

Using Some Self-Regulatory Writing Strategies for Developing Writing Skills and Reducing Writing Anxiety among Faculty of Education EFL Majors

Dr. Said Ahmed Mahrous Ahmed

Lecturer of Curriculum and TEFL Methodology Faculty of Education, Aswan University, Egypt.

DOI:

Abstract

The aim of the present study was to investigate the effect of using some self-regulatory writing strategies on developing writing skills and reducing writing anxiety among EFL majors.

The study used the pre-posttest quasi-experimental one group design. The Participants were forty-five first year EFL majors enrolled in Aswan Faculty of Education. The instruments of the present study included an EFL writing skills test prepared by the researcher and an EFL writing anxiety scale.

The test and the scale were administered to the participants before and after the treatment.

The participants of the study were trained to use some self-regulatory writing strategies to develop EFL writing skills and reduce their writing anxiety.

Data were treated statistically using SPSS.

Results of the study revealed that using some self-regulatory writing strategies was found to be effective in developing EFL writing skills and reducing writing anxiety among the participants of the present study.

Keywords: *Self-regulatory writing strategies, EFL writing skills, writing anxiety, Faculty of Education EFL majors.*

Introduction

Writing is an essential communication skill that is necessary in personal relationships and in almost every profession.

Therefore, writing has always been regarded as an important skill contributing to students' language learning.

Moreover, in almost all schools and universities in many EFL countries, including Egypt, students' academic success in EFL courses is measured, to a large extent, depending on their final written product.

Therefore, some students, despite their excellence, may score low on written tests because they lack the necessary EFL writing skills required for expressing their ideas clearly.

Writing is one of the fundamental channels to transmit existing knowledge in most academic fields during undergraduate education.

In undergraduate programs, getting professionalized in writing skills is quite substantial. At the same time, becoming competent in writing maybe a demanding process for first-year students and their trainers since it embodies various components (e.g. vocabulary, mechanics, citation procedures, genre variations etc.) (Prat-Sala & Redford, 2012).

Writing effectively is a critical communication tool for conveying thoughts and opinions, describing ideas and events, and presenting information. Students' skills and abilities relating to writing are measured as much as, if not more than, any other skills.

In addition, writing remains challenging for many learners. The challenge exacerbates when learners have to write in EFL context.

EFL learners need planning, monitoring, and evaluating strategies for better writing.

1.1 Problem of the Study

Writing is generally regarded as a difficult skill and a complex task because EFL learners should balance multiple issues, such as content, organization, purpose, audience, vocabulary, punctuation, spelling and mechanics (Zacharias, 2007).

Cumming (2006) argued that writing is a profoundly complex ability, a highly conventionalized mode of communication, and a uniquely personal form of individual expression.

Helping students to improve their writing requires an approach to teaching that attends to each of these elements judiciously. At the same time, teachers need to foster students' capacities to regulate their own writing performance autonomously, purposefully, and effectively. Sova (2004) stated that writing clearly takes more effort and it can be a more intimidating experience. Many eloquent and articulate speakers go to great lengths to avoid placing their thoughts in writing, because the written word is permanent and allows the reader time to analyze and assess.

For EFL learners, writing is often viewed as the most difficult among all language skills (Zhang & Guo, 2012).

This is because less scaffolding is provided in the writing process compared with other domains of language learning.

The displacement from its readers makes writing a thought-demanding and effortful task (Bruning & Horn, 2000).

In addition, writing is a complex and multidimensional process that involves many factors such as task environment, motivation, working memory, long-term memory and cognitive process (Hayes, 2000).

The current study addresses the question of whether or not using some self-regulatory writing strategies develop writing skills and reduce writing anxiety among the first year EFL majors enrolled in Aswan Faculty of Education.

As an EFL faculty member, the researcher noticed a number of writing problems among the first year EFL majors.

They have several common writing problems such as using correct spelling, using appropriate punctuation, writing coherent/cohesive sentences and/or paragraphs, using correct and appropriate idioms and expressions, using appropriate grammatical rules, and using appropriate vocabulary .

In order to make sure that writing is problematic for the first year EFL majors at Aswan Faculty of Education, a pilot study was conducted.

The researcher prepared a writing test administered to the first year EFL majors (n=30).

Students were required to write an essay on "Using Technology in Teaching". Results of the writing skills test revealed that 73 % of them were not able to produce an organized essay.

Their essays contained some mistakes in grammar, spelling, and style. Also, they lacked unity and coherence.

Some of their concluding paragraphs were not relevant either.

Also, the first year EFL majors showed a high level of writing anxiety and they showed lack of confidence in FL writing, lack of ability to express ideas in appropriate English, and fear of negative comment.

1.2 Aim of the Study

The aim of the current study is to investigate the effect of using some self-regulatory writing strategies on developing writing skills and reducing writing anxiety among first year EFL majors enrolled in Aswan Faculty of Education.

1.3 Questions of the Study

This study is an attempt to answer the following questions :

- What are the writing skills required for the first year EFL majors enrolled in Faculty of Education ?

- How far would the self-regulatory writing strategies be effective in enhancing writing skills and reducing writing anxiety among the first year EFL majors?. This question is divided into the following sub-questions :

1. To what extent are the self-regulatory writing strategies effective in enhancing the first year EFL majors' mechanics of writing skills?
2. To what extent are the self-regulatory writing strategies effective in enhancing the first year EFL majors' organization skills?
3. To what extent are the self-regulatory writing strategies effective in enhancing the first year EFL majors' content skills?
4. To what extent are the self-regulatory writing strategies effective in enhancing the first year EFL majors' language use skills?
5. To what extent are the self-regulatory writing strategies effective in reducing the first year EFL majors' writing anxiety ?

1.4 Hypotheses of the Study

Hypotheses of the present study can be stated as follows :

1. There is a statistically significant difference between the mean scores of the study participants on the overall writing skills pre-posttests in favor of the post .
2. There is a statistically significant difference between the mean scores of the study participants on the mechanics of writing skills pre-posttests in favor of the post .
3. There is a statistically significant difference between the mean scores of the study participants on the organization skills pre-posttests in favor of the post .
4. There is a statistically significant difference between the mean scores of the study participants on the content skills pre-posttests in favor of the post .

5. There is a statistically significant difference between the mean scores of the study participants on the language use skills pre-post -tests in favor of the post .
6. There is a statistically significant difference between the mean scores of the study participants in the pre and post administrations of the writing anxiety scale in favor of the pre-administration.

Statement of the Problem

Based on the results of the pilot study and the semi - structured interviews.

It became clear that Sadat's Academy IT students' levels in functional writing and attitude towards writing were low and they needed stimulating methods to arouse their interest to write effective business messages .

Therefore, the researcher investigated the impact of using Task- based learning to develop Sadat's Academy IT students' English functional writing and attitude towards writing.

The researcher aimed at developing second year IT students' functional writing and attitude through using Task-based learning.

Hypotheses

The following hypotheses were tested:

1. There would be a statistically significant difference ($\alpha \leq .05$) between the study group's mean scores of the pre-post testing (favoring the post testing) of the functional writing test.
2. There would be a statistically significant difference ($\alpha \leq .05$) between the study group's mean values of the pre-post administrations (favoring the post administration) of the writing attitude scale.
3. There would be a positive correlation between the study groups' scores in the Functional writing test and theirs in the writing attitude scale.

Significance

The importance of the current study emerged from the following points:

1. The present study tried to fill in a gap in the review of literature about studies that dealt with TBL to enhance Sadat's Academy IT students' English functional writing and attitude towards Writing
2. It offered a teacher's guide for presenting the sessions using Task- based learning.
3. The study encouraged students to learn by doing things actively instead of being too dependent upon their instructors.
4. It helped students to strengthen their linguistic skills by positively affecting their learning attitude and by helping them build learning strategies and promote their self-confidence.
5. It offered an English functional writing test with a table of specifications focusing on the most needed writing skills that are essential at work place communication.
6. It offered a writing attitude scale.

1.5 Delimitations of the Study

The present study is delimited to the following:

The first year EFL majors enrolled in Aswan Faculty of Education (n=45), the second semester of the academic year 2021/2022 .

The writing skills which are required for first year EFL majors enrolled in Aswan Faculty of Education .

Some self-regulatory writing strategies (i.e., writing planning, goal-oriented monitoring, goal-oriented evaluation, emotional control, memorization, and metacognitive judgment) .

1.6 Significance of the Study

The results of this study can be helpful for Faculty of Education first year EFL majors, EFL experts and course designers.

It might help Faculty of Education first year EFL majors develop their writing skills and reduce writing anxiety through the application of some self-regulatory writing strategies.

Moreover, using self-regulatory writing strategies in developing writing skills and reducing writing anxiety among first year EFL majors, the current study suggests a modification of the teaching methods currently adopted to develop EFL majors' writing skills in Egyptian Faculties of Education.

1.7 Definition of Terms

1.7.1 Self-Regulatory Writing Strategies

According to Teng, Wang and Zhang (2022, p. 2), self-regulatory writing strategies are “any series of actions (mental, physical, or both) that student writers need to execute for achieving their writing goals.”

In the present study, self-regulatory writing strategies can be operationally defined as a series of actions (mental, physical, or both) that first year EFL majors use to develop their writing skills.

Attitude In general, attitude is an individual's reaction or evaluation of a certain situation or object depending on his / her opinions and beliefs (Abidin, et.al, 2012).

For Al Norsy (2013), attitude is viewed as a psychological process in which learners favor or disfavor a certain situation.

1.7.2 EFL Writing Skills

Fulwiler (2002, p. 3) defined EFL writing skills as “processes needed to produce good writing exemplified in correct grammar, range of vocabulary, accurate punctuation, correct layout, accurate spelling and good range of

sentence structure.”

In the present study, EFL writing skills is operationally defined as the ability of the first year EFL majors to produce good writing exemplified in correct grammar, range of vocabulary, accurate punctuation, correct layout, accurate spelling and good range of sentence structure using some self-regulatory writing strategies .

1.7.3 Writing Anxiety

Hassan (2001, p. 4) defined writing anxiety as “a general avoidance of writing and of situations perceived by the individuals to potentially require some amount of writing accompanied by the potential for evaluation of that writing”.

In the present study, the researcher adopts Hassan (2001) definition of writing anxiety as an operational one.

2. Review of Literature

2.1 EFL Writing Skills

Writing is a fundamental skill in language learning. Writing allows students to see their progress and get feedback from the teacher and allows teachers to monitor students and diagnose problems encountered.

Accordingly, EFL learners should master the written form of language and learn certain structures which are important for effective written communication.

Writing is one of the fundamental channels to transmit existing knowledge in most academic fields during undergraduate education.

College composition or first-year writing classes of undergraduate programs represent the first step to academic writing.

Resulting from this fact, getting professionalized in writing skill is quite substantial.

At the same time, becoming competent in writing maybe a demanding process for first-year students and their trainers since it embodies various components (e.g. vocabulary, mechanics, citation procedures, genre variations etc.) (Tanyer, 2015).

Zhu (2004) added that writing is an important productive skill that can be used in learning other receptive and productive skills.

Moreover, writing is among the most important skills that EFL students need to develop, and the ability to teach writing is central to the expertise of a well-trained language teacher.

Also, writing is a language skill essential for academic success and a skill required in many occupations.

Due to the increased emphasis on EFL writing skills, much revived writing research has been conducted using various approaches and strategies. Mohamed (2016) investigated how the achievement of English major students at the Faculty of Education, Beni Suf University, was affected by using blogs as considered a means of formative assessment, and checked the participants' attitudes towards blogs.

Instruments include an achievement test based on writing skills and a learner attitudes' scale.

Results showed that there were statistically significant differences between the mean score of the experimental and control groups in favor of the experimental group.

The study concluded that using blogs as a means of formative assessment proved to be effective in improving freshmen students at the faculty of education writing skills and attitudes towards blogs.

Abdel-Haq, Atta and Ali (2020) investigated the effects of a suggested Web-Mediated Process Genre (WMPG)-based Program on developing the writing skills of third year EFL majors enrolled in Sohag Faculty of Education.

Materials and instruments of research included a test of EFL writing skills (WT) and the suggested WMPG-based program.

The results revealed that there were statistically significant differences between the mean scores of the experimental group and the control group on the post- WT in favor of the experimental group.

These results revealed that the suggested WMPG-based program brought about significant gains in the writing performance of participants.

Therefore, the suggested WMPGA-based program was recommended to be integrating into EFL writing instruction.

Tanyer (2015) investigated the relationship between perceived reading and writing self-efficacy beliefs in addition to their effect on writing performance. The first-year EFL preservice teachers of a state university in Turkey (N=116) completed the Self-efficacy in writing (SEW) and the Self-efficacy in reading (SER) surveys.

Writing performances of the participants were evaluated by a short essay written for the final exam of Written Communication Course. The findings revealed that SEW was positively and significantly correlated with writing performance as well as SER.

Also, hierarchical regression analysis demonstrated that SEW and SER significantly accounted for the variance in writing scores.

To sum up, writing requires thinking strategies that allow the individual to express him or herself competently in the other language, and is a complex activity that requires a certain level of linguistics knowledge, writing conventions, vocabulary and grammar.

2.2 Writing Anxiety

Foreign language education, due to its prominence in today's world, has expanded rapidly during the last few decades in Egypt and English courses are offered from primary to advanced levels at many institutions and universities.

Although, practitioners in this field make their best to keep up with the most recent trends of English teaching and learning, Egyptian EFL students still have difficulty in comprehending and employing English language skills. Anxiety, as a main source of difficulty, has long been recognized as an obstacle in foreign language learning by researchers, teachers and students. According to MacIntyre and Gardner, (1994, p. 284), foreign/second language anxiety is defined as “the feeling of tension and apprehension specially associated with second language contexts, including speaking, listening, and writing”.

Rohmah and Muslim (2020) stated that, as an essential part of EFL academic practices, writing is the most required skill in higher-education context. Subsequently, the requirement of having a high command of English writing skill emerges as one of the most important criteria for qualified EFL graduates.

In reality, many students are still struggling to write in proper way, especially in undergraduate level since they are novices to academic writing practices. As a result, writing anxiety hinders the writing process which affects the quality as well as perception of writing among students.

Heaton and Pray (as cited in Rezaei & Jafari, 2014, p. 1546) identified several causes of writing anxiety as follows 1) having a limited time to plan, write and revise; 2) absence of good writing skills including writing instruction and practice, brainstorming ideas, organization of ideas and mechanics of writing such as punctuation and vocabulary; 3) teachers’ negative comments.

Bloom (1981) considers self-imposed pressure for perfect work and problems with topic choice as possible causes of anxiety.

Other sources of writing anxiety include lack of confidence in FL/L2 writing (Cheng, 2002), lack of ability to express ideas in appropriate English, high frequency of writing assignments, and fear of negative comment (Hyland,

2003).

Recent studies revealed significant negative correlations between EFL writing anxiety and writing performance. Writing anxiety has negative effects on attitudes, success, student achievement, hinders the writing process, and reduces interest in writing. Kabigting et al. (2020) conducted a study and explored the writing anxiety experienced by secondary school students in Philippine. Findings revealed that more than eighty percent of participants had high level of writing anxiety which affected negatively learner's writing performance.

Rezaei & Jafari (2014) examined the levels, types and causes of writing anxiety among Iranian EFL students.

The participants were 120 EFL students in two institutes of higher education in Shiraz, Iran.

Using the Second Language Writing Anxiety Inventory (SLWAI) (Cheng, 2004), and Causes of Writing Anxiety Inventory (CWAI), developed by the authors based on classroom observations and the previous research available on this issue.

The level, types and causes of writing anxiety were obtained and triangulated by a semi-structured interview.

The findings of the study indicated a high level of writing anxiety among students, with cognitive anxiety as its main type, and fear of teacher's negative feedback, low self-confidence and poor linguistic knowledge as its main sources.

Nugroho & Ena (2021) examined the level of writing anxiety experienced by high school students in learning English as a foreign language.

The study adapted the Second Language Writing Anxiety Inventory questionnaire compiled by (Cheng, 2004).

The results showed that the participants had high and moderate writing

anxiety.

Cognitive anxiety showed the highest result. Whereas, avoidance anxiety was reported in the second position of writing anxiety.

The lowest score was performed by somatic anxiety that occurred in the result.

Choosing a topic to write on, finding helpful ideas, time constraints, topic sentence writing, and a lack of effective feedback were the most worrying factors.

Aljafen (2013) investigated the sources of writing anxiety among Engineering and Pharmacy Colleges Saudi EFL students.

The participants (n=296) filled out the English Writing Apprehension/Attitude Test (EWAT) scale survey.

The findings showed that the students share almost the same moderate feeling of English writing anxiety.

By comparison, the Engineering students were somewhat higher anxiety than the Pharmacy majors.

The weakness of their past English education, their lack of confidence in writing, and their fear of evaluation were the overwhelming reasons for their writing anxiety.

Haddad (2018) explored the correlation between writing anxiety and the grammatical complexity of Jordanian EFL students' written compositions, i.e. the use of subordinate clauses.

Eighty seven students, who were purposefully chosen from among the freshmen and senior students at Al-Balqa Applied University participated in the study.

Writing Anxiety Inventory (WAI) was used in order to collect the data.

The findings of the study revealed that there was a significant correlation between the level of writing anxiety and the grammatical complexity of the

written compositions of the study participants, as reflected in their use of subordinate clauses.

2.3 Self-Regulatory Writing Strategies

Students' skills and abilities relating to writing are measured as much as, if not more than, any other skills in today's higher education systems.

Writing is also considered an important part of EFL higher education contexts.

Despite the acknowledged importance in developing writing skills in higher education institutions, writing remains challenging for many learners.

So, EFL learners in higher education contexts should be supported to learn how to write through a variety of writing strategies e.g. planning, monitoring, and evaluating strategies for better writing.

Writing is not simply a product-oriented process or linguistic knowledge-oriented process; rather, it depends on student writers' understanding, belief, and use of strategies in planning, goal setting, drafting, evaluating, revising, and editing (Hughes, Regan, & Evmenova, 2019).

Hence, student writers must learn to apply various writing strategies in learning how to write.

However, students encounter various challenges when learning to write.

One obstacle appears to be limited English language input.

For some students, writing-related issues can be exacerbated due to a lack of awareness and use of self-regulated writing strategies (Teng & Huang, 2019).

In addition, student writers have unique strategy repertoires for learning to write (Palermo & Thomson, 2018) and often possess different levels of "self-initiated thoughts, feelings, and actions" when pursuing writing goals (Zimmerman & Risemberg, 1997, p. 76).

This problem may be more emergent today, as teaching writing is commonly product- and exam-oriented in today's educational systems (Teng &

Reynolds, 2019).

According to Harris and Graham (2009), students who lack important strategies for planning, producing, organizing, and revising text may have difficulty in generating ideas and selecting topics. In contrast, Ma & Teng, (2021) confirmed that students who frequently adopt writing strategies may be able to negotiate the rules and mechanics of writing, focus on the organization, form and features, and evaluate the communication between author and reader.

A large body of research identified various self-regulatory writing strategies that writers utilize in the course of writing (Graham & Harris, 2000; Wang, Kim, Bong, & Ahn, 2013; Zimmerman & Risemberg, 1997).

Graham and Harris (2000) identified many self-regulatory writing strategies, including goal setting and planning, seeking information, record keeping, organizing, transforming, self-monitoring, reviewing records, self-evaluating, revising, self-verbalizing, rehearsing, environmental structuring, time planning, self-consequence, seeking social assistance, and self-selecting models.

One empirical study on self-regulation in writing (Festas et al., 2015) involved 380 Portuguese young learners.

Instruction was based on self-regulated strategy development (SRSD), which was an instructional approach designed to help students learn, use, and adopt the strategies used by skilled writers.

Students who received SRSD intervention made statistically greater gains in composition elements than the comparison students immediately following instruction and 2 months thereafter.

Teng (2020a) divided 144 6th-grade students from Hong Kong into four conditions: SRSD; collaborative modeling of text structure; SRSD and collaborative modeling of text structure; and a control group.

Findings revealed that the combination of SRSD and collaborative modeling of text structure enhanced participants' performance in content comprehension and writing quality. Harris, Ray, Graham, and Houston (2019) explored students' performance when writing a persuasive essay following close reading of a source text.

Instruction on SRSD was included in the writing process.

Results showed that students demonstrated meaningful improvements on genre elements, holistic quality, and complexity of plans for writing after SRSD instruction.

Teng and Zhang (2016), adopting multiple regression analysis, suggested that seven strategies, including text processing, planning, monitoring, evaluating, feedback handling, emotional control, and motivation, predicted EFL students' writing proficiency.

EFL writing has also been found to be influenced by learners' self-regulation of cognition, motivation, and behavior, which mediates the relations among the person, the environment, and the achievement.

Teng, Wang, Zhang (2022) assessed students' use of self-regulatory writing strategies and the predictive effects of these strategies on students' writing performance.

Findings revealed that students in higher grade levels reported more frequent use of self-regulatory writing strategies (i.e., writing planning, goal-oriented monitoring, goal-oriented evaluation, emotional control, memorization, and metacognitive judgment) than those in lower grade levels, and female students reported using self-regulatory writing strategies more than male students.

After reviewing the literature related to self-regulatory writing strategies, the researcher determined a list of strategies that can be used to help Faculty of Education first year EFL majors develop their writing skills and reduce their writing anxiety.

The list includes writing planning, goal-oriented monitoring, goal-oriented evaluation, emotional control, memorization, metacognitive judgment, text processing, feedback handling, goal setting and planning, seeking information, record keeping, reviewing records, self-evaluating, revising, self-verbalizing, rehearsing, time planning, and self-consequence.

3. Method and Procedures

3.1. Design of the study

In the present study, the researcher adopted the pre-posttest quasi-experimental one group design.

This group was tested before and after implementing the experiment.

Also, the analytical descriptive method was used with regard to reviewing the literature related to the variables of the study.

3.2. Participants of the study

The participants of the present study were 45 first year EFL majors enrolled in Aswan Faculty of Education in the second semester of the academic year 2021/2022.

3.3. Instruments and Materials

The researcher prepared and used the following instruments in order to fulfill the aims of the present study:-

3.3.1 The EFL Writing Skills Checklist

The current study concerned with the EFL writing skills which are necessary to the first year EFL majors enrolled in Aswan Faculty of Education, the second semester of the academic year 2021/2022.

To ensure the validity of the EFL writing skills checklist, in its initial version, it was submitted to a jury of experts in EFL methodology.

They were requested to judge the checklist validity in terms of

appropriateness and suitability for the students' level.

All the jury members indicated that the checklist items were appropriate and necessary to the participants of the study.

For the final version of the EFL writing skills list, see (Appendix 1).

3.3.2 The EFL Writing Skills Test

3.3.2.1 Test Description

The EFL writing skills test (Appendix 2), aimed to test the first year EFL majors' writing skills the present study is concerned with.

The test consists of two questions.

In the first question, students were asked to write an essay of about 200 words about the advantages and disadvantages of social media.

In the second question, students were asked to write an essay of about 200 words about the role of technology in education.

The EFL writing skills test was piloted by administering it to 30 first year EFL majors (they were not included in the study group), in order to determine the suitability of the test for the participants, the simplicity/difficulty of the test items, the clarity of the test instructions, and the time allotted for the test. The average time needed for the students to answer the test was calculated. The total time was divided by students' number.

It was eighty-five minutes.

3.3.2.2 Test Validity

The test was given to EFL jurors to judge its validity.

The EFL jurors agreed that the test is valid and measures the intended EFL writing skills.

In addition, the validity coefficient of the EFL writing skills test was calculated using the square root of the reliability coefficient.

Based on that, the test validity coefficient was (.77) which is considered

acceptable. Thus, the test is valid and can measure first year EFL majors' EFL writing skills before and after intervention.

3.3.2.3 Test Reliability

The test-retest method was used to estimate the test reliability. The students were first tested on the 21st of February 2022.

Two weeks later, they were retested.

The correlation coefficient was (0.73).

3.3.2.4 Scoring the EFL Writing Skills Test

The researcher prepared an EFL writing skills rubric to score the EFL writing skills test used in the present study.

The first year EFL majors' writing skills were scored by two raters according to the rubric.

Each participant's score was the mean of the two raters' scores (the test total score=60).

Finally, the Pearson correlation coefficient ascertained that the level of inter-rater reliability is (0.78).

The EFL writing skills rubric included five levels of performance described on a five-point rating scale (arranged from 1 to 5).

The highest performance level was represented by "5", while the lowest performance level was represented by "1".

To ensure the validity of the EFL writing skills rubric, it was submitted to a jury of experts in EFL methodology to comment on the suitability of each level of performance to each EFL writing skill.

The scoring rubric was modified according to the jurors' comments and suggestions.

For the final form of the EFL writing skills rubric, see (Appendix 3).

3.3.3 The EFL Writing Anxiety Scale

In the present study, the researcher prepared an EFL writing anxiety scale in light of the Second Language Writing Anxiety Inventory (SLWAI) prepared by Cheng (2004).

The reason for selecting this scale as a measure of EFL writing anxiety was that it has been proved as being highly reliable and valid by means of correlation and factor analysis (Cheng, 2004).

The researcher facilitated students' reading and understanding of the items and provision of correct responses on their parts.

The EFL writing anxiety scale, used in the present study, contains 18 Likert-scale items scored on a 5-point scale, ranging from (1 to 5).

The participants were asked to indicate whether they (5) strongly agree, (4) agree, (3) uncertain, (2) disagree, or (1) strongly disagree with the statements of the scale.

For the final form of the EFL writing anxiety scale, see (Appendix 4).

The writing anxiety scale was used before the implementation of the self-regulatory writing strategies based program to measure the level of EFL majors' writing anxiety.

Moreover, the scale was used after the implementation of the self-regulatory writing strategies based program in order to investigate the effect of using some self-regulatory writing strategies in decreasing the students' writing anxiety.

3.3.3.1 Validity

To achieve the content validity of the EFL writing anxiety scale, it was submitted to a jury of experts in EFL methodology to judge the scale face validity in terms of clarity of items and suitability for the participants' level. All jury members indicated that the EFL writing anxiety scale is clear and suitable for the participants of the present study and valid for measuring their

EFL writing anxiety.

3.3.3.2 Reliability

The test re-test method was used to decide the reliability of the EFL writing anxiety scale.

It was administered to a group of first year EFL majors (N=30), then it was administered to the same group again after two weeks.

The Pearson correlation between the two administrations was (.75).

This means that the EFL writing anxiety scale is a reliable tool to measure the participants' EFL writing anxiety.

3.3.3.3 Scoring the Writing Anxiety Scale

Under the guidance and help of the researcher, the participants were asked to complete the EFL writing anxiety scale and choose one of the options ((5) strongly agree, (4) agree, (3) uncertain, (2) disagree, or (1) strongly disagree).

The student who chooses 'strongly agree' with all statements will receive a score of five for each of the eighteen statements.

Such a student will receive a total score of ninety marks, the maximum score possible.

A student, who chooses 'agree' to all statements, will receive a score of four for each statement or a total score of seventy-two marks and so on. The high the student's score is, the high is his EFL writing anxiety.

3.3.4 The Self-Regulatory Writing Strategies-based Program

The aim of the self-regulatory writing strategies-based program was to help the first year EFL majors at Aswan Faculty of Education develop their EFL writing skills and reduce their EFL writing anxiety.

The self-regulatory writing strategies-based program was implemented in the second semester of the academic year 2021/2022.

The program lasted for two months and consisted of thirteen sessions; each of which took 2 hours.

The first session was devoted to the introduction and procedures of the self-regulatory writing strategies for the first year EFL majors at Aswan Faculty of Education.

The remaining sessions were instructional sessions through which the participants were trained to participate in different writing activities and use some self-regulatory writing strategies to develop their writing skills and reduce writing anxiety.

For the final form of the self-regulatory writing strategies-based program used in the present study, see appendix (5).

4. Results of the Study

The results of the current study are presented in light of the hypotheses of the study using the Statistical Package for Social Sciences (SPSS) version 19. The results are stated as follows:

4.1. Hypothesis 1

The first hypothesis states that “There is a statistically significant difference between the mean scores of the study participants on the overall writing skills pre-posttests in favor of the post”.

The following table presents students’ mean scores, standard deviations, t-value and level of significance on the overall writing skills pre-posttests.

Table (1): The t-value, mean scores, standard deviations, and level of significance on the overall writing skills pre-posttests.

Skill	Measurement	N	Mean	S.D	T-Value	D.F	Sig.
Overall writing skills	Pre	45	28.13	3.33	28.93	44	0.05
	Post	45	46.42	2.39			

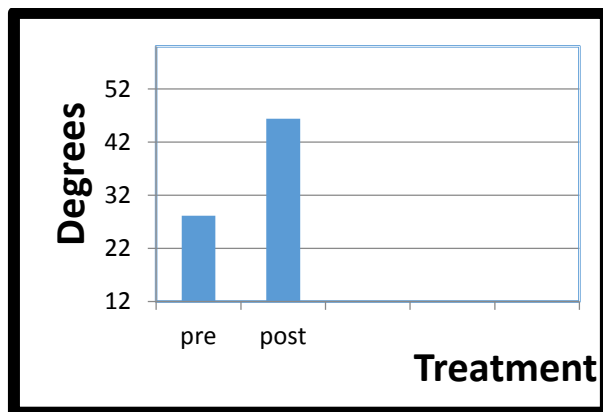
As table (1) indicates, the mean score of the study participants on the overall writing skills posttest is higher than their mean score on the pre-test, where “t-value” is (28.93) which is significant at the (0.05) level of significance. Consequently, the first hypothesis was confirmed.

The results of the first hypothesis revealed that there was a statistically significant difference between the mean score of the study participants on the overall writing skills pre-posttest in favor of the post.

As indicated in table (1), the study participants showed more development in their overall writing skills in the post assessment than in the pre assessment. This proved and confirmed the first hypothesis statistically.

This development as indicated in Figure (1) can be related to the administration of the self-regulatory writing strategies-based program.

Figure (1): The mean scores of the study participants on the overall writing skills pre-posttests



The effect size of the self-regulatory writing strategies-based program is indicated in the following table:

Table (2): The effect size of the self-regulatory writing strategies-based program on the overall writing skills

Skill	t-value	d-value	Effect size
Overall writing skills	28.93	4.31	Large

As indicated in table (2), the development of the study participants’ overall writing skills can be related to the use of the self-regulatory writing strategies-based program which is found to be effective in developing first year EFL majors’ overall writing skills.

4.2. Hypothesis 2

The second hypothesis states that “There is a statistically significant difference between the mean scores of the study participants on the mechanics of writing skills pre-posttests in favor of the post”.

The following table presents students’ mean scores, standard deviations, t-value and level of significance on the mechanics of writing skills pre-posttests.

Table (3): The t-value, mean scores, standard deviations, and level of significance on the mechanics of writing pre-posttests.

Skill	Measurement	N	Mean	S.D	T- Value	D.F	Sig.
Organization skills	Pre	45	7.95	2.11	17.86	44	0.05
	Post	45	15.04	1.29			

As table (3) indicates, the mean score of the study participants on the mechanics of writing skills posttest is higher than their mean score on the pre-test, where “t-value” is (11.82) which is significant at the (0.05) level of significance.

Consequently, the second hypothesis was confirmed.

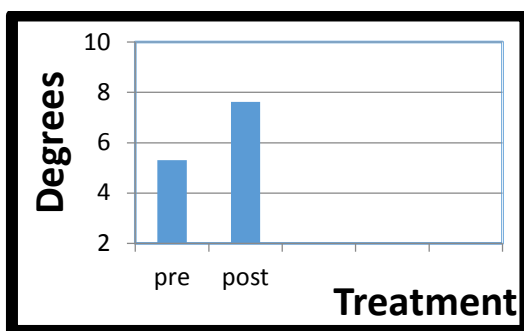
The results of the second hypothesis revealed that there was a statistically significant difference between the mean score of the study participants on the mechanics of writing skills pre-posttest in favor of the post.

As indicated in table (3), the study participants showed more development in their mechanics of writing skills in the post assessment than in the pre assessment.

This proved and confirmed the second hypothesis statistically.

This development as indicated in Figure (2) can be related to the administration of the self-regulatory writing strategies-based program.

Figure (2): The mean scores of the study participants on the mechanics of writing skills pre-posttests



The effect size of the self-regulatory writing strategies-based program is indicated in the following table:

Table (4): The effect size of the self-regulatory writing strategies-based program on the mechanics of writing skills

Skill	t-value	d-value	Effect size
Mechanics of writing skills	11.82	1.76	Large

As indicated in table (4), the development of the study participants' mechanics of writing skills can be related to the use of the self-regulatory

writing strategies-based program which is found to be effective in developing EFL majors’ mechanics of writing skills.

4.3. Hypothesis 3

The third hypothesis states that “There is a statistically significant difference between the mean scores of the study participants on the organization skills pre-posttests in favor of the post”.

The following table presents students’ mean scores, standard deviations, t-value and level of significance on the organization skills pre-posttests.

Table (5): The t-value, mean scores, standard deviations, and level of significance on the organization skills pre-posttests.

Skill	Measurement	N	Mean	S.D	T-Value	D.F	Sig.
Organization skills	Pre	45	7.95	2.11	17.86	44	0.05
	Post	45	15.04	1.29			

As table (5) indicates, the mean score of the study participants on the organization skills posttest is higher than their mean score on the pre-test, where “t-value” is (17.86) which is significant at the (0.05) level of significance.

Consequently, the third hypothesis was confirmed.

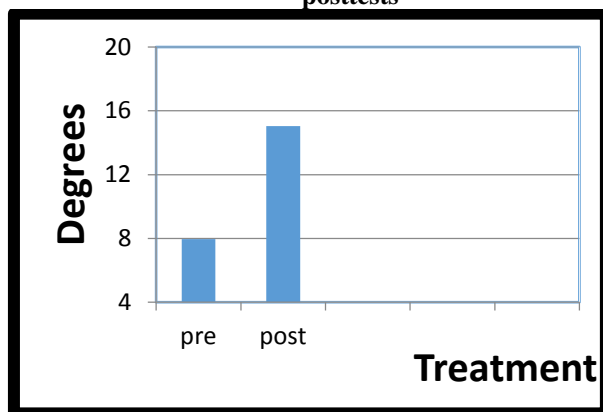
The results of the third hypothesis revealed that there was a statistically significant difference between the mean score of the study participants on the organization skills pre-posttest in favor of the post.

As indicated in table (5), the study participants showed more development in their organization skills in the post assessment than in the pre assessment.

This proved and confirmed the third hypothesis statistically.

This development as indicated in Figure (3) can be related to the administration of the self-regulatory writing strategies-based program.

Figure (3): The mean scores of the study participants on the organization skills pre-posttests



The effect size of the self-regulatory writing strategies-based program is indicated in the following table:

Table (6): The effect size of the self-regulatory writing strategies-based program on the organization skills

Skill	t-value	d-value	Effect size
Organization skills	17.86	2.66	Large

As indicated in table (6), the development of the study participants’ organization skills can be related to the use of the self-regulatory writing strategies-based program which is found to be effective in developing EFL majors’ organization skills.

4.4. Hypothesis 4

The fourth hypothesis states that “There is a statistically significant difference between the mean scores of the study participants on the content skills pre-posttests in favor of the post”.

The following table presents students’ mean scores, standard deviations, t-value and level of significance on the content skills pre-posttests.

Table (7): The t-value, mean scores, standard deviations, and level of significance on the content skills pre-posttests.

Skill	Measurement	N	Mean	S.D	T-Value	D.F	Sig.
Content skills	Pre	45	7.17	.98	21.05	44	0.05
	Post	45	11.82	1.21			

As table (7) indicates, the mean score of the study participants on the content skills posttest is higher than their mean score on the pre-test, where “t-value” is (21.05) which is significant at the (0.05) level of significance. Consequently, the fourth hypothesis was confirmed.

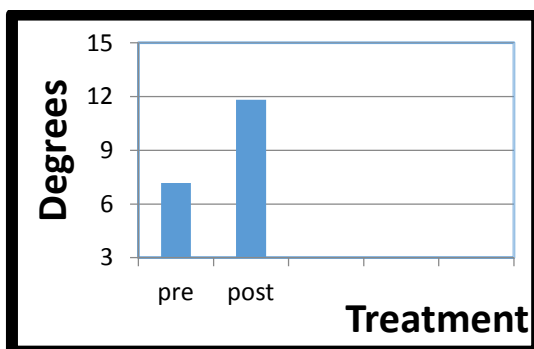
The results of the fourth hypothesis revealed that there was a statistically significant difference between the mean score of the study participants on the content skills pre-posttest in favor of the post.

As indicated in table (7), the study participants showed more development in their content skills in the post assessment than in the pre assessment.

This proved and confirmed the fourth hypothesis statistically.

This development as indicated in Figure (4) can be related to the administration of the self-regulatory writing strategies-based program.

Figure (4): The mean scores of the study participants on content skills pre-posttests



The effect size of the self-regulatory writing strategies-based program is indicated in the following table:

Table (8): The effect size of the self-regulatory writing strategies-based program on the content skills

Skill	t-value	d-value	Effect size
Content skills	21.05	3.13	Large

As indicated in table (8), the development of the study participants’ content skills can be related to the use of the self-regulatory writing strategies-based program which is found to be effective in developing first year EFL majors’ content skills.

4.5. Hypothesis 5

The fifth hypothesis states that “There is a statistically significant difference between the mean scores of the study participants on the language use skills pre-posttests in favor of the post”.

The following table presents students’ mean scores, standard deviations, t-value and level of significance on the language use skills pre-posttests.

Table (9): The t-value, mean scores, standard deviations, and level of significance on the language use skills pre-posttests.

Skill	Measurement	N	Mean	S.D	T-Value	D.F	Sig.
Language use skills	Pre	45	7.68	1.31	14.06	44	0.05
	Post	45	11.93	1.23			

As table (9) indicates, the mean score of the study participants on the language use skills posttest is higher than their mean score on the pre-test, where “t-value” is (14.06) which is significant at the (0.05) level of significance.

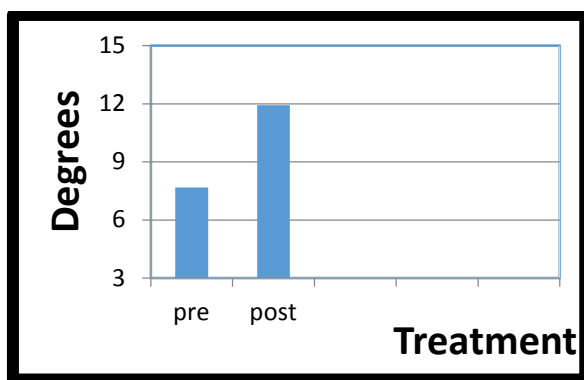
Consequently, the fifth hypothesis was confirmed.

The results of the fifth hypothesis revealed that there was a statistically significant difference between the mean score of the study participants on the language use skills pre-posttest in favor of the post.

As indicated in table (9), the study participants showed more development in their language use skills in the post assessment than in the pre assessment. This proved and confirmed the fifth hypothesis statistically.

This development as indicated in Figure (5) can be related to the administration of the self-regulatory writing strategies-based program.

Figure (5): The mean scores of the study participants on the language use skills pre-posttests



The effect size of the self-regulatory writing strategies-based program is indicated in the following table:

Table (10): The effect size of the self-regulatory writing strategies-based program on the language use skills

Skill	t-value	d-value	Effect size
Language use skills	14.06	2.09	Large

As indicated in table (10), the development of the study participants’ language use skills can be related to the use of the self-regulatory writing strategies-based program which is found to be effective in developing first year EFL

majors’ language use skills.

4.6. Hypothesis 6

The sixth hypothesis states that “There is a statistically significant difference between the mean scores of the study participants in the pre and post administrations of the writing anxiety scale in favor of the pre-administration”.

The following table presents students’ mean scores, standard deviations, t-value and level of significance in the pre and post administrations of the EFL writing anxiety scale.

Table (11): The t-value, mean scores, standard deviations, and level of significance in the pre and post administrations of the EFL writing anxiety scale

Scale	Measurement	N	Mean	S.D	T- Value	D.F	Sig.
EFL Writing anxiety scale	Pre	45	70.24	4.07	35.56	44	0.05
	Post	45	42.17	3.27			

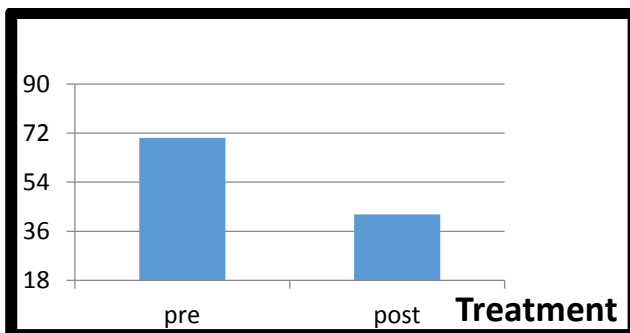
As table (11) indicates, the mean score of the study participants in the pre-administration of the EFL writing anxiety scale is higher than their mean score in the post-administration, where “t-value” is (35.56) which is significant at the (0.05) level of significance. Consequently, the sixth hypothesis was confirmed.

The results of the sixth hypothesis indicated that there was a statistically significant difference between the mean scores of the study participants in the pre and post administrations of the EFL writing anxiety scale in favor of the pre-administration.

Table (11) indicated that t-value was significant at 0.05 level. This proved and supported the sixth hypothesis statistically.

Figure (6) illuminates these results:

Figure (6): The mean scores of the study participants in the pre and post administrations of the EFL writing anxiety scale



The present study focused on reducing the first year EFL majors’ EFL writing anxiety through the offered activities, tasks, and exercises in the self-regulatory writing strategies-based program.

These activities provided opportunities for first year EFL majors’ to apply some self-regulatory writing strategies and select, process and organize information, rehearse materials, allocate resources to memory, and evaluate the learning process and thus can enhance their writing.

As a result, the post assessment has indicated that the first year EFL majors’ writing anxiety was reduced due to the influence of the self-regulatory writing strategies-based program.

The following table presents the effect size of the self-regulatory writing strategies-based program on the study participants’ EFL writing anxiety:

Table (12): The effect size of the self-regulatory writing strategies-based program on the study participants’ EFL writing anxiety

Scale	t-value	d-value	Effect size
EFL writing anxiety	35.56	5.30	Large

5. Discussion

The present study aimed to develop the EFL writing skills and reduce the EFL writing anxiety among first year EFL majors enrolled in Aswan Faculty of Education through using the self-regulatory writing strategies-based program. The program offered a dynamic and learner-centered framework for improving the study participants' writing skills through various purposeful and well-designed writing activities and tasks using some self-regulatory writing strategies.

The results of the present study showed that the self-regulatory writing strategies-based program has improved the study participants' writing skills and reduced their writing anxiety.

These improvements can be due to the effectiveness of using the self-regulatory writing strategies-based program, and the activities and tasks offered through the sessions, to the study participants.

The self-regulatory writing strategies-based program enabled first year EFL majors to achieve active self-directed learning.

The writing activities and tasks offered through the program increased first year EFL majors' abilities regarding text processing, planning, monitoring, and evaluating.

Also, using self-regulatory writing strategies encouraged first year EFL majors to think about how much time they should spend on each part of the essay, search for some good words and sentences in mind before writing, list main ideas or details before writing, collect relevant materials and do some reading preparation for the writing topic, plan for their writing based on peer feedback and teacher feedback, and check and revise sentences to ensure content and grammar accuracy after writing.

The findings of the present study are consistent with the results of some recent

studies (e.g., Ching, 2002; Cho, Cho, and Hacker, 2010; Chien, 2012) which have documented that the employment of the self-regulatory writing strategies contributed to the improvement of students' knowledge associated with writing skills.

In addition, high achievers in writing tended to use certain categories of self-regulatory writing strategies and spend more time in making statements in the planning process, generating longer text in the writing process, and making more revision in the review process than low-achieving students.

These studies provides evidence that using the self-regulatory writing strategies was effective in developing writing skills.

Moreover, the present study confirms the effectiveness of the self-regulatory writing strategies in reducing first year EFL majors' writing anxiety.

6. Implications

In light of the results of the present study, the following implications are suggested:

1. EFL writing skills and writing anxiety should be given more attention when designing English language programs.
2. Training the EFL majors on the use of the self-regulatory writing strategies to develop their writing skills.
3. Training the EFL majors on the use of the self-regulatory writing strategies to reduce their writing anxiety.
4. EFL faculty members should clarify the importance of EFL writing skills to their students.

In addition, they should illustrate the importance of the self-regulatory writing strategies as they help the students to monitor their writing processes, assess language use and content, evaluate previous learning, control emotions and negative feelings when learning to write, and memorize and organize information and ideas.

7. Conclusion

The current study investigated the effect of using self-regulatory writing strategies on developing writing skills and reducing writing anxiety among first year EFL majors enrolled in Aswan Faculty of Education.

Results indicated that the participants' writing skills was developed, and their writing anxiety was reduced as a result of using the self-regulatory writing strategies-based program.

The results of the current study show that the self-regulatory writing strategies may be regarded as a means to help first year EFL majors acquire and develop writing skills.

Also, first year EFL majors need programs that support and develop their writing skills.

There are wide variations in first year EFL majors' use of self-regulatory writing strategies and their writing outcomes.

Self-regulatory writing strategies should be included in EFL writing programs to engage students in critical thinking through planning, monitoring, and regulating their writing processes.

References

Abdel-Haq, E., Atta, H., & Ali, A. (2020). Promoting EFL Writing Skills Using a Web-Mediated Process Genre Approach among EFL Majors at Faculties of Education. *Sohag University International Journal of Educational Research*, 1, 60-82 .

Aljafen, B., S. (2013). Writing Anxiety Among EFL Saudi Students in Science Colleges and Departments at A Saudi University. Master's Dissertation, Indiana University of Pennsylvania, USA .

Bloom, L. (1981). Why graduate students can't write: Implications of research on writing anxiety for graduate education. *Journal of Advanced Composition*, 2, 1-2.

Bruning, R., & Horn, C. (2000). Developing motivation to write. *Educational Psychologist*, 35, 25-37.

Cheng, Y. (2002). Factors associated with foreign language writing anxiety. *Foreign Language Annuals*, 35(5), 647-656.

Cheng, Y. (2004). A measure of second language writing anxiety: Scale development and preliminary validation. *Journal of Second Language Writing*, 13, 313-335.

Chien, S. (2012). Students' use of writing strategies and their English writing achievements in Taiwan. *Asia Pacific Journal of Education*, 32(1), 93-112.

Ching, L. (2002). Strategy and self-regulation instruction as contributors to improving students' cognitive model in an ESL program. *English for Specific Purposes*, 21, 261-289.

Cho, K., Cho, M., & Hacker, D. (2010). Self-monitoring support for learning to write. *Interactive Learning Environments*, 18(2), 101-113.

Cumming, A. (2006). Teaching writing: Orienting activities to students' goals. In E. Uso´-Juan and A. Mart´nez-Flor (Eds.), *Current Trends in the Development and Teaching of the Four Language Skills* (pp.473-491), Berlin: Mouton de Gruyter.

Erkan, D., & Saban, A. (2011). Writing Performance Relative to Writing Apprehension, Self-Efficacy in Writing, and Attitudes towards Writing: A Correlational Study in Turkish Tertiary-Level EFL. *The Asian EFL Journal Quarterly*, 13(1), 163-191.

Festas, I., Oliveira, A., Rebelo, J., Damião, M., Harris, K., & Graham, S. (2015). Professional development in self-regulated strategy development: Effects on the writing performance of eighth grade Portuguese students. *Contemporary Educational Psychology*, 40, 17–27 .

Fulwiler, T. (2002). *College Writing: A Personal Approach to Academic Writing* Third Edition. Portsmouth, NH: Boynton/Cook Publishers, Inc.

Graham, S., & Harris, K. (2000). The role of self-regulation and transcription skills in writing and writing development. *Educational Psychologist*, 35(1), 3-12.

Haddad, M. (2018). Writing Anxiety and the Use of Subordinate Clauses in the Written Compositions of Jordanian EFL Undergraduate Students. *Theory and Practice in Language Studies*, 8, 4, 404-409 .

Harris, K., & Graham, S. (2009). Self-regulated strategy development in writing: Premises, evolution, and the future. *British Journal of Educational Psychology Monograph Series II*, 6, 113–135 .

Harris, K., Graham, S., & Mason, L. (2006). Improving the writing, knowledge, and motivation of struggling young writers: Effects of self-regulated strategy development with and without peer support. *American Educational Research Journal*, 42, (2), 295–340 .

Harris, K., Ray, A., Graham, S., & Houston, J. (2019). Answering the challenge: SRSD instruction for close reading of text to write to persuade with 4th and 5th Grade students experiencing writing difficulties. *Reading and Writing*, 32, 1459–1482 .

Hassan, B. (2001). The relationship of writing apprehension and self-esteem .to the writing quality and quantity of EFL University students. *Mansoura Faculty of Education Journal*. Retrieved on April 2022 from: <http://eric.ed.gov/PDFS/ED459671.pdf> .

Hayes, J. (2000). A new framework for understanding cognition and affect in writing. In R. Indrisano, & J. Squire (Eds.), *Perspectives on writing: Research, theory, and practice* (pp. 6-44). Newark, DE: International Reading Association.

Hughes, M., Regan, K., & Evmenova, A. (2019). A computer-based graphic organizer with embedded self-regulated learning strategies to support student writing. *Intervention in School and Clinic*, 55, 13–22 .

Hyland, K. (2003). *Second language writing*. New York: Cambridge University Press.

Kabigting, R., Gumangan, A., Vital, D., Villanueva, E., Mosuela, E., Muldong, F., Pamintuan, K., Mallari, M., & Sagum, M. (2020). Anxiety and Writing Ability of Filipino ESL Learners. *International Journal of Linguistics, Literature and Translation (IJLLT)*, 3(7), 126–132.

Ma, M., & Teng, F. (2021). Metacognitive knowledge development of students with differing levels of writing proficiency in a process-oriented course: An action research study. In B. L. Reynolds, & M. F. Teng (Eds.), *Innovative approaches in Teaching writing to Chinese speakers* (pp. 92-117). Berlin: DeGruyter Mouton .

MacIntyre , P., & Gardner, R. (1994). The Subtle Effects of Language Anxiety on Cognitive Processing in the Second Language. *Language Learning*, 44, 2, 283-306 .

Nugroho, A., & Ena, O. (2021). Writing Anxiety among EFL Students of John Senior High School. *Journal of Language Teaching and Learning, Linguistics and Literature*, 9, (1), 245 – 259 .

Palermo, C., & Thomson, M. (2018). Teacher implementation of self-regulated strategy development with an automated writing evaluation system: Effects on the

argumentative writing performance of middle school students. *Contemporary Educational Psychology*, 54, 255–270 .

Prat-Sala, M. & Redford P. (2012). Writing essays: does self-efficacy matter? The relationship between self-efficacy in reading and in writing and undergraduate students' performance in essay writing. *Educational Psychology*, 32, (1), 9–20.

Rezaei, M., & Jafari, M. (2014). Investigating the Levels, Types, and Causes of Writing Anxiety among Iranian EFL Students: A Mixed Method Design. *Procedia - Social and Behavioral Sciences* 98, 1545-1554.

Rohmah, N., & Muslim, A. (2020). Writing Anxiety in Academic Writing Practice: Insights from EFL Learners' Perspectives. *Advances in Social Science, Education and Humanities Research*, 546, 348-354 .

Sova, D. (2004). *Writing Clearly a Self-Teaching Guide*. New Jersey: John Wiley & Sons, Inc.

Tanyer, S. (2015) The role of writing and reading self-efficacy in first-year preservice EFL teachers' writing performance. *Procedia - Social and Behavioral Sciences*, 199, 38 – 43 .

Teng, F. (2020a). Young learners' reading and writing performance: Exploring collaborative modeling of text structure as an additional component of self-regulated strategy development. *Studies in Educational Evaluation*, 65, Article 100870 .

Teng, F., & Huang, J. (2019). Predictive effects of writing strategies for self-regulated learning on secondary school learners' EFL writing proficiency. *TESOL Quarterly*, 53, 232–247 .

Teng, F., & Reynolds, B. (2019). English foreign and second language literacy development across Chinese Speaking Asia: What do we know? In B. Reynolds, & F. Teng (Eds.), *English literacy instruction for Chinese speakers* (pp. 3–13). Singapore: Palgrave Macmillan.

Teng, M., Wang, Ch., & Zhang, L. (2022). Assessing self-regulatory writing strategies and their predictive effects on young EFL learners' writing performance. *Assessing Writing*, 51, 1-16 .

Wang, C., Kim, D., Bong, M., & Ahn, H. (2013). Korean college students' self-regulated learning strategies and self-efficacy beliefs in learning English as a foreign language. *Asian EFL Journal*, 15(3), 81-112.

Zacharias, N. (2007). Teacher and student attitudes toward teacher feedback. *RELC Journal*, 38, 38-57.

Zhang, Y., & Guo, H. (2012). A study of English writing and domain-specific motivation and self-efficacy of Chinese EFL learners. *Pan-Pacific Association of Applied Linguistics*, 16, (2), 101-121.

Zhu, W. (2004). Faculty views on the importance of writing, the nature of academic writing, and teaching and responding to writing in the disciplines. *Journal of Second Language Writing*, 13, 29–48.

Zimmerman, B., & Risemberg, R. (1997). Becoming a self-regulated writer: A social cognitive perspective. *Contemporary Educational Psychology*, 22, 73-101 .