type B is when the writers have self-imposed perception, but they received negative other imposed expectations. This can still lead to positive beliefs as the writer is motivated. Type C refers to writers who have positive self-imposed perception and received positive other imposed expectations. This can lead to positive writing belief. Data is analysed using the SPSS version to reveal frequency of responses and presented in mean scores.

The study by Kaweera et al (2019) compared between individual and collaborative writing (pair and group of four) activities of 72 EFL students. The subjects of the study were assigned to produce their tasks by these three activities. Qualitative method was employed by interviewing nine students drawn from students with different levels of English proficiency (low, fair and high). It was focused on their perspectives towards skills practiced during

working on written tasks: writing, thinking, participation, communication as well as their satisfaction of these activities. The results from content analysis demonstrated that overall the students practiced participation skills when doing individual and pair work. The students practiced writing skills when joining group work. With regard to the students' satisfaction, low proficiency students in low group were likely to enjoy coauthoring activity either pair or group work. Their satisfaction seemed to increase according to the number of group members.

Selvarasu, et.al (2021) investigated problems of teaching writing and problems of teaching it online. After the webinar, a questionnaire was administered to collect feedback from the participants. 41 participants (who are teachers) gave their feedback on the questionnaire and each question was to focus on one particular writing tool to get tool-specific feedback from the teachers who attended the webinar. The questions also mentioned when the online is to be used to make the feedback even more context-specific. The participants of the research study are positive about the efficacy of the online tools in enlivening the online writing classes. The study revealed that online tools are expected to turn the online writing classes into a participative pedagogical phenomenon.

### **Conceptual Framework of the Study**

This study is rooted from Piaget's (1953) factors in cognitive constructivism. Figure 1 presents the conceptual framework of the study. To begin with, in group online writing, at the initial stage, team members go through the (a) accommodation stage at the stage where they made plans and wrote the essay. The writers are then guided to use (b) schema in the form of colour codes to facilitate their planning and write-up. To stay more focused with the ideas when they wrote as a group, they were guided to (c) achieve equilibrium by using scaffolds prepared by the writer instructor. Next, the writers are guided to improve their writing (d) with the assistance for adaptation through the use of structure and group work activities. Finally, the writers are given (e) assistance for assimilation by learning how to review their writing as a group.

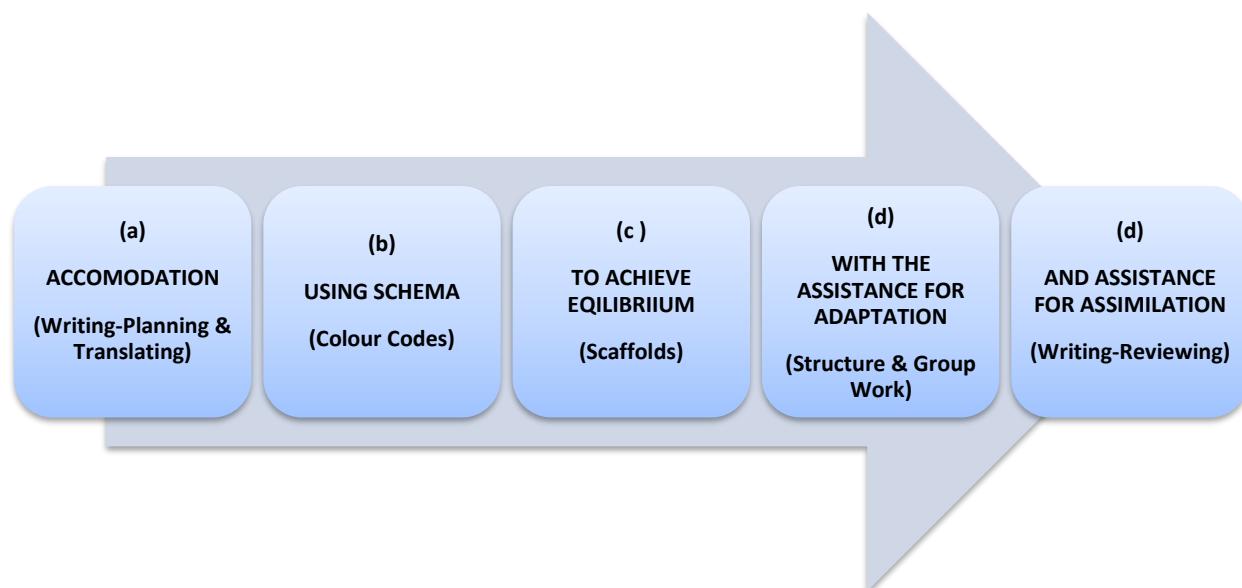


Figure 1- Conceptual Framework of the Study-  
Cognitive Constructivism in Group Online Writing

### Methodology

This quantitative study is done to investigate. 62 participants were purposely chosen from a public university in Malaysia. The instrument (refer to table 1) used is a survey adapted from Rahmat (2081). Apart from the demographic profile in Section A., there are 6 other sections. Section B has 8 items on Planning of writing, section C has 8 items on translating, section D has 7 items on Reviewing, section E has 13 items on graphic organisers, section F has 7 items on structure & group work and section G has 9 items on colour codes.

Table 1

*Distribution of Items in Survey*

SECTION		
B	Writing-Planning	8
C	Writing-Translating	8
D	Writing -Reviewing	7
E	Graphic Organizers	13
F	Structure & Group Work	7
G	Colour Codes	9
		52

Table 2

*Reliability Statistics*

Cronbach's Alpha	N of Items
.922	52

Data is collected via goggle form and analysed using SPSS version 26. With reference to table 2, the SPSS analysis revealed a Cronbach analysis of .922; thus, showing a high internal reliability for the instrument. Data is presented in terms of percentage for the demographic profile and mean scores to answer the research questions.

### Findings

#### Findings for Demographic Profile

4	Have you learnt Academic Writing with citations before this?	YES	NO
		73%	27%

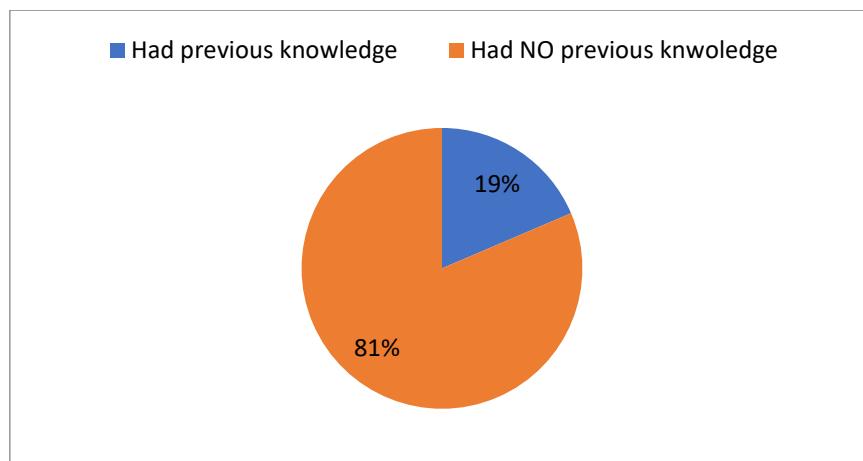


Figure 2- Percentage for Previous Knowledge

Figure 2 presents the percentage for learners' previous knowledge with regards to the learning academic writing conventions (particularly citations). 73% reported they had previous knowledge, while 27% reported they had no background knowledge. According to Piaget (1953), motivation is crucial for learning because it allows students to use their previous knowledge for making connections for new knowledge.

#### Findings for Accommodation

This section presents analysed data to answer Research Question 1: How does learning writing online in group influence learners' accommodation? In the context of this study, this is measured by (i) planning and (ii) translating.

*Planning*

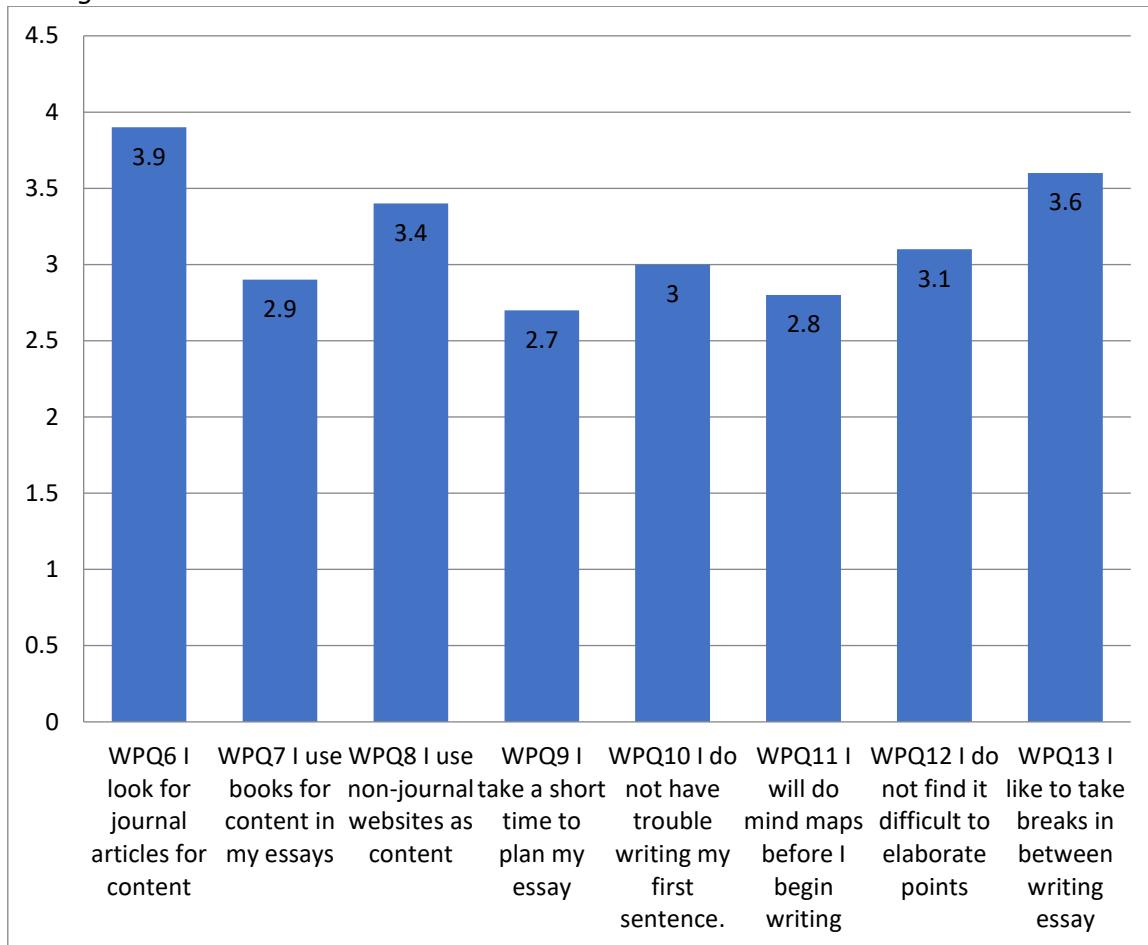


Figure 3- Mean for Planning

Figure 3 presents the mean for Planning. Respondents reported the highest mean (3.9) for "look for journal articles for content". Next is "to take breaks in between writing essay" (mean= 3.6). It is good to know that the lowest mean (2.7) is for "take a short time to plan my essay".

*Translating*

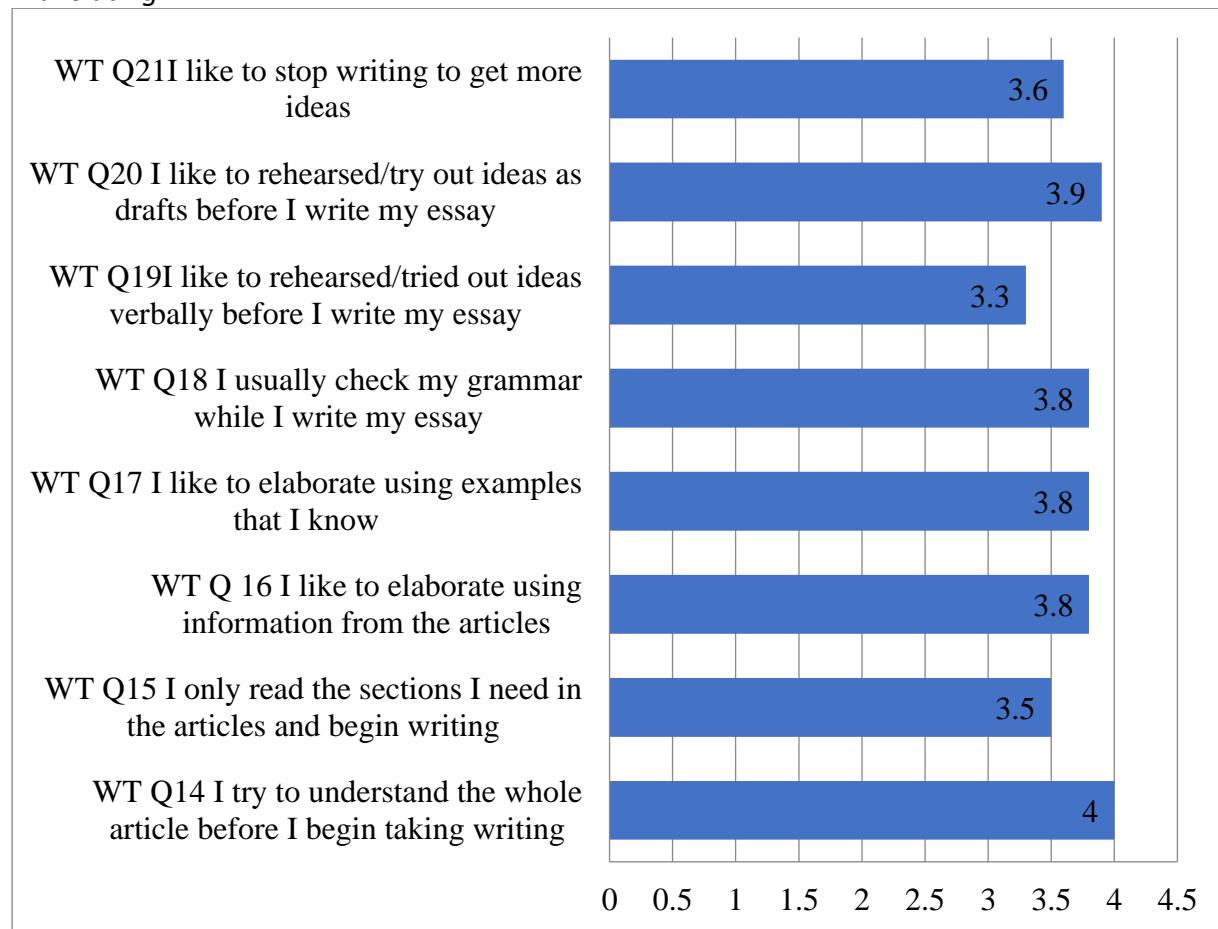


Figure 4- Mean for Translating

Figure 4 presents the mean for Translating. The highest mean (4) is for “try to understand the whole article before I begin taking writing”. This is followed by “like to rehearsed/try out ideas as drafts before I write my essay” (mean=3.9).

**Findings for Schema**

This section presents analysed data to answer Research Question How does learning writing online in group influence schema? In the context of this study, schema is taught using colour codes.

### Colour Codes

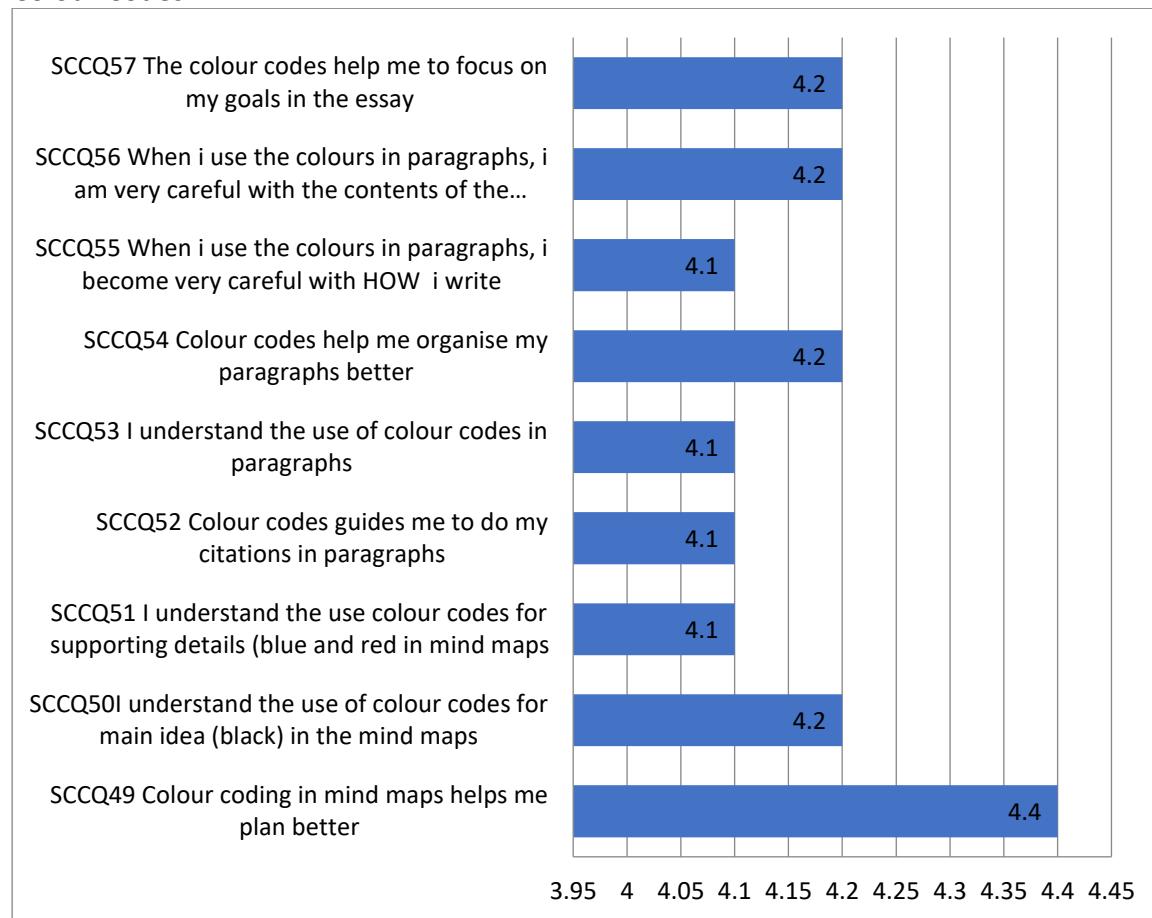


Figure 5-Mean for Colour Codes

Figure 5 shows the mean for colour codes. The highest mean (4.4) is for “Colour coding in mind maps helps me plan better”. Next, three items had similar mean of 4.2 and they are “understand the use of colour codes for main idea (black) in the mind maps”, “Colour codes help me organise my paragraphs better”, and also “When i use the colours in paragraphs, i am very careful with the contents of the paragraphs”.

### Findings for Equilibrium

This section presents analysed data to answer Research Question 3: How does learning writing online in group influence equilibrium? In the context of this study, this is measured by scaffolding through the use of graphic organisers (mind maps and shapes).

*Scaffolding -Graphic Organisers (Mind Maps and Shapes)*

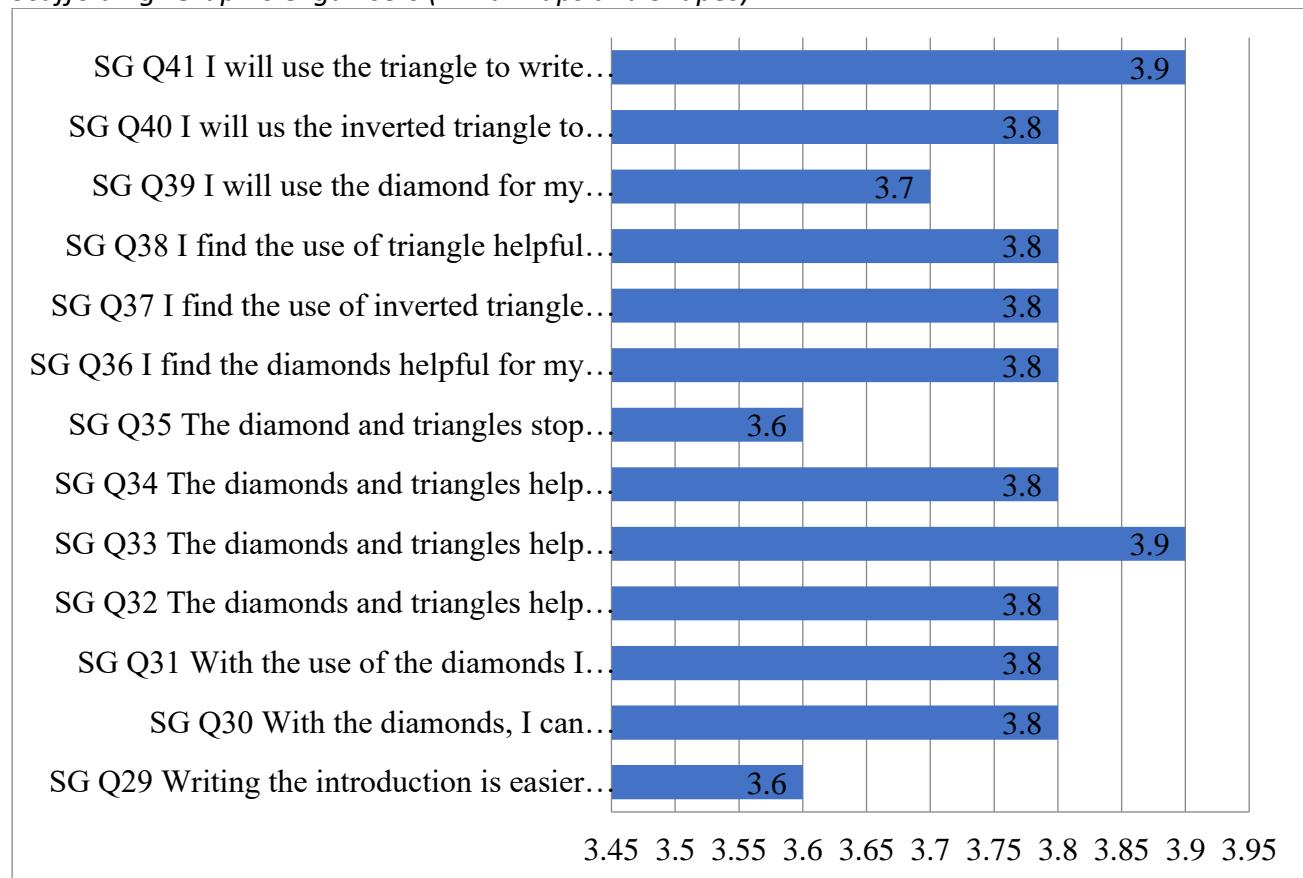


Figure 6- Mean for Scaffolding

Figure 6 shows the mean for scaffolding. The highest mean is 3.9 for “The diamonds and triangles help me organize the content of my essay”. The lowest mean is 3.6 for “Writing the introduction is easier with the inverted triangle” and also at the same mean of 3.6 is “The diamond and triangles stop me from writing irrelevant points in my essay”.

**Findings for Adaptation**

This section presents analysed data to answer Research Question 4: How does learning writing online in groups influence adaptation?

### Adaptation-Structure & Group Work

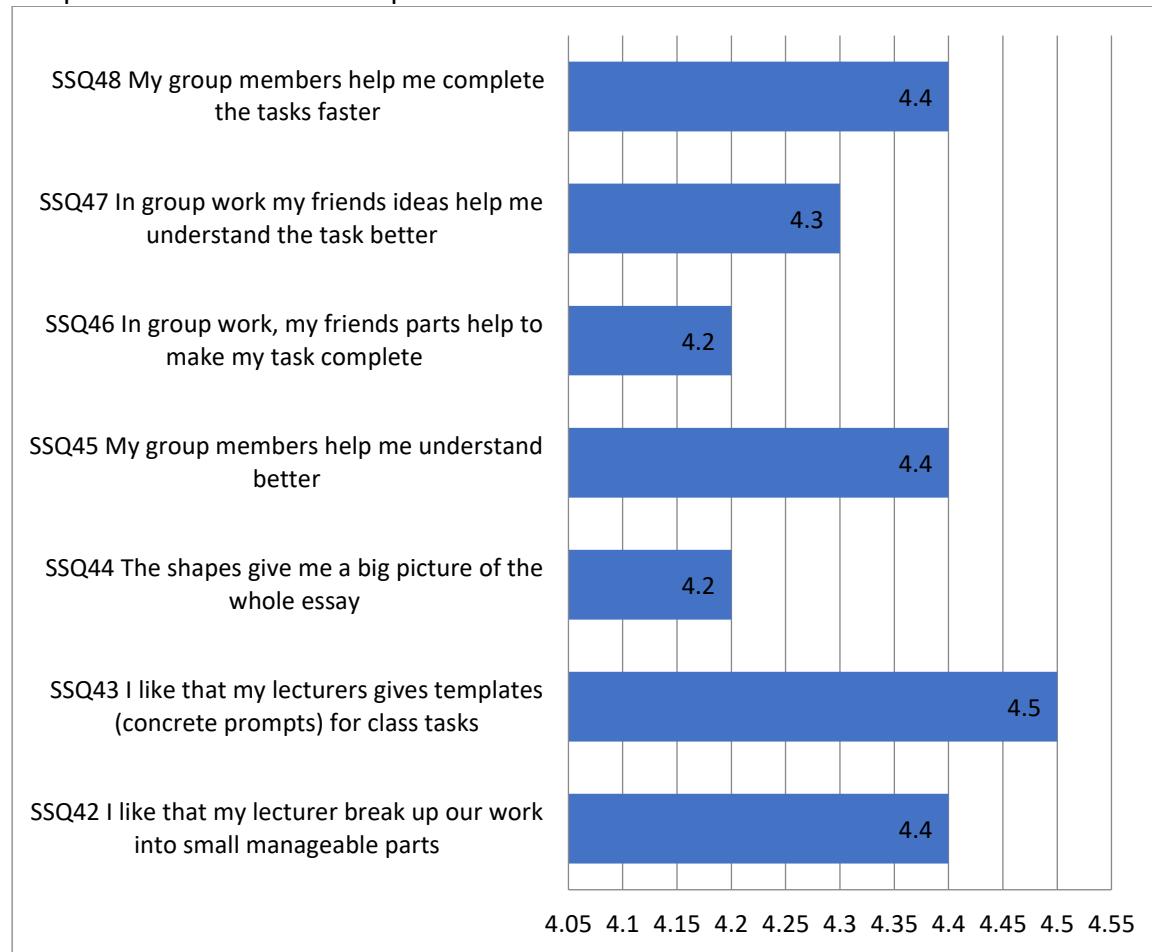


Figure 7- Mean for Structure & Group Work

Figure 7 presents the mean for structure and group work. The highest mean (4.5) is for “like that my lecturers give templates (concrete prompts) for class tasks”. Next, 2 items had a mean of 4.4 and they are “like that my lecturer break up our work into small manageable parts” and “My group members help me understand better”.

### Findings for Assimilation

This section presents analysed data to answer Research Question 5: How does learning writing online in groups influence assimilation?

### Assimilation-Reviewing

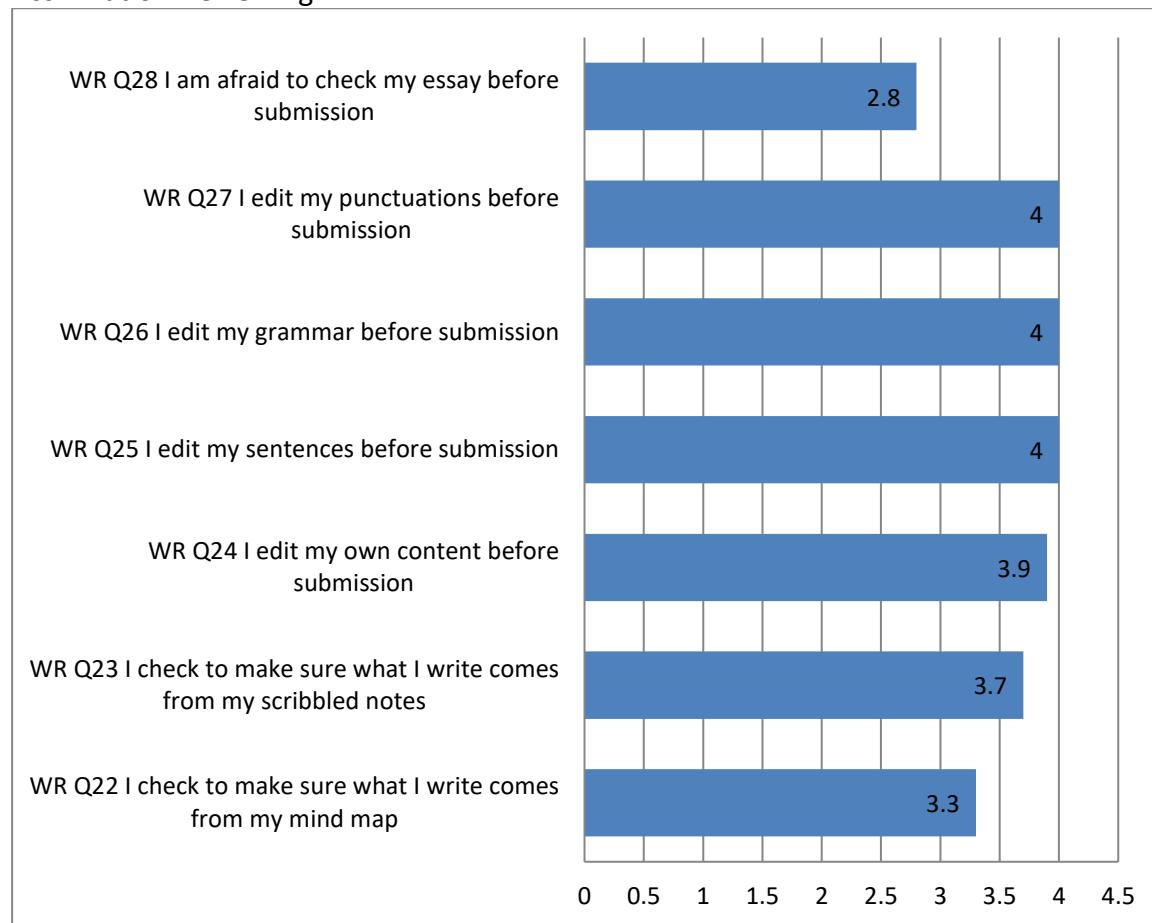


Figure 8 - Mean for Reviewing

Figure 8 shows the mean for reviewing. The highest mean of 4 is for three items and they are “edit my sentences before submission”, “edit my grammar before submission”, and also “edit my punctuations before submission”. The lowest mean of 2.8 is for “afraid to check my essay before submission”.

### Conclusion

#### *Summary of Findings and Discussion*

The discussion of summary needs a recapitulation of the conceptual framework of the study (refer to figure 1). This online group writing began with accommodation. Participants worked in groups online to look for journal articles to be used in the content of their essay. They spent a long time doing this planning stage. This finding is in accordance with the study by Fadda (2011) who also reported that writers spent time to make plans for the write up. In groups, the writers took time to understand the whole article before beginning to write. In groups, they reported to rehearse their ideas as drafts.

Next, in the context of this study, the use of schema is done through the use of colour codes. The participants reported that the colour-coded, mind maps helped them plan better. They also reported that the colours in the paragraphs helped them to be more careful when writing the contents of the essay.

For equilibrium, the participants were taught scaffolding. This is facilitated by the use of diamonds and triangles. They reported that the shapes helped them organize the essay better. For adaptation, the participants were taught to structure the essay in groups. They reported

that the templates given to them helped them structure their essays in more organised manner. Finally, participants were taught reviewing skills to display the use of assimilation in learning. They reported that they were more aware of their mistakes and edited before they submitted their work for evaluation.

This method has in some ways reduced the fear writers have about academic writing. The activities designed in this study helped participants enjoy the writing process via online. Azhari, et.al (2022) also reported that one major problem among writers are not the lack of linguistic competence –it's the process. If learners can learn to enjoy the process, they may in turn result in positive outcomes of writing. This is also agreed by Othman,et.al. (2022) who felt that how writing prophecies influence writers' own self-imposed belief and how this belief is affected by other imposed expectations and finally these impact the results of the writing activity.

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

Online learning mode is here to stay. Perhaps that is the positive outcome of the covid-19 wave. Learning modes has changed and learners are enjoying the benefits of instructors' creativity to make their learning experience a positive one. Future researchers could focus on more creative ways of teaching academic writing online-not merely using online tools and applications.

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