



Effects of Teacher Scaffolding On EFL Learners' Self-Regulation and Paragraph Writing Performance

Yohana Ebrahim, Abiy Yigzaw, Anegagregn Gashaw

Wollo University, Dessie, Ethiopia

Bahir Dar University, Bahir Dar, Ethiopia

Debre Tabor University, Debre Tabor, Ethiopia

Abstract. The main objective of this research was to check the effects of teacher scaffolding on EFL students' self-regulation and paragraph writing performance. Intervention case study was the research design used in this research and the method was mixed methods. The participants were one section grade 9 students from Kidame Gebeya Secondary School in Dessie, Ethiopia. Paragraph writing tests, questionnaire for students, classroom observation, students' self-reflection reports and semi-structured interview for teacher were the data gathering instruments. The data collected through tests and questionnaires were analyzed using paired sample t-test and percentage. The data obtained through observation, self-reflection reports and semi-structured interview were thematically analyzed. The mean difference before and after the intervention, the p-value .000; <0.05 alpha level as well as the data gained through observation, self-reflection reports and semi-structured interview indicated that teacher scaffolding significantly enhances students' self-regulation and paragraph writing performance.

Index Terms: scaffolding; interaction; attachment strategies; internalization; self-regulation; paragraph writing performance

I. Introduction

English language serves for wider communication worldwide; it is used in many organizations and institutions. It is also a medium of instruction in colleges and universities in countries like Ethiopia (Mekasha, 2002). In Ethiopia, English is given as a subject from pre-primary; so that, students can be competent in all the skills of the language to learn other subjects better and effectively use it in organizations and institutions after they have completed their education at higher levels. One of the skills students should be proficient is writing.

Writing is a skill, a process and the most frequently used mode of communication that involves cognition, thinking and reflection (Charles, 2009; Langan, 2006); by nature, writing is complex and more formal (Caroline, 2005; Chakraverty & Guatum, 2000). Hence, it is taught and learned formally. As Michael and David (2004) stated, "Writing is often the most painfully and formally learned of the area of English" (p.77), and for many, it is difficult to write their idea clearly because writing requires active thinking and high levels of personal regulation. Writing activities are also typically self-planned, self-initiated, and self-sustained (Zimmerman & Reisemberg, 1997 in Walla et al., 2010). So, being systematic and active as well as having self-control ability is required for good writing proficiency. For this,



learners should develop self-regulation. Self-regulation is self-directive process which embraces a set of behavior and helps learners to convert their mental abilities into skills (Zimmerman et al., 2002 in TEAL, 2010). If learners develop self-regulation and can autonomously plan, monitor and assess their learning, they will not get frustrated when they do writing activities by themselves. As to Boekaerts (2011) and Pintrich (2000), self-regulation is associated with learners' characteristics and performance since it maintains learners' commitment to learn by reducing stress.

In educational setting, writing is highly valued (Sara, 2002), and to develop writing, learners should exercise it. According to Langan (2006), an excellent way to learn how to write clearly and logically is by practicing writing. Thus, teaching English writing skills is important because English is currently an international language, and writing is a pivotal mode of communication both for the academic and wider purposes.

Yet, in the research setting, it was observed that students were unmotivated, easily bored and unable to write autonomously. They were also incapable to actively monitor their emotional states like frustration when they faced writing problems like problems of vocabulary, organization, unity, grammar, punctuation, capitalization, and spelling. This shows students have not developed self-regulation and felt insecure in writing classes. Learners can control their learning, keep on practicing writing despite of challenges and do it independently when they have self-regulation (Panadero et al., 2016).

Hence, teachers should scaffold learners to develop self-regulation and perform paragraph writing by creating enjoyable and comfortable writing classes where learners are provided with various appropriate, cooperative and self regulation promoting writing activities (Langan, 2006; Nunan, 1991). Scaffolding is a term that expresses the appropriate support offered to students to enable them to learn what would have been intricate if they had done it alone (Moro, 2006; Wood 1998).

To achieve learners' ultimate autonomy, successful scaffolding should be contextually provided with the aim of shifting teacher-learner interaction from teacher-regulated activities to learner-regulated activities (Michel & Sharpe, 2005; Freda, 2005). Learners, therefore, need to learn writing skills through interaction and internalization (Johnson, 2004 & Vygotsky, 1962), for writing is both cooperative and self-regulatory. Because writing is cooperative, there is an interaction (scaffolding) between the teacher and the students, and writing class should be enjoyable, affectionate and warm which motivates learners to learn (Anete et al., 2010 & Nunan, 1991). A writing class becomes enjoyable, warm and comfortable when there is secure teacher-students attachment (Bergin & Bergin, 2009). For this, secure attachment strategies should be implemented in the scaffolding process as these strategies could affect the teacher-student relationship and influence the efficacy of the scaffolding.

Teachers can scaffold learners' self-regulation and paragraph writing performance through different scaffolding methods. According to Skene and Fedko (2004), process, critical thinking, disciplinary practice and blended scaffolding



are scaffolding methods. Process scaffolding is a way to assist learners by dividing the writing task into parts, and allowing learners to do the task part by part. Critical thinking scaffolding is supporting students to develop thinking complexity. Disciplinary practice scaffolding is introducing students with professional discourses and providing them with explicit writing models that build their vocabulary and concept understanding. Blended scaffolding is using different scaffolding methods in creative and intermingled manner to encourage students in developing writing skills that is related with their learning objective and enhance their success. The method requires teachers' creativity in providing fascinating writing tasks that promote learners' involvement and enjoyment to learn.

Therefore, this research centered on the effects of teacher scaffolding on EFL learners' self-regulation and paragraph writing performance. Self-regulation was focused, because it affects writing and holistically embraces significant number of variables that influence learning and help to change mental ability in to skills. It is also under SRL perspective in which learners actively participate in their learning process by constructing their own learning goals and strategies from the input they get either from the external environment or from their minds. Scaffolding was used as means to enhance learners' self-regulation and paragraph writing performance. Attachment strategies also intervened in the scaffolding process. Although attachment works more for children and students with trauma, in this research, it is used with the notion of 'classroom rapport/teacher-students relationship which can be applied at any level to any group.

Among the various models of self-regulation, Zimmerman's model was concerned in this research for the following reasons. First, this model connects individuals with society using socio cognitive theory as a framework and expresses how learners acquire knowledge through observation and social interaction. Second, it is highly interrelated with scaffolding strategies. Third, the model draws attention to the interrelation between meta-cognitive and motivational processes at individual level, and it reveals that interactions influences self-regulation. Generally, this model incorporates learning at societal and individual level (it is tangled with Vygotsky's potential development and actual development) and permits application of attachment strategies in the interaction process with the notion that interaction affects self-regulation.

From this model, 'Cyclical' and 'Multi-level' SRL models were used in integration. We did this because these models are highly interconnected to scaffolding strategies and help us to more clearly check out the improvement of learners' self-regulation through the process of scaffolding in teaching paragraph writing. As Lantof and Thorne (2006) stated, learners internalize language and become self-regulated learners through regulation process. The regulation process includes object-regulation, other-regulation and self-regulation. But, we focused only on other-regulation and self-regulation, because other-regulation stage is related with scaffolding and attachment strategies, and self-regulation stage is connected with self-regulation.



From process scaffolding, splitting the paragraph writing task into smaller parts and helping learners to feel comforted was picked up. From critical thinking scaffolding, apart from its appropriateness to higher levels, it was implemented with notion of moving students away from rote memorization to critical thinking which is more related with promotion of self-regulation, but with great care on the level of task and critical thinking complexity. Disciplinary practice method was applied to assist learners' paragraph writing skills through model provision. Even though, we picked some points from each method, we got the last method more governing because it embraces the notion of being creative, giving clear instruction about what is required to be achieved, specifying the scaffolding with the specific learning objective (self-regulation and paragraph writing performance in this case) as well as the amount and the way of scaffolding provision.

Thus, this research based on the concepts of scaffolding and self-regulation. Scaffolding embraces interaction as the learning process and internalization as the learning outcome (Johnson, 2004; Vygotsky, 1962). So, scaffolding was associated with self-regulation, because self-regulation is highly related with internalization, and appears as the product of learning.. Attachment strategies were also included since these strategies could affect the scaffolding process and make it enjoyable with objective of making learners independent and responsible (self-regulated) in their learning (paragraph writing). The research, therefore, attempted to see the effects of teacher scaffolding on grade 9 learners' self-regulation and paragraph writing performance.

Studying this issue is also required because as to our experience, there are no researches conducted to study teacher scaffolding with learners' self-regulation and paragraph writing performance. Of course, researchers investigated effects of scaffolding on students' writing skills. Simachew and Belyihun (2021) for instance, examined the effects of teacher scaffolding techniques on grade 9 students' paragraph writing skills at Meneguzer Secondary School, and they indicated teacher scaffolding positively and significantly influenced students' writing skills. Additionally, Teshale and Mendida (2019) explored the effects of teacher scaffolding techniques on grade 9 students' paragraph writing skills at Arjo High School. They demonstrated implementation of teacher scaffolding techniques, to some extent but not large, enhanced students' paragraph writing skills.

Piamsai (2020) also studied the effect of scaffolding on non-proficient EFL learners' performance in an academic writing class on Chulalongkorn University Language Institute second year students and revealed scaffolding positively affected non-proficient EFL learners' academic writing performance. Besides, Padmadewi and Artini (2018) researched the implementation of scaffolding strategies in teaching writing on North Bali Bilingual School and demystified the improving effect of scaffolding on students' writing quality. Another research was conducted by Wulandari et al. (2012) on the implementation of scaffolding teaching technique to improve SMA Negeri 1 Sumberlawang grade 10 students' writing skills. The result explicated that scaffolding had an enhancing effect on students' writing skills. Burch (2007) checked the impact of scaffolding on young children's acquisition of literacy in



primary grades at Daisy Elementary Public School and found it beneficial to students. From this, it could be realized that whereas scaffolding has been studied with writing skills, its applicability to improve self-regulation has not been researched.

Besides, attachment strategies are not studied in scaffolding learners' self-regulation and paragraph writing skills, so this study fills conceptual gap. This study also varies from the aforementioned studies as it integrates scaffolding strategies and methods with Zimmerman's cyclical and multi-level models of self-regulation to check its effects on learners' self-regulation and paragraph writing performance; moreover, unlike with the previous researches which were quasi-experimental, it fills methodological gap for it is intervention case study.

II. Research Questions

The research questions were

- ✓ Does teacher scaffolding significantly influence learners' self-regulation?
- ✓ Does teacher scaffolding considerably affect learners' paragraph writing performance?
- ✓ How do teachers scaffold learners' self-regulation and how does their self-regulation look like?
- ✓ How do teachers scaffold learners' paragraph writing performance and how do their paragraph writing performance look like?

III. Significance of the Study

The findings of this study will be essential for various bodies. Students are the first to be benefited because this study explores the way through which they could be assisted to write paragraphs confidently, enthusiastically and independently, first by enjoyably interacting with the teacher and later by themselves. English language teachers are also advantaged since the findings could help them to be aware of professional and school-based relationships as well as teaching methodology; in order that, they can scaffold learners' self-regulation and paragraph writing performance by creating good teacher-students relationship and enjoyable writing classes. In addition, because inability to handle classroom relationships makes the teaching task tedious for English language teachers, the findings of this study will show them how to easily teach paragraph writing. The results could also inform material writers and curriculum designers to design scaffolding activities which can develop learners' self-regulation and paragraph writing performance.

IV. Theoretical Framework

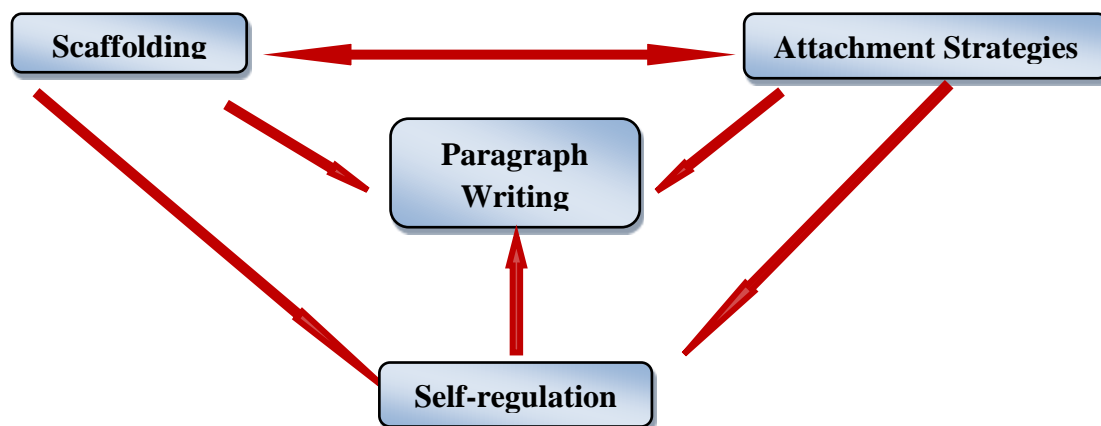
As this study focused on the effects of teacher scaffolding on EFL learners' self-regulation and paragraph writing performance, the theoretical framework centered on Vygotsky's socio-cultural, Bowlby's attachment and Zimmerman's self-regulated learning theories. We chose SCT, because it is suitable to describe the process and product of learning:



interaction and *internalization*. Bowlby's attachment theory was taken since attachment strategies were applied in the scaffolding process to make the scaffolding enjoyable that can enhance students' self-regulation and paragraph writing performance. Self-regulation and paragraph writing were also incorporated as they are likely to be developed through *scaffolding (interaction)* and emerged as the product of learning (*internalization*).

V. Conceptual Framework

Conceptual framework, according to Jabareen (2009) is a structure of entwined concepts that provides comprehensive understanding of phenomena. In a conceptual framework, researchers graphically or diagrammatically present the relationship among the variables of the research (Orodho, 2008). Thus, the conceptual framework is presented based on the concepts that the research concerned: scaffolding, attachment strategies, self-regulation and paragraph writing.



As figured, attachment strategies are interconnected with scaffolding. Scaffolding is also linked with attachment strategies. This is to show attachment strategies intervened in the scaffolding process to make it pleasurable to improve learners' self-regulation and paragraph writing performance. (See the head of the arrows)

VI. Research Methodology

Research Paradigm

This study focused on checking if an intervention (scaffolding) significantly improves learning (students' self-regulation and paragraph writing performance) to take the intervention as a best method if it has significant effect on students' learning. Thus, pragmatism was used since it takes the way that solves the problem as the best method. It also allows using mixed research methods to triangulate the data. A research attempts to answer the question "will this intervention improve learning?" utilizes pragmatism (Creswell, 2009).



Research Design and Method

The purpose of this study was to examine the effects of teacher scaffolding on learners' self-regulation and paragraph writing performance. To respond the research questions, we used case study and involved both quantitative and qualitative methods. Among various types of case study, intervention case study was used in this research since it allows to study what happened (the intervention: scaffolding) and how it happened (the attachment strategies intervened in the scaffolding process) in the context (the paragraph writing classes). "In intervention case studies, the researcher studies what effect an intervention has on participants in the case." (Hornberger & Corson, 1997, p.145)

Methodologically, intervention case study resembles experimental research since the goal is to explain behavior based on what happens as a result of the intervention. Yet, there is difference that experimental research typically uses quantitative (statistical) approaches, involves an experimental and control group and uses inferential statistics to generalize the results of the study from a sample to a population whereas intervention case study focuses on a single individual or site and is interested in understanding the phenomenon the way the participants interpret it within each of the phases of research. Additionally, unlike with experimental research, intervention case study does not make generalization; rather, it presents the results to readers, and lets them make their own generalizations based on the data of the case with intent that they can transfer knowledge and meaning to newly encountered cases with similar settings, features and events (Hornberger & Corson, 1997).

In this study, scaffolding was the independent variable; the dependent variables were self-regulation and paragraph writing performance; attachment strategies were the variables that intervened in the scaffolding process. Triangulation mixed approach (both quantitative and qualitative research methods) was used. 'Mixed methods' was selected since it helps for triangulation purpose (Creswell, 2009). Moreover, as pragmatism was utilized in this research, 'mixed methods' was applied.

Samples, Sampling Techniques and Sampling Procedure

Among four government secondary schools: Hottie, Memhir Akalewold, Kidame Gebeya and Nigus Michael, in Dessie Town in 2015 E.C academic year, Kidame Gebeya was selected using simple random sampling technique and one grade 9 English language teacher, who taught grade 9 students in the selected school, was purposively chosen based on his experience and commitment which was confirmed by the school principals. To select the sample students, from the sections "A"- "D" that the selected teacher taught, we selected section "C" via simple random sampling technique. In this section, there were 42 students: 24 males and 18 females. Simple random sampling technique was favored due to its simplicity, minimum bias and provision of equal chance to every item in the population to be included as the sample. To do this, we wrote the name of the sections on slips of paper and conducted a lottery (Yalew, 2006; Kothari, 2004).



Procedures of the Research

The study was intervention case study and an intervention was done to investigate whether or not teacher scaffolding considerably influences learners' self-regulation and paragraph writing performance. Before commencing the study, to see the nature of the writing activities, we assessed the Grade Nine English language textbook. The textbook has twelve chapters, and there are about thirty seven writing activities. Most of them focus on form and there are comprehension questions that are included as writing activities. Thus, before the intervention, we prepared training material for the teacher. In the training material, the main concepts of scaffolding, attachment strategies, self-regulated learning and scaffolding activities to teach paragraph writing were incorporated. This was to get the teacher clear about what, why and how to teach. Besides, the way how to intervene attachment strategies in the process of scaffolding was shown in the material. Then, the participant teacher was trained using the guideline for three days. After the training, the material was given to the teacher; so that, he could teach with it. We also checked the students' self-regulation practice and paragraph writing performance through observation, tests and questionnaires.

Then, the intervention was conducted by the trained teacher for eight weeks. The teacher scaffolded students' self-regulation and paragraph writing performance using different scaffolding strategies and methods. He also implemented interactive teaching methodology. He did the intervention taking two periods per week. During the intervention, students learned self-regulation and paragraph writing through different scaffolding strategies. At the beginning of each writing period, scaffolding strategies like schema building: asking learners brain storming questions which help them to interconnect their prior knowledge with the topic they wrote about and contextualizing: presenting the writing activities with understandable, easily addressed and approachable context were applied to help the learners to develop self-regulation at forethought stage. Modeling strategy (providing sample paragraphs) was also applied when it was necessary to get learners observe and emulate what to write. Then, the students were asked to perform paragraph writing tasks. This helped them practice self-regulation at performance stage. Here, strategies like text representation (transforming table in to paragraph) were employed. Finally, they were given reflection time to reflect and evaluate what they write. This assisted them to improve self-regulation at reflection stage. In the teaching, different scaffolding methods such as letting the students to do paragraph writing tasks step by step (process scaffolding) and providing paragraph writing that required a little bit creativity (critical thinking scaffolding) were applied. Additionally, offering model paragraphs that show various contexts (disciplinary practice scaffolding) and blended scaffolding (using different scaffolding methods in integration) were executed.

Telling stories to students and asking them to write a paragraph using the stories as a spring board, encouraging students when they show positive behaviors and having positive attitudes towards the students as well as incorporating writing topics that touch students' lives outside the school were the attachment strategies intervened in the scaffolding process. Students were taught how to write united and coherent paragraph. Spelling, punctuation and grammar were



also considered in the teaching process; the intervention process as well as the students' reaction towards it was followed through observation and reflected through students' self-reflection reports.

After the intervention, we checked the students' self-regulation and paragraph writing performance through classroom observation, questionnaire, tests and self-reflection report. This was done to ensure if the students got improved after the intervention.

Data Gathering Instruments

Tests, questionnaire, classroom observations, students' self-reflection reports as well as semi-structured interview for teachers were employed as data gathering tools. These tools were used for triangulation purpose (Patton, 1990). Classroom observation was conducted at the pre-, while and post-intervention stages. One week pre-intervention observation was made to have overall view on how writing lessons went on and how the assistance and the interaction between the teacher and the learners as well as the ways students behave when they learn writing look like. It was done using the check-list we prepared based on related literature. After the intervention, observation was done for one week to see if students got improved in their self-regulation and paragraph writing skills. The same check-list was used at the pre- and post- intervention stages, but at while-intervention stage, as the teacher taught using the teaching material (the guideline) made for this research purpose and the procedures given in the material might make the students fulfill the checklist criteria, we felt doing the observation through the checklist may be inappropriate. Therefore, we intentionally did not use the checklist; rather, the observation was to see how the intervention was continued and how the students react towards it. Besides, it was to see if improvement was required on the activities. The observation was done throughout the while-intervention stage.

Three pre-tests and three post-tests were administered to the participant students (Marczyk et al., 2005). After providing the pre-tests, the intervention (teaching paragraph writing using the prepared scaffolding activities) was done for two months. Then, the post-tests were offered to check if the students' paragraph writing performance significantly varies before and after the intervention. Both the pre- and the post-tests were paragraph writing tests. Writing paragraphs about "Disadvantage of Technology", "Making Coffee" and how they perform writing activities when they learn writing were the pre-tests. The post-tests were writing paragraphs about "Good Friendship", "Peace" and how they study during their studying time. The pre-tests were different from the post-tests to control the learning effect, and they were immediate post-tests least additional interferences might occur (Eng, 2017).

Questionnaire was implemented since it is a typical assessment instrument in SRL research (Gass & Mackey, 2005). The questionnaire was a five point (frequency) Likert scale because Likert scale is easily understood by the respondents, and it is consistent as it presents the items in interrelated manner (Kothari, 2004). The questionnaires were adapted from Tanner (2012) and Schraw (1998).



	Items	Scales										Total		
		5	%	4	%	3	%	2	%	1	%	No	%	
1.	How often have you tried to recognize what kind of a task you are given in writing session before doing so?													
2.	How often do you think about your writing goal and the way to know if you have reached it preceding your doing?													
3.	How often do you ask yourself what you already know about the topic that you are going to write about?													
4.	To what extent do you try to extract if or not you need additional information to write well about the topic?													
5.	How often do you get yourself ready on the strategies you should use in your writing? (actively listening, taking notes, outlining, visually representing the material or writing a summary)													
6.	How often do you think about your writing weaknesses and the ways to make up them?													
7.	How often do you consider your interest and motivation to do the writing task, and the way to increase them if they are low?													
8.	To what extent do you try to evaluate the value of what you will be learning/writing?													
9.	How often do you recognize your confident level on your ability to write, and the way to increase it if it is low?													
10.	To what extent do you recall similar tasks you did well in the past?													
11.	How often do you consider the amount of time needed and the availability of resources to do your writing task?													
12.	To what extent have you tried to make your environment better when you write?													
13.	How often do you try to remind yourself about your being sure that you know what you are writing?													
14.	To what extent do you try to answer the question that “Am I making good progress toward my goal?” during your writing time?													
15.	How often do you ask yourself, “How focused am I? Am I getting tired? If so, how can I keep myself focused and alert?” when you do writing tasks?													
16.	How often do you try to relate what you are learning/writing to your experience or your future?													
17.	To what extent do you think of the way to change negative thinking when you start to get discouraged or give up when you write?													
18.	How often do you consider the suitability of your task doing environment and physical position when you do writing task?													
19.	How often do you do it if you need a short break to refresh your mind and body?													



made the research instruments focus on the research variables by adapting them from different sources and preparing them based on the related literatures. To ensure *statistical validity*, we used both quantitative and qualitative methods. For the *face validity*, we let the instruments have further validity check by grade 9 English language teachers, colleagues and field professionals (Weir, 1990). But, even if *external validity* was not totally ignored as *internal validity* is a prerequisite for external validity (Gass & Macky, 2000), it was not that much concerned in this study. It is because the study is intervention case study which does not intend to generalize the research findings to larger population. Rather, we took care of the *internal validity* recognizing that it is the hallmark of well-done case-study (Hornberger & Corson, 1997).

Hence, to maintain the *internal validity* we used the same participants for the pre- and the post-tests. This lessens additional sample variation causes which can affect the dependent variables. Besides, we made theoretical orientation to the teacher on the research variables at the beginning of the study; so that, he could be clear on and consistently do the intervention. Additionally, to minimize the threat of internal validity: the probability of replication of the pre-test answer to the post-test, there was test variation and time interval between the pre-test and the post-test; so that, the students would not replicate the pre-test answers in the post-test (Eng, 2017). We also conducted observations at the case sites, check and re-check assertions as well as triangulate the data since doing these is helpful to establish internal validity which is highly related with reliability (Hornberger & Corson, 1997).

Reliability is to what extent a test or a questionnaire can consistently measure something, and internal consistency is one way of measuring reliability (Black, 1993). Hence, we calculated the “average inter-item correlation” using “Cronbach’s alpha” and got 0.846 at the pre-intervention and 0.978 at post-stage of the study. This indicates the Likert scale questions were with very good internal consistency (Pallant, 2011).

Data Collecting Procedure

The quantitative data was gathered at the pre- and post-intervention phases using writing tests and Likert scale questionnaire in the following procedures. First, we arranged time, oriented the participants (the students) and gave them the tests at different days. Next, the students’ writing was collected and corrected out of 100 using the same rubric at the pre- and post-phases. “Rubric is a scoring guide.” (Wiegler, 2002, p.109) The rubric was holistic and adapted from Koizumi et al., (2020). Independent raters (two grade 9 English teachers) corrected the students’ writing and the average was taken. They were chosen using simple random sampling technique. To collect data using the Likert scale questionnaires, first, we translated the questions in Amharic and administered them to the participant students. Then, after the respondents responded, we collected the papers to calculate and compare the pre- and the post-intervention results. The collected data was compared using paired samples t-test and percentages to explore the effects of the intervention.



The qualitative data was collected through classroom observation, students' self-reflection reports and semi-structured interview for teacher. To conduct the observations, we prepared observation check list that focused on the variables of the research and made classroom observations using the prepared checklist. To collect data through students' self-reflection reports, at the beginning, we made the participants clear on how and why they write the self-reflection report. Then, we provided the students with paper to write their self-reflection report, and got the teacher follow the students on writing the reflection continuously. Finally, we collected the reports to analyze. For the semi-structured interview, we made consent and arrange time with the interviewee. At last, we interviewed the teacher, recorded the data and analyzed it.

Methods of Data Analysis

Mean analysis and paired samples t-test was used to analyze the data collected through writing tests. The data from the Likert scale questionnaires was explored using percentage, mean analysis and paired samples t-test. These methods were applied to check if learners' self-regulation and paragraph writing varies before and after implementation of scaffolding. The primary reason to prefer this analysis method is its suitability to test the same individuals at different point of time to verify if there is a difference in the dependent variable before and after the intervention. In addition, since the participants used in the paired-test are the same, it is more powerful in terms of reducing further causes of sample dissimilarity other than the independent variable (Kothari, 2004).

The qualitative data was analyzed thematically. Thematic analysis, according to Lisa (2008), Atkinson et al. (2003), Braun and Clarke (2006), allows exploration of questions about experience, perspectives, practices and behavior of participants. Moreover, multiple theories can be applied to its process since thematic analysis is flexible and can be used with various research methods. According to Braun and Clarke (2006) and Atkinson et al. (2003), if the analysis is not rooted on theoretical framework, the interpretive power of thematic analysis will be limited. Therefore, we made the analysis based on the theoretical framework to overcome this limitation.

VII. Results

The main objective of this research was to check if teacher scaffolding could significantly affect students' self-regulation and paragraph writing performance. The pre- and the post-intervention result of the participant students' self regulation practice and paragraph writing performance are summarized in tables as follows.

Effects of Teacher Scaffolding on Students' Self-regulation

As previously mentioned, students' self-regulation was assessed before and after the intervention through Likert scale. The items from no. 1 to 12 concerned about the forethought stage; the items from no. 13 to 19



focused on performance stage; the items from 20 to 26 measured reflection stage of self-regulation. (See the tables below)

Table 1: Percentage Statistics

Items	Pre- intervention												Items	Post- intervention											
	Scales										Total			Scales										Total	
	5	%	4	%	3	%	2	%	1	%	No	%		5	%	4	%	3	%	2	%	1	%	No	%
1.	6	14.3	6	14.3	12	28.6	11	26.2	7	16.7	42	100	1.	19	45.2	10	23.8	9	21.4	4	9.5	0	0	42	100
2.	10	23.8	9	21.4	10	23.8	10	23.8	3	7.1	42	100	2.	19	45.2	14	33.3	5	11.9	4	9.5	0	0	42	100
3.	6	14.3	10	23.8	11	26.2	11	26.2	4	9.5	42	100	3.	18	42.9	13	31.0	8	19.0	3	7.1	0	0	42	100
4.	3	7.1	7	16.7	13	31.0	12	28.6	7	16.7	42	100	4.	10	23.8	20	47.6	8	19.0	4	9.5	0	0	42	100
5.	5	11.9	6	14.3	10	23.8	13	31.0	8	19.0	42	100	5.	12	28.6	7	16.7	11	26.2	12	28.6	0	0	42	100
6.	9	21.4	6	14.3	10	23.8	15	35.7	2	4.8	42	100	6.	16	38.1	12	28.6	11	26.2	3	7.1	0	0	42	100
7.	7	16.7	9	21.4	14	33.3	9	21.4	4	9.5	42	100	7.	14	33.3	14	33.3	12	28.6	2	4.8	0	0	42	100
8.	10	23.8	6	14.3	11	26.2	8	19.0	7	16.7	42	100	8.	15	35.7	11	26.2	9	21.4	7	16.7	0	0	42	100
9.	7	16.7	7	16.7	16	38.1	8	19.0	4	9.5	42	100	9.	13	31.0	12	28.6	11	26.2	6	14.3	0	0	42	100
10.	2	4.8	9	21.4	16	38.1	11	26.2	4	9.5	42	100	10.	5	11.9	13	31.0	14	33.3	10	23.8	0	0	42	100
11.	6	14.3	9	21.4	7	16.7	10	23.8	10	23.8	42	100	11.	8	19.0	14	33.3	9	21.4	11	26.2	0	0	42	100
12.	10	23.8	8	19.0	8	19.0	10	23.8	6	14.3	42	100	12.	15	35.7	6	14.3	11	26.2	9	21.4	1	2.4	42	100
13.	8	19.0	7	16.7	15	35.7	12	28.6	0	0	42	100	13.	10	23.8	16	38.1	14	33.3	2	4.8	0	0	42	100
14.	7	16.7	13	31.0	17	40.5	3	7.1	2	4.8	42	100	14.	13	31.0	15	35.7	8	19.0	6	14.3	0	0	42	100
15.	9	21.4	6	14.3	12	28.6	8	19.0	7	16.7	42	100	15.	13	31.0	10	23.8	9	21.4	10	23.8	0	0	42	100
16.	5	11.9	8	19.0	13	31.0	15	35.7	1	2.4	42	100	16.	11	26.2	14	33.3	10	23.8	7	16.7	0	0	42	100
17.	7	16.7	7	16.7	13	31.0	12	28.6	3	7.1	42	100	17.	11	26.2	11	26.2	11	26.2	9	21.4	0	0	42	100
18.	8	19.0	10	23.8	8	19.0	12	28.6	4	9.5	42	100	18.	9	21.4	12	28.6	11	26.2	10	23.8	0	0	42	100
19.	7	16.7	7	16.7	13	31.0	11	26.2	4	9.5	42	100	19.	10	23.8	8	19.0	16	38.1	8	19.0	0	0	42	100
20.	8	19.0	11	26.2	12	28.6	8	19.0	3	7.1	42	100	20.	16	38.1	16	38.1	7	16.7	3	7.1	0	0	42	100
21.	7	16.4	9	21.4	12	28.6	10	23.8	4	9.5	42	100	21.	9	21.4	12	28.6	9	21.4	12	28.6	0	0	42	100
22.	7	16.7	8	19.0	9	21.4	10	23.8	8	19.0	42	100	22.	11	26.2	9	21.4	11	26.2	11	26.2	0	0	42	100
23.	8	19.0	6	14.3	6	14.3	15	35.7	7	16.7	42	100	23.	8	19.0	14	33.3	11	26.2	6	14.3	3	7.1	42	100
24.	6	14.3	5	11.9	11	26.2	12	28.6	8	19.3	42	100	24.	11	26.2	10	23.8	12	28.6	7	16.7	2	4.8	42	100



25.	10	23.8	13	31.0	9	21.4	8	19.0	2	4.8	42	100	25.	18	42.9	10	23.8	8	19.0	6	14.3	0	0	42	100
26.	5	11.9	8	19.0	10	23.8	15	35.7	4	9.5	42	100	26.	12	28.6	11	26.2	9	21.4	10	23.8	0	0	42	100

5= Always 4= Usually 3 = Sometimes 2 = Rarely 1 = Never

The percentage statistics, gained through these 26 items, indicated that the number of students who practice self-regulation increased after the intervention. This meant the students' self-regulation was improved almost at all the three: forethought, performance and self-reflection stages, and they commenced practicing what they never did before the intervention.

Table 2: Paired Sample Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRE-INTERVENTION	3.0476	42	1.00521	.15511
	POST-INTERVENTION	3.7051	42	.48796	.07529

Table 3: Paired Sample Test

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 PRE-INTERVENTION – POST-INTERVENTION	-.65751	1.21272	.18713	-1.03542	-.27960	-3.514	41	.001

The pre- and the post-intervention mean variation as well as .000, $p < 0.05$ (two-tailed) in the above tables explicated the considerable improvement of the students' self-regulation.

Through observation, before the intervention, it is observed that most of the students were unwilling and easily bored to write, and they did not ask their teacher for help. Moreover, as they did not want to write, the



students tried to hide themselves behind their friends; they also attempted to cheat their teacher acting as they were writing. In addition, they were to copy what their friends wrote. But, at the while-intervention stage, students' tendency to ask for help and to keep up trying to write paragraphs enhanced from time to time. At the post-intervention stage, most of the students were seen making an effort to write paragraphs by themselves.

The same result was drawn from students' self-reflection reports. In self-reflection reports, at the while-intervention stage, but at the beginning of the intervention, nearly 35 students revealed they disliked and feared paragraph writing as it was very difficult for them. They also explicated they felt discomforted when their teacher rounded and asked them to write, because it was their first time they continuously had writing classes to learn paragraph writing and they counted the teacher's help as additional burden. The rest students explained despite of its difficulty, they did not hate paragraph writing, and they would be happy if they were able to perform it. Yet, when the intervention continued, most of the students explained they enjoyed paragraph writing saying "it would be better if paragraph writing was always provided to us". Likewise, the students reflected they were able to distinguish the problems they encountered when they wrote paragraph like problem of flow of idea, spelling or vocabulary and commenced to ask for help and tried to jot down the new vocabularies; so that, they could study and use them for another time.

At the post-intervention stage, the students wrote the reflection comparing the self-regulation and paragraph writing performance they had before and after the intervention. In their reflection, almost 30 students reflected before the intervention, they believed paragraph writing was complicated and monotonous. Thus, they were not happy to do it. But after the intervention, the students indicated they understood paragraph writing could be learned as other skills or subjects; their frustration lessened from time to time; they could witness their progress, and they were ready to continue to write as they learned. 7 students also showed although they did not hate paragraph writing, they did not get chance to practice it as they had not been taught before the intervention. But, through the intervention, they got time to practice it, and it helped them to improve self-regulation and paragraph writing skills. In explaining the enhancement they got from the intervention, 3 students explained since they had not learned paragraph writing before, they supposed paragraph writing as a difficult task and they were unable to write. So, sometimes they thought to be absent from the paragraph writing period. Yet later, when they saw the teaching method, they felt comforted to attempt paragraph writing. Then, they could say they would not be stressed if paragraph writing task was given to them for the future, and they were ready to perform it as much as they could. These results reveal that students develop self-regulation: forethought, performance, self-reflection and self-controlling. But, 2 students reflected they did not get improved saying: "I am not improved."

Effects of Teacher Scaffolding on Students' Paragraph Writing Performance



Table 4: Paired Sample Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	PRETEST1	34.24	42	12.040	1.858
	POSTTEST1	62.55	42	14.889	2.297
Pair 1	PRETEST2	37.19	42	14.557	2.246
	POSTTEST2	64.10	42	14.187	2.189
Pair 1	PRETEST3 –	35.33	42	13.494	2.082
	POSTTEST3	63.10	42	14.000	2.160

Table 5: Paired Samples Test

	Paired Differences					T	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 PRETEST1 - POSTTEST1	-28.310	7.922	1.222	-30.778	-25.841	-23.160	41	.000
Pair 1 PRETEST2 - POSTTEST2	-26.905	8.533	1.317	-29.564	-24.246	-20.433	41	.000
Pair 1 PRETEST3 - POSTTEST3	-27.762	8.266	1.276	-30.338	-25.186	-21.765	41	.000

Paired samples t-test was conducted to check the impact of teacher scaffolding on students' paragraph writing. The mean difference before and after the intervention and .000, $p < 0.05$ (two-tailed) (see table 3) indicated that there was statistically significant enhancement from pre-intervention to post-intervention.

Teacher's Scaffolding Practice towards Learners' Self-regulation and Paragraph Writing



The teacher's scaffolding practice was observed different and improved from the pre- intervention stage. The same was gained from the interview. Being interviewed, the teacher explained that scaffolding students' self-regulation and paragraph writing performance by intervening attachment strategies in the scaffolding process impacted him as a teacher saying:

To tell you the truth, when you told me that you chose me as a participant, I felt you would exhaust me because I thought the intervention could be exhaustive, time consuming and not as effective as expected, but when I took the training and got the teaching material before commencing the intervention, I got clear about what to do, so my discomfort was reduced.

In explaining his practice after he started the intervention, he said that he practiced what he had not done and saw what he had never seen before on the students' self-regulation and paragraph writing performance saying "the students' interest to write was surprising; I can witness that the frustration and the pessimistic outlook the students have towards writing skills has been changed". He also added,

I got the teaching method through which the students learn self-regulation and paragraph writing helpful and attractive, so I recognize that students can be effective and no student will be unable to write if such kind of teaching is continued; hence, I dare to say we have done what should have been done, and I will attempt to teach writing like this for the future; the teaching material, I have been given, will help me to do this. I am also prepared to share the experience I have gained from this intervention to my colleagues.

VIII. Discussion

The results of this study were consistent with results of other researches. For instance, Simachew and Belyihun (2021), Piamsai (2020), Padmadewi and Artini (2018), Yulia et al. (2015), Wulandari et al. (2012) and Burch (2007) reported the positive and the significant effect teacher scaffolding has on students' (paragraph) writing skills. However, the findings of this research varied from what Teshale and Mendida (2019) found. Even if this research investigated teacher scaffolding positively and significantly affects students' paragraph writing skills, Teshale and Mendida believed although teacher scaffolding techniques improves students' paragraph writing skills, the improvement is not large.

Nevertheless, researchers attempted to study scaffolding with students' writing skills, what scaffolding contributes to students' self-regulation has not been studied yet; hence, the results of this research differed from others' regarding to this.

IX. Conclusion and Recommendation



The findings of this study revealed teacher scaffolding improved EFL learners' trend to write paragraphs by themselves. Therefore, we can conclude teacher scaffolding is significant to enhance EFL learners' self-regulation and paragraph writing performance. Based on this, it is recommended that English language teachers should create enjoyable writing classes by providing various writing activities. They should apply different scaffolding methods and strategies to assist learners to plan, perform and reflect when they teach paragraph writing; in order that, the learners could perform paragraph writing autonomously. Furthermore, the teachers should supply learners with models; so that, they can get information and be clear on how to write paragraphs.

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