

## Team Writing Using Colour: An Intervention to Academic Writing

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### ABSTRACT

Academic writing is considered as a difficult task for many writers. Even instructors who teach the course may or may not be comfortable writing an academic paper voluntarily. Among some of the challenges are teaching and non-teaching responsibilities. In addition to that some may not have the confidence due to lack of experience. Measures must be taken to encourage academicians to write academic papers amidst the challenges. This study investigated the perception of lecturers on the implementation of the intervention program. 31 academicians from a public institution participated in this intervention. After going through the intervention, the participants responded to a questionnaire to report on their perception of the intervention. The questionnaire has 5 sections and they are intervention of colour coded team writing, cognitive load, task modelling, supportive and directive scaffolding. Findings revealed positive high correlation for the intervention of colour coded team writing with the use of task modelling, supportive and directive modelling. The result of this study bear interesting implications for academicians to see academic paper writing as do-able and manageable.

**Contribution/Originality:** This study adds to the existing literature on the intervention strategies for team work in academic writing. It also adds a creative touch towards academic writing that is through the use of colour codes. The colour codes determine each individual writer's contribution to the write-up.

## 1. Introduction

This study proposes an intervention for academic writing among academicians. Why this intervention? Academics or instructors in higher institutions of learning are no longer expected to only teach. They are required to go beyond classroom teaching. Felten (2013) introduced the Scholarship of Teaching and Learning (SoTL). He proposed that the SoTL is a way for academics to systematically collect and analyse data about their teaching. He identified five main principles for good practice in SoTL. Firstly, teaching needs to focus on students learning. Secondly, teaching should be grounded in context. Thirdly, it should be methodologically sound. Next, it should be conducted in partnership with students. Finally, it should be appropriately public. Among the five good practices, the last one is a

challenge to many academics. This is because “appropriately public” usually means publication for academics. Generally, for academics, publication refers to publication of journal article or academic writing.

One might think academics should not have problems with academic writing. They are assumed to be familiar with academic writing as their entry requirement is postgraduate qualification and most postgraduate students would have been exposed to academic writing. However, due to teaching and non-teaching work load, many find conducting research and then writing about the research for journal publication a burden. Some may be able to spare extra time to write academic papers for journals but may need guidance.

This study explores a special intervention program to guide academics to write academic papers. It is implemented to encourage first-time academic writers to embark on the journey of academic writing. This study investigated the perception of lecturers on the intervention program.

This research is carried out to investigate the how writers perceive the use of the intervention. Specifically, this study is done to answer the following questions;

- i. What is the perception of writer on the activity to Reduce Cognitive Load?
- ii. What is the perception of writer on the activity of Task Modelling?
- iii. What is the perception of writer on the activity for Supportive Modelling
- iv. What is the perception of writer on the activity for Directive Modelling?
- v. What is the perception of writer on the activity of colour coded team writing?
- vi. What is the relationship between team work and all aspects of Intervention?

## 2. Review of Related Literature

The literature section discusses theories related to (i) instructional scaffolding, (ii) modelling, (iii) use of colour and (iv) team work. For proof of practical application of the theories mention, the discussion continues at the next section elaborating on past studies done in the four aspects (i-iv). This literature review ends with a proposed conceptual framework of the study.

### 2.1. Theoretical Framework

#### 2.1.1. Team Writing

Team writing is based on the benefits of group work. Group work is a popular and powerful learning method. The benefits of group interaction is rooted from the concept of ZPD -zone of proximal development by [Vygotsky \(1978\)](#). This concept explains how individuals achieve more out of learning when they are collaborating with others in a group compared to working alone. The social interaction enhances the team members' capacity to think critically and also improve on their outcome as a team. [Rahmat \(2020\)](#) states that the social interaction among team members gives the members more than just improve communications skills. They gain critical thinking and problem solving skills as well.

#### 2.1.2. The Concept of Colour and Selective Attention

Colour is a good method to make people focus a specific information. The use of colour for emphasis is rooted from [Broadbent's \(1958\)](#) theory of Selective Attention. This theory

uses the process of directing a person's awareness to relevant information while ignoring the irrelevant information. The intervention in this study uses colour to assign specific colour to (a) individual author because the theories of colour reveal that colours are capable. Next colour is used to focus on (b) specific content in the paper. The concept of focus using colour shows that colours can help readers focus their attention on specific content at any one specific time (Sweller, 1988; Chang et al., 2018). Also, focusing content using colour helps to reduce germane cognitive load. Germane cognitive load refers to the mental effort that the learner needs to process the new information. Some information demands a lot of mental effort for a person to comprehend. So, the use of colour of assigned sections focuses the person attention on one small section at a time to enable final understanding. The use of colour can also facilitate the application of selective attention to allow them filter out irrelevant information as well as focus on the desired information momentarily.

## 2.2. Past Studies

### 2.2.1. Motivation in Writing

Next, the qualitative study by Sidky (2019) was done to enhance students' essay writing at the secondary stage through the use of scaffolding techniques in a workshop forum. 40 students from a secondary school in a government language school participated in the study. Data was collected from sample of students' writing on three genres as well as interviews. A pre and post-test was done. Findings revealed that scaffolding techniques was found to be an effective method to improve students' writing. Data analysed also revealed that having an authentic reason for writing is a good source of writing motivation.

Lastly, the study by Widiana and Sabiq (2021) explored scaffolding strategy in teaching writing. The participants for this study were an English teacher and her 10<sup>th</sup> grade students in a school in Indonesia. Data was collected from observation, interviews and documentation. Findings showed that scaffolding strategy improves students' critical thinking skills. The study also reported some challenges of using scaffolding strategy in writing. The challenges are students' level of academic results. Students also showed they were not interested in the classroom activities. They were also reported to be weak in their vocabulary. Finally, they had no motivation for writing.

### 2.2.2. Group Work

A study by Pham (2021) conducted a research on 62 students at a university in Ho Chi Minh City. The study looks at the effects of collaborative writing. Out of the 62 students, 27 were put in the control group while 35 students were in the experimental group. The students underwent individually and collaboratively essay writing tasks. Data was collected from students' pre and post tests on students' writing. Data was also collected from semi-structured interviews. Findings revealed that collaborative writing influenced students writing.

Another study by Rahmat (2020) explored learners' perception of conflict resolution in class discussions. The quantitative study was done with 164 respondents. The instrument was a questionnaire. It has 32 items on competing, accommodating, avoiding and compromising & collaborating. Findings revealed that team members gained knowledges as well as improved their communication skills throughout the team interactions.

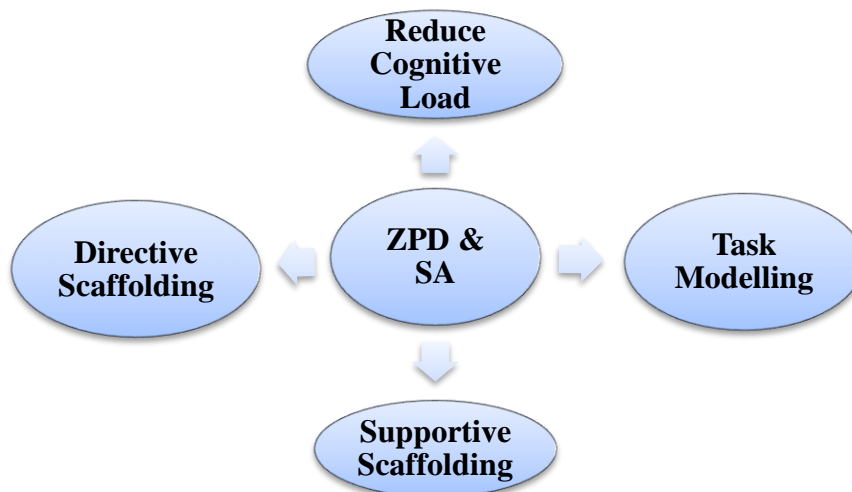
### 2.2.3. Past Studies on Colour

[Ewoldt and Byrne \(2023\)](#) conducted a single-case design study to explore a pre-and post-intervention assessment by using instructional design for exploratory essays. The study also explored students' use of colour code to highlight elements in the essay. Five students who are dyslexic were chosen to participate in this study. Data analysis revealed that students improve their expository paragraph knowledge and skills.

## 2.3. Conceptual Framework

[Figure 1](#) presents the conceptual framework of the study. From the bird's eye view, this study explores the use of Instructional Scaffolding to guide academic writer. Based on [Silliman and Wilkinson \(1994\)](#) concept of scaffolding, this study explores both types of scaffolding and they are Supportive and Directive Scaffolding. The use of instructional scaffolding is again focused on the intervention of colour codes in the guidance through team writing or group work. Team writing or group work in this intervention is rooted from the classic theory of ZPD-Zone of Proximal Development.

Figure 1: Conceptual Framework of the Study



### 2.3.1. Colour coded team writing

Team work enables writers to internalise the concept of shared burden towards an otherwise over-burdened writing task done alone. The use of colours that signifies individual writers' designated writing task help writers focus only on their assigned parts. The use of colours also help writers filter out irrelevant information at the time of writing. Finally, team work also helps reduce learners cognitive load by making the task manageable.

### 2.3.2. Reduce Cognitive Load

One tedious task of embarking on a research is the search for / or the construction of the instrument. This is in line with [Sweller's \(1988\)](#) cognitive load. This intervention activity takes away germane cognitive load of having to process the information on how to construct instrument by using ready-made instruments prepared as part of the intervention.

### 2.3.3. Task Modelling

According to [Bandura \(1971\)](#), one way learners learn is through (a) observation, and (b) modelling. One aspect of this intervention is the writing workshop is done through “hands-on” activity. For instance, in the teaching of SPSS analysis, participants were guided to analyse their own data to be used in their own academic paper. This activity is also considered as Taks Modelling where the instructor demonstrates the task.

### 2.3.4. Supportive Scaffolding

The intervention adopts the concept of instructional scaffolding by [Silliman and Wilkinson \(1994\)](#). The invention adopts supportive scaffolding when the instructor provides the template for writing the academic paper. This academic paper template is loaded with colour codes (to assign individual writers to coloured sections of the paper). This can be considered as individual writers transferring their ideas INTO the given coloured template for each team. The coloured sections will be converted to black colour when it is ready to be submitted to the publisher.

### 2.3.5. Directive Scaffolding

When the draft is completed and no longer in colour codes, the participants are then guided to transfer out the draft onto a template provided. This is also known as directive scaffolding. This time the scaffolds was obtained from the chosen publisher. Participants transfer their completed drafts onto the journal template ready for submission to the publisher. Since the focus of this intervention is team work through ZPD and SA (selective attention using colours), this study looks at the relationship between ZPD & SA with all the other writing tasks (refer to [Figure 1](#)).

## 3. Research Methods

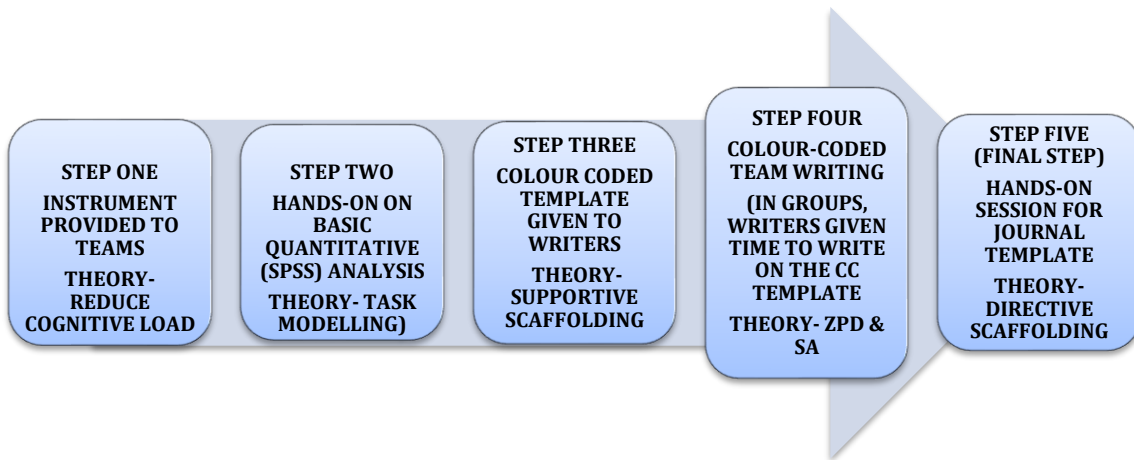
This research methodology is presented into two. The first section displays the step-by-step of the procedure of the Intervention while the second section elaborates the data collection method and analysis. The participants are 31 lecturers in a public university who signed up for this academic writing Intervention Program. They volunteered the participants of this study.

### 3.1. Intervention -How it is carried out

[Figure 2](#) shows the flow of the intervention. Step one signifies the start of the intervention. Prior to this participants chose their team members and identify themselves as a team. This meet-up can be done online or face -to-face where the team members were given their chosen instrument that matches their topic of research study. Before meeting for Step Two, participants are required to collect data using their questionnaires on Google Form. During Step Two, participants underwent a hands-on session to learn basic SPSS. They analyse their own collected data. When the session ends, the instructor prepares a colour-coded template for each team that uses the analysed data done by the team themselves. During Step Three, participants get their colour-coded template to write on. Each writer is assigned a colour. Every part of the academic paper contains colours that corresponds to the author and their assigned colours. Step Four is when the participants are given one month to complete the academic paper as a team. The focus at this step is (a) team work and (b) colour-codes. The final step-Step Five is when the participants

choose the journal they wish to send their academic paper to. They transfer their draft onto the assigned template by the publisher. The intervention ends.

Figure 2: The Intervention – Coloured Team Writing



### 3.2. The Participants’ Feedback on the intervention

This study investigates participants’ perception on learning academic writing using coloured intervention. 31 participants responded to the survey. A purposeful sampling involves intentionally selecting participants based on specific characteristics for the research. The participants of this study therefore are lecturers in a public university who volunteered to learn journal writing using colour codes. A 5 Likert-scale survey is used. This instrument is anchored from several theories in learning. Section A has several questions on demographic profile. With reference to Table 1, Section B has 7 items on Reduce Cognitive Load (Sweller, 1988).

Table 1: Distribution of Items in the Survey

Section	Variable	No of Item
B	Reduce Cognitive Load	7
C	Task Modelling	7
D	Supportive Scaffolding	7
E	Colour Coded Team Writing- Zpd & Selective Attention	7
F	Team Work- Directive Scaffolding	7
	Total No. Of Items	35

Section C has 7 items on Task Scaffolding (Sweller, 1988). Section D displays 7 items on Supportive Scaffolding (Silliman & Wilkinson, 1994). Section E has 7 items on ZPD & Selective Attention Approach which looks into Teamwork and using colour codes (Vygotsky, 1978). Finally, section f has 7 items on Directive Scaffolding (Silliman & Wilkinson, 1994). This instrument has gone through content reliability by an expert in the department. Content validity in a questionnaire refers to the degree to which the questions included in the survey accurately represent the intended topic or construct.

Table 2 shows the reliability of the survey. The analysis shows a Cronbach alpha of .91 for all 35 items; thus, this shows good reliability of the instrument chosen/used. Further analysis using SPSS. The analysed data is used to present findings to answer the research questions for this study.

Table 2: Reliability of Statistics

Cronbach's Alpha	N of Items
.91	35

## 4. Results

### 4.1. Findings for Demographic Profile

Table 3 shows the percentage for teaching experience. 26% had between 0-5. Next, 6% reported to have 6-10 years. 23% had between 11-15 years. 13% had 16-20 years of experience while 35% had more than 32years of teaching.

Table 3: Percentage for Teaching Experience

No	Years	Percentage
1	0-5 years	26%
2	6-10 years	6%
3	11-15 years	23%
4	16-20 years	13%
5	More than 21 years	32%

Table 4 shows the percentage for publication experience. 58% said "yes" while 42% said "no".

Table 4: Percentage for Publication Experience

No	Item	Percentage
1	No	58%
2	Yes	42%

Table 5 shows the percentage for amount of publication. 74% had 1-5 past publications while 26% had between 6-10 publications previously.

Table 5: Percentage for Quantity Publication

No	Quantity	Percentage
1	01-5	74%
2	6-10	26%
3	More than 10	0%

### 4.2. Findings for Reduce Cognitive Load

#### 4.2.1. What is the perception of writer on the activity to Reduce Cognitive Load?

Table 6 shows the mean for reducing cognitive load. The highest is the first item (mean=4.7, SD=.4519). This item reports that the participants were scared of research and they hope to gain confidence thorough this intervention program. Next, they reported high mean for item 2 (mean = 4.5, SD=.56985) and 3item 3 (mean=4.5, SD= .5088). Item 2 states that the participants agreed that good planning is crucial in research to reduce the writers' load. Next, the participants were grateful for the ready-made instruments prepared.

Table 6: Mean for Reduce Cognitive Load

Item	Mean	SD
WPPQ1 Embarking on research on my own scares me, so joining this program gives me confidence to start one	4.7	.45719
WPPQ2 I think good planning is important in research as it reduces the load	4.5	.56985
WPPQ3 Constructing an instrument for research is difficult, the ready-made instrument makes it easier	4.5	.50588
WPPQ4 The sections provided in the instrument helps me understand about variables better	3.6	.76059
WPPQ5 The activity of making changes to the survey helps me construct my own instrument after this	3.8	.77875
WPPQ6 The ready-made online survey (Google Form) makes it easier for me	4	.60464
It is easy to collect data from the ready-made survey		
WPPQ7 It is easy to collect data from the ready-made survey	4.1	.59749

### 4.3. Findings for Task Modelling

#### 4.3.1. What is the perception of writer on the activity of Task Modelling?

Table 7 presents the mean for task modelling. The highest mean is item 3 (mean=4.6, SD=.50161) where the respondents reported that learning is easier by following step-by-step. Next, for item1 (mean=4.4, SD=.55842), the respondents agreed that learning is easier when it is done through hands-on experience.

Table 7: Mean for Task Modelling

Item	Mean	SD
IRQ1 Learning basic SPSS is easier when it is done through hands-on	4.4	.55842
IRQ2 Learning basic SPSS through following the instructor step-by-step is easier	4	.87498
IRQ3 Learning basic SPSS is easier when I can understand the function of each step	4.6	.50161
IRQ4 Learning basic SPSS is using my own data is meaningful	4	.94812
IRQ5 Knowledge of basic SPSS is useful for me to do research	4.1	.74632
IRQ6 Knowledge of SPSS is useful for me to analyse my data in future	3.9	.72735
IRQ7 Knowledge of SPSS can enable me to carry out research on my own in future	4.2	.68784

### 4.4. Findings for Supportive Scaffolding

#### 4.4.1. What is the perception of writer on the activity for Supportive Scaffolding?

Table 8 presents the mean for supportive scaffolding. The highest mean is item 2 (mean=4.5, SD=.50588) where respondents reported that the template given helped give them direction. Next, for item 1, respondents reported that the template mirrors the actual academic paper (mean=4.4, SD=.50161). The respondents also agreed (item 4) that the templates guided them to be more organized (mean=4.4, SD=.5506).

Table 8: Mean for Supportive Scaffolding

ITEM	MEAN	SD
PQ1 The template mirrors an actual academic paper	4.4	.50161
PQ2 The template given help give me direction	4.5	.50588
PQ3 The templates give me an overall view of what a paper is	4.3	.59928
PQ4 The templates guide me to be more organized in my writing	4.4	.55066
PQ5 The templates help me understand an academic paper	4.3	.68155
PQ6 The tips written at each sub-section of the template guides me	4.3	.63075
PQ7The tips written help me focus better for my future writing	4.2	.71692

#### 4.5. Findings for Colour Coded Team Writing

##### 4.5.1. What is the perception of writer on the activity of colour coded team writing -ZPD & Selective Attention?

Table 9 reveals the mean for ZPD & Selective Attention. Item 1 has the highest mean (mean=4.7, SD=.47519) where respondents reported that the colour coded template helped them focus on specific parts. Next, respondents agreed with item 2 (mean=4.6, SD=.49514) that the colours assigned was useful for assigning writer's roles. This is followed by item 5 (mean=4.6, SD=.50561) where writers stated they tried to understand what the other writers are writing. In item 6 (mean=4.6, SD=.4914), respondents agreed that they made sure their writing is well-written in terms of language. Finally, in item 7 (mean=4.6, SD=.56416), respondents also made sure their own parts are well-written in technical aspects.

Table 9: Mean for Colour Coded tema writing-ZPD &amp; Selective Attention

Item	Mean	SD
RQ1, I find the colour coded help me focus on specifics parts of the paper	4.7	.47519
RQ2I find the colour-coded templates helpful in assigning roles to all writers	4.6	.49514
RQ3When I get the colour code, I begin to understand the structure of a journal article	3.5	1.15004
RQ4When I get the colour-coded template, I can focus more on my own coloured parts	4.3	.78288
RQ5 When I get the colour coded template, I also try to understand what the other writers have to write	4.6	.50161
RQ6When I get the colour coded template, I make sure that my parts are well-written in terms of language	4.6	.49514
RQ7When I get the colour coded templates, I make sure that my parts are well-written in terms of citation and referencing skills.	4.6	.56416

#### 4.6. Findings for Directive Scaffolding

##### 4.6.1. What is the perception of writer on the activity for Directive Scaffolding?

Table 10 shows the mean for directive scaffolding. Two items share the same highest mean. The first one is item 1 (mean=4.7, SD=.47519) where the respondents reported that team writing is manageable. Next, item 6 (mean=4.7, SD=.47519) reported that the transfer from drafts to the assigned journal templates was smooth. Item 5 (mean=4.5,

SD=.62390) states that the respondents found working in team simplifies their writing task.

Table 10: Mean for Directive Scaffolding

Item	Mean	SD
GQ1I find that team writing is do-able for a research paper	4.7	.47519
GQ2The deadlines given help the team keep track of the writing task	4.2	.77875
GQ3The team members adhered well to the assignment of the colour codes	3	1.13970
GQ4 Working in a team makes the writing task less challenging	4.5	.62390
GQ5The list of journals to choose from helped me to make publication decision fast	3.9	.94357
GQ6The transfer from drafts to journal templates was easily done	4.7	.47519
GQ7The final hands-on session to submit to journals was successfully done	4.3	.68155

#### 4.7. Findings for Relationship between Team work and all aspects of the Intervention

##### 4.7.1. What is the relationship between team work and all aspects of Intervention?

In the context of this study, team work refers to colour-coded team writing. In this study, the focus is team writing as well as using colours as the intervention mode, so it is interesting to explore how this variable correlates with the other variables such as reducing cognitive load, task modelling, supportive and directive scaffolding.

To determine if there is a significant association in the mean scores between team work and all aspects of Intervention, data is analysed using SPSS for correlations. Results are presented separately in [Table 11](#), [Table 12](#), [Table 13](#) and [Table 14](#).

[Table 11](#) shows there is an association between colour-coded team writing and reducing cognitive load. Correlation analysis shows that there is a high significant association between colour-coded team writing and reducing cognitive load ( $r=.610^{**}$ ) and ( $p=.000$ ). According to [Jackson \(2015\)](#), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between colour-coded team writing and reducing cognitive load.

[Table 12](#) shows there is an association between colour-coded team writing and Task Modelling. Correlation analysis shows that there is a high significant association between colour-coded team writing and Task Modelling ( $r=.521^{**}$ ) and ( $p=.000$ ). According to [Jackson \(2015\)](#), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between colour-coded team writing and Task Modelling.

Table 11: Correlation between Colour Coded Team Writing and Reduce Cognitive Load

		Colour Coded Team Writing	Reduce Cognitive Load
Colour Coded Team Writing	Pearson Correlation	1	.610**
	Sig.(2-tailed)		.000
	N	31	31
Reduce Cognitive Load	Pearson Correlation	.610**	1
	Sig.(2-tailed)	.000	
	N	31	31

\*\* Correlation is significant at the 0.01 level (2-tailed)

Table 12: Colour Coded Team Writing and Task Modelling

		Colour Coded Team Writing	Task Modelling
Colour Coded Team Writing	Pearson Correlation	1	.521**
	Sig.(2-tailed)		.003
	N	31	31
Task Modelling	Pearson Correlation	.521**	1
	Sig.(2-tailed)	.003	
	N	31	31

\*\* Correlation is significant at the 0.01 level (2-tailed)

Table 13 shows there is an association between colour-coded team writing and Supportive Scaffolding. Correlation analysis shows that there is a high significant association between colour-coded team writing and Supportive Scaffolding ( $r=.626^{**}$ ) and ( $p=.000$ ).

Table 13: Colour Coded Team Writing and Supportive Scaffolding

		Colour Coded Team Writing	Supportive Scaffolding
Colour Coded Team Writing	Pearson Correlation	1	.626**
	Sig.(2-tailed)		.000
	N	31	31
Supportive Scaffolding	Pearson Correlation	.626**	1
	Sig.(2-tailed)	.00	
	N	31	31

\*\* Correlation is significant at the 0.01 level (2-tailed)

According to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between colour-coded team writing and Supportive Scaffolding.

Table 14 shows there is an association between colour-coded team writing and Directive Scaffolding. Correlation analysis shows that there is a high significant association between colour-coded team writing and Directive Scaffolding ( $r=.611^{**}$ ) and ( $p=.000$ ). According to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between colour-coded team writing and Directive Scaffolding.

Table 14: Colour Coded Team Writing and Directive Scaffolding

		Colour Coded Team Writing	Directive Scaffolding
Colour Coded Team Writing	Pearson Correlation	1	.611**
	Sig.(2-tailed)		.000
	N	31	31
Directive Scaffolding	Pearson Correlation	.611**	1
	Sig.(2-tailed)	.00	
	N	31	31

\*\* Correlation is significant at the 0.01 level (2-tailed)

## 5. Conclusion

### 5.1. Summary of Findings and Discussions

The intervention in this study is team writing using colour codes. According to Vygotsky (1978), group interaction improves the team members' zone of proximal development which means team members achieve working in group compared to working alone. The colour codes assigned to authors' names helped writers focus on their assigned parts thus reminding them of their assigned roles in the paper. Each author made sure their own part is well-written in terms of language and technical aspects. In addition to that results of this study also showed that this intervention helped to reduce writers' cognitive load and with lessened load, writers gained confidence in academic writing. They were grateful for the ready-made instruments given but also agreed that good planning reduces their academic writing load. The findings of this study is in accordance with past studies. Pham (2021) agreed that individual effort when combined can lead to the team achieving group perfection. Next the study by Rahmat (2020), team interaction increased members knowledge as well as communication skills so that the task can run smoothly. Ewoldt and Byrne (2023) vouched for the use of colour in writing for better organization.

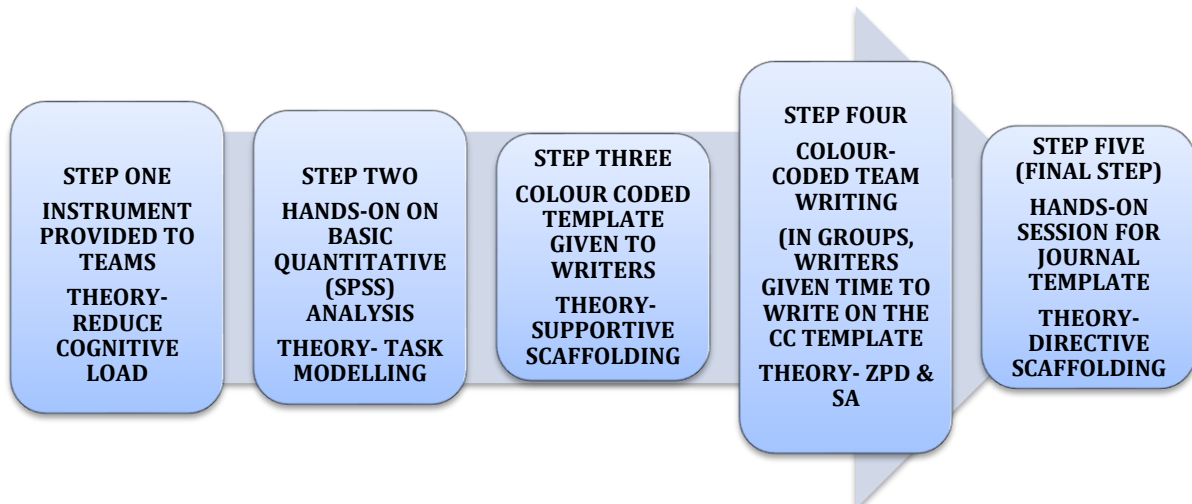
Next, task modelling by the instructor helped writers follow step-by-step. The also felt that task modelling was best done when it is followed by hands-on experience by the participants. For supportive scaffolding, the participants felt that the templates (scaffolds) provided them with direction. They also agreed that the scaffolds helped them see the actual academic paper, as well as made them more organised writers. Directive scaffolding takes action when writers transfer the completed draft onto the chosen journal template. The transfer was smooth because the draft was already properly scaffolded into a general academic paper. Both Sidky (2019) as well as Widiana and Sabiq (2021) reported that the use of scaffolding helped to minimise the challenges of writing as writers can follow a structured pattern.

Finally, the findings in this study also revealed positive high correlation for the intervention of colour coded team writing with the use of task modelling, supportive and directive modelling. As far as this study is concerned, the intervention was found to be successful to attract academicians to not fear writing academic papers.

## 5.2. Pedagogical Implications and Suggestions for Future Research

Figure 2 below recaps the steps taken in the intervention. Step one gets the writer ready with the ready-made instrument. Step 2 puts the writers in hands-on mode in the learning of basic SPSS skills using the data they collected with the instrument. More often than not, SPSS lessons are taught using dummy data and the participants often could not connect with their own research. Writers get their coloured coded template in step 3. Perhaps the most tedious step is step 4 because writers need to write. However, the burden is lessened through team writing. Each writer is assigned a colour and sections of the academic paper is coloured so writers only write their assigned parts. Step 4 enables writers to compile the completed academic paper by the team, transfers to the chosen journal template and send to the publisher.

Figure 2: The Intervention – Coloured Team Writing



Academic writing becomes even more difficult because academicians have other overlapping responsibilities; both teaching and non-teaching. As an academician myself, on top of the overloading of responsibilities, I had no one to turn to when I did not know how to even start writing academic paper. This invention acts as *hand-holding concept* of the writers to smoothly go through the first stage of constructing or finding research instruments, to analyse my data, to write the paper with the help of team members. The use of colour coding the authors and their parts to write helps to reduce unnecessary communication that can take more time than necessary to complete the writing task. Everyone focusses on their assigned parts. Future research could be conducted to introduce other interventions and compare the effectiveness.

## Ethics Approval and Consent to Participate

All consents from the participants were obtained before the research was carried out. All procedures performed in this study involving human participants were conducted in accordance with the ethical standards of the institutional research committee.

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## Conflict of Interest

The authors reported no conflicts of interest for this work and declare that there is no potential conflict of interest with respect to the research, authorship, or publication of this article.

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