

**EXPLORING SELF-EFFICACY
AS A PREDICTOR OF L2 LEARNERS'
WRITING PROFICIENCY**

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Abstract

This article reports a study investigating the existence of any statistically significant correlation between self-efficacy and L2 learner's writing proficiency. Initially, the participants were 100 female L2 learners at Islamic Azad university of Damavand in Iran, but only 78 of them provided valid data. The participants completed self-efficacy questionnaires and received two topics in order to write two essays, one of which was on an informative topic and the other on a comparative topic. Two rubrics, one for writing to inform and the other for writing to compare and contrast, were used to evaluating the learners' skill in those writing tasks. In addition, there were self-efficacy questionnaires. Then the data were submitted to statistical analyses. Based on the Pearson correlation, we found that there was a significant correlation between self-efficacy and L2 learners' informative and comparative writing; moreover, regression analyses revealed self-efficacy can be used as a predictor of L2 learners' writing proficiency. The findings of the study have implications for L2 teaching and assessment.

Keywords: Self-Efficacy, Writing and Writing Achievement, Informative Writing, Comparative Writing.

Introduction

Studies on the impact of psychological elements on education process achieved momentum starting from the 19th century. One of the most interesting psychological elements of nowadays is self-efficacy perceptions. In the last thirty-eight years following the introduction of self-efficacy perceptions to the science world by Bandura (1977) , different studies proposed that it has important impacts on human life's different fields such as sports, health, profession selection, and education (Schunk & Pajares, 2002). Diversification of studies conducted and results gained helped increase the number and quality of researches conducted on self-efficacy.

In a Norwegian twin study, the heritability of self-efficacy in adolescents was estimated at 75 percent. The remaining variance, 25 percent, was due to environmental influences not shared between family members. The shared family environment did not contribute to individual differences in self-efficacy (as cited in Waaktaar, Torgersen, 2013).

Some scholars developed and verified a theoretical model of the effect of self-efficacy on transgressive behavior in research with school children (Bandura, Caprara, Barbaranelli, & Pastorelli, 1996).

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According to Kwak & Bandura (1998) prosocial behavior (such as helping others, sharing, and being kind and cooperative) and moral disengagement (manifesting in behaviors such as making excuses for bad behavior, avoiding responsibility for consequences, and blaming the victim) are negatively correlated (Kwak & Bandura, 1998).

Researchers claimed that academic, social, and self-regulatory self-efficacy encourages prosocial behavior, and thus helps prevent moral disengagement (Bandura, Caprara, Barbaranelli, & Pastorelli, 1996).

Self-efficacy has been linked to many domains of learning and teaching. Some researchers worked on a study which adapted a self-efficacy survey, from the "Self-Efficacy for Learning Performance" subscale of the Motivated Learning Strategies Questionnaire and administered it to the introductory, calculus-based physics classes ($N=1005$) over the fall 2015 and spring 2016 semesters. This assessment measured students' self-efficacy in domains including the physics class, other science and mathematics classes, and their intended future career. The effect of gender was explored with the only significant gender difference ($p<.001$) existing within the physics domain. A hierarchical linear regression analysis indicated that this gender difference was not explained by a student's performance which was measured by test average. However, a mediation analysis showed that students' overall academic self-efficacy, measured by their math and science self-efficacy, acts as a mediator for the effect of test average on self-efficacy towards the physics class domain. One more, study underpinning social cognition and theory of planned behavior, investigated the attitudes, self-efficacy, and experiences of 559 first year undergraduate chemistry students from two cohorts in modified process-oriented guided inquiry learning (POGIL) classes (Vishnumolakala, Southam, Treagust, Mocerinoa & Qureshic, 2017). Self-efficacy has even been linked to dance. According to Renner and Pratt (2017): "A focus on teachers' self-efficacy beliefs for teaching dance that required teachers to identify those aspects in which they felt more or less confident and competent in teaching adds a depth and breadth to understanding that simple measures of confidence do not." (Renner & Pratt, 2017, p. 115). Another study examined the development of self-efficacy in the high school years and the related socio-demographic and family correlates. A longitudinal research design was used to collect data from students in Grade 7 to Grade 12 by the researchers. At each wave, students responded to measures of socio-demographic characteristics (gender, economic disadvantage and non-intactness), family processes (family functioning and parent-child relational quality), academic and school competence and self-efficacy. They found that self-efficacy increased in the adolescent years. Regarding socio-demographic predictors, economic disadvantage and family non-intactness were related to adolescent self-efficacy. Their findings also showed that family processes (family functioning and parent-child subsystem quality) and academic and school competence were related to adolescent self-efficacy but the nature of relationships was more complex than expected (Shek & Liang, 2016).

1.2 Self-Efficacy and Writing

The emphasis on the development of student's literacy has increased during recent years particularly reading and writing. Although these two literacy skills depend in part on learner's verbal abilities, studies showed that cognitive and motivational variables play a significant role, too (Zimmerman & Bandura, 1994, as cited in Schunk & Zimmerman, 2007).

It is believed that self-efficacy is an important factor that is affecting academic success and performance (Bandura & Locke, 2003; Pajares, 1996b). Webb-Williams (2006) studied the relationship between self-efficacy and science performance of primary school children aged between 10 to 12 years old, completed self-efficacy questionnaires. His

study concluded that self-efficacy has positive relation with academic performance. In addition, self-efficacy perceptions influence the behaviors of learners inside the class to a great extent. In this context, theoretically, it is expected for a learner with a high writing self-efficacy, which means perceiving his/her writing skill, to be high, more enthusiastic about writing exercise, set out higher targets about writing, overcome problems encountered in writing process more easily, and exert more efforts in order to complete any writing activity initiated with a better result (Henk & Melnick, 1995).

Researches done specifically on language education and language skills proposed that self-efficacy perceptions are important in terms of education activities and researches (Pajares & Valiante, 2006; Maloti & Shumba, 2012).

Researchers in both composition and self-efficacy have shown interest in writing self-efficacy, and they have examined the relationship between writing self-belief and writing outcomes in academic setting; these researchers found a strong relationship between them (Pajares, 2000, 1996a, & Pajares & Valiante 2001). In this research, self-efficacy was usually found to have the most powerful prediction among all the motivating constructs studied over writing performance; such findings lead to the claim made by Bandura(1986) based on social cognitive theory, that self-efficacy plays a primary role in predicting writing performance.

Self-efficacy perception is among the titles that education studies have recently attached great importance to writing skill - that is taught through a programmed education process among the basic language skills - a skill that can be improved through lots of variables. Self-efficacy perception also influences writing skill as is the case with many skills of education process.

Studies have shown that there is an important correlation between self-efficacy perceptions and writing achievement when it comes to writing in the second language learning with regards to writing skills in particular (Pajares & Johnson, 1993). This review explains self-efficacy in general, and tries to find out its relationship with writing performance with a specific focus on comparison between informative writing and comparative writing.

Pajares explained writing self-efficacy beliefs as the people's judgment of their competence in writing, specifically their judgment of their ability to write various writing tasks and of their possession of varying composition, usage and mechanical skills (Pajares & Johnson, 1993). Five years later Bandura introduce people who doubt their capabilities running away from tasks which seems difficult to them and viewed as personal threats in contrast to people with high assurance in their capabilities, with their fruitful revenue to express the effect of self-efficacy (Bandura, 2006). However, Zimmerman believed self-efficacy beliefs have great different conceptually and psychometrically from closely related constructs, like outcome expectations, self-concept, and perceived control (Zimmerman, 2000, p.84).

Furthermore, writing studies research indicates that self-efficacy influences student choices, effort, persistence, perseverance, thought patterns, and emotional reactions when completing a writing assignment (Pajares, 2003; Pajares & Johnson, 1994; & Schunk, 2003). Students with a high self-efficacy are more likely to attempt and persist in unfamiliar writing tasks (McCarthy, Meier, & Rinderer, 1985; & Schunk, 2003).

Scholars believe that self-efficacy has often been linked to students' writing performance outcomes. More so than any other element within the cognitive-affective domain, self-efficacy beliefs have proven to be predictive of performance outcomes in writing

(McCarthy, Meier, & Rinderer, 1985; Pajares, 2003; Pajares & Johnson, 1994; & Schunk, 2003).

In order to assess the relationship between self-efficacy and writing capabilities, several studies have constructed scales to measure students' self-efficacy beliefs (McCarthy, Meier, & Rinderer, 1985; & Pajares & Johnson, 1994). Pajares (2003) argues that the results of these scales are then compared to student writing samples. The studies included other variables, such as writing anxiety, grade goals, depth of processing, and expected outcomes. However, self-efficacy was the only variable that was a statistically significant predictor of writing performance (Pajares, 2003).

2. Related Studies

In 1987, three scholars did a study on two groups of students composed of 606 in one group and 438 in another. These students had been in the grades 4, 7, and 10. Two-paragraph essay scored holistically in this research while two scales assessing self-efficacy for writing task and writing skills. The task involved essay writing. While self-efficacy measure assessed confidence for a variety of writing tasks. Perceived self-efficacy was not significant at the 4th grade, but was the most significant predictor at grades 7 and 10 (Bruning, Shell, & Murphy, 1987).

Another study in 1989 on two other groups of students was done. In this research, the elementary school students were experienced. Story writing assessed "story grammar elements" and quality, 10-item scale measuring self-efficacy to write a "made-up story". Finally, strategy training increased perceived self-efficacy while explicit self-regulation training did not augment self-efficacy of the students' overestimated abilities. In this study all the students had learning disabilities. Critical task involved writing a "made-up story" (Graham & Harris, 1989a).

Zimmerman & Kitsantas found that self-efficacy was highly predictive of writing performance. According to them students who shifted goals from process to outcome displayed higher self-efficacy. They used task-specific measure assessing perceived capability to complete critical task for measuring self-efficacy; meanwhile, sentence combining task was their performance measure (Zimmerman & Kitsantas, 1999).

Page-Voth & Graham also found that perceived self-efficacy was not affected by inclusion in two experimental groups: goal setting or goal-setting with strategy instruction. The self-efficacy measure used in their study was six-item self-efficacy scale assessing confidence for writing essays; meanwhile, three essays scored for functional elements, length and quality were used as the performance measure in that research (Page-Voth & Graham, 1999).

Pajares and Valiante (1999) have done a study which the objectives of it were to determine whether middle school students' writing self-efficacy beliefs make an independent contribution to the prediction of their writing competence and to explore grade level and gender differences in writing self-beliefs also the number on the participants in their study were 742. They stated that writing self-efficacy was the only motivation construct to predict writing competence in a model that included writing self-concept, writing apprehension, perceived value of writing, self-efficacy for self-regulation, previous writing achievement, gender, and grade level. Girls were more competent writers than were boys, but there were no gender differences in writing self-efficacy beliefs. However, when students were asked whether they were better writers than their peers, girls expressed that they were better writers than were other boys or girls in their class or in their school to a greater degree than did the boys (Pajares & Valiante, 1999). Their findings suggest that girls and boys may use a different metric when responding to

traditional self-efficacy scales. Students in Grade 6 reported higher self-efficacy and found writing more valuable than did their older peers, and students in Grade 7 reported lower writing self-beliefs than did students in Grades 6 or 8 (Pajares & Valiante, 1999).

According to Pajares and Valiante (1999), in that study, self-efficacy beliefs decreased from grade six to seven, but rebounded in grade eight and no gender differences found. The self-efficacy measure they have used was writing skill self-efficacy scale (which included ten items) measuring confidence to perform specific writing skills. In the other hand, the performance measure they have used was thirty-minute essay (Pajares & Valiante, 1999). The specificity of self-efficacy measure in the study of Pajares and Valiante (1999) was high which measures confidence to perform specific writing skills. Self-efficacy measure in that study described: “consisted of ten items asking students how sure they were that they could perform specific writing skills” (Pajares & Valiante, 1999, p. 392).

In the study have been done by Spaulding (1995), perceived self-efficacy was positively related to writing-task engagement which high-efficacy students and low-efficacy students both were engaged in task for teacher, but not for researcher it showed the significant interaction between self-efficacy and audience.

In most of the studies, self-efficacy was found to play a primarily role in predicting student writing performance. Students with learning disabilities were found to overestimate their ability to do writing tasks. Some studies found gender differences, with boys rating their confidence higher than girls do; however, its actual performance did not have any difference.

3. Rationale of the Study

Learners' success or failure in learning FL/SL also is influenced by how much their self-efficacy is. An understanding of the relationship between EFL learners' self-efficacy and their writing performance in a comparison between informative writing and comparative writing is important. Because it can guide teachers in working with those have high or low self-efficacy beliefs, also language learners by themselves since writing is a complex process, and competent writing is frequently accepted as being the last language skill to be acquired.

Investigating learner variables such as self-efficacy is important to learners, teachers, teacher educators as well as researchers. The results of such studies will be important for EFL learners since they will find out to what extent motivation and attitude can influence their learning outcome. They will detect that strong motivation and positive attitude help develop their academic achievement to a great extent. For teachers, they can check the appropriateness of theirs and their colleagues' performance regarding foreign language teaching and learning in general and their success in teaching writing in particular based on the research results. In addition, teachers can understand what their students expect from them and develop their pedagogical techniques through reflection on their actual teaching, which will in turn enhance the complex process of teaching and learning. Teachers will definitely understand how their own self-efficacy and their command in language skills help enhance their professional development. For teacher educators, the results of the present study are important since they will consider their student teachers' self-efficacy, and writing during their academic education. Teacher educators can incorporate some provisions to increase their student teachers' self-efficacy in becoming a committed and effective teacher in future, develop good resilience for their teaching career, overcome their stress, and increase their self-efficacy to help them improve their professional development. Finally, the study is important for researchers who will find out whether learners honestly reveal their ideas about their self-efficacy, and show their real

performance in writing. They will come up with what EFL learners actually do in their classes, and in turn, they can help EFL learners enhance their language learning based on their self-efficacy. Few people write spontaneously, and few feel comfortable with a formal writing task (Hamp-alayons & Heasley, 1987; Lavelle, 2006 as cited in Bandura, 2006). It presents a challenging presents, a challenging task for both native and nonnative speakers (Kroll, 1990 as cited in Zimmerman, 2000). While many studies have explored various aspects of teachers' perception about teaching writing (Moore, 2000 as cited in Zimmerman, 2000), few have considered the relationship between self-efficacy and writing performance. The present study aims to investigate EFL learners' self-efficacy as linked to their performance in their informative and comparative writing particularly.

4. Method

4.1 Participants

The participants of this study were 100 students from the Department of English, College of Humanities and Social Sciences at Islamic Azad university of Damavand in Iran; however, among this sample only 78 provided valid data. The participants came from different classes but with almost the same background. All the participants were adult female learners aged 20-60. These learners were learning English as their foreign language, and they were studying at the MA level. Therefore, it was supposed that they were aware of the fundamental principles of writing; also, they were familiar with the different types of writing. Therefore; first, they completed the self-efficacy questionnaire. Then, they have been asked to write two different writings: informative writing and comparative writing according to the given topics.

4.2 Instrumentation

As this study aims at probing the relationship between EFL learners' self-efficacy and their writing performance in informative and comparative writing, the needed instrument was the learners' own writings. As a result, there were writing about these topics of the two kinds of writing:

Informative: a writing task with the topic of "Global warming"

Comparative: a writing task with the topic of "Living on campus and living off campus"

Additionally, there was questionnaire related to the self-efficacy formulated by Holt, Rinehart and Winston (2004) gathered from International Reading Association, was used for the present study. The questionnaire included 16 items designed in 5-scaled Likert format to measure the participants' self-efficacy of writing tasks in English language. The scale ranged from 'strongly disagree'(1), 'disagree' (2), 'neutral or maybe' (3), 'agree'(4), 'strongly agree' (5). The participants were to choose one of these five options based on their understanding of the items also especial rubrics for evaluating learners' writing achievement. Results of these rubrics were categorized as a Likert scale numbered from 1 to 5 to measure the participants' writing scores in determined topics. The scale ranged from 'weak' (1), 'moderately weak' (2), 'average' (3), 'moderately strong'(4), 'strong' (5). The raters were to choose one of these five options based on especial rubrics for evaluating learners' writing while these were gathered from International Reading Association:

1- Comparing and Contrasting rubric which is designed by Holt, Rinehart and Winston.

2- Writing to Inform rubric which is designed by Holt, Rinehart and Winston.

Therefore, correct and appropriate attention to the factors of these rubrics focused in correcting the papers.

4.3 Procedure

At the start of the study, the three research tools were prepared: a questionnaire for measuring the participants' self-efficacy, a rubric for measuring the participants' informative writing performance, and a rubric for measuring the participants' comparative writing performance. The two rubrics and questionnaire were given to three different raters to achieve the inter-rater reliability. When the researcher became sure about their reliability and content validity, each of these research instruments were prepared and adapted to the participants carefully.

After that, the researcher administered the questionnaires to learners, who were selected based on the sampling considerations that the researcher mentioned earlier.

In the next stage, the researcher started presenting the questionnaires to the participants; that is, EFL learners. While collecting data based on the questionnaires, the researcher checked the accuracy of the data to exclude any sort of fake data and included the questionnaires which are filled out carefully by the participants in the study and excluded any fake data from the sample.

While the sample was filling in the questionnaires, the researcher monitored the data collection procedure very carefully, and tried to minimize any sort of intervention which might have destroyed the naturalness of the data. Besides, she patiently answered any questions the participants asked regarding the questionnaires, and offered clarifications whenever a participant could not understand the point of a question.

After that the sample were writing about the two topics: one informative (writing to inform) and the other comparative (comparing and contrasting) writing.

Finally, the researcher entered the collected data into SPSS software for the purpose of statistical analysis. The data elicited by the use of each of the research tools were analyzed to test the six research null hypotheses.

The data collected using self-efficacy questionnaires and learners' writing tasks. The results of the questionnaires of all learners compared with their own informative writing grades in order to investigate the relationship between learners' self-efficacy and the results of their informative writing performance. Then the results of the questionnaires of all learners compared with their own comparative writing grades in order to investigate the relationship between learners' self-efficacy and the results of their comparative writing performance. Also each learner's both writings (informative writing and comparative writing) compared with their writing skill. The relationship between components of learner's self-efficacy and their informative writing and comparative writing founded. After that, these results compared in order to arbitrate if there is any difference between the results of these findings. The data entered into SPSS and have computed to determine whether there is a correlation between self-efficacy and learners' performance in their informative and comparative writing.

5.1 Results

Before any inferential on the different test scores, it is necessary to see some basic descriptive statistics of the scores for informative & comparative writing skills. The following table, which is famous as five-number summary, provides basic descriptive statistics for these test scores.

Table 5.1
Descriptive Statistics

	Mean	95% CI for Mean		Median	Std. Deviation	Minimum	Maximum
		LB	UB				
Comparing and Contrasting	33.68	31.38	35.98	30.00	10.22	22.00	49.00
Writing to Inform	32.85	30.76	34.93	28.00	9.23	23.00	49.00

5.2 Reliability of the Self-Efficiency Questionnaire Based on Cronbach's ALPHA

For the self-efficiency questionnaire, we have the detailed grade of the 78 respondents. So we could compute the Cronbach's alpha which is formally used as a (n) (lower bound) estimate of the reliability of a questionnaire. The following table provides its value for the mentioned test questions:

Table 5.2
Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.732	.766	16

This shows that the used questionnaire has an acceptable reliability and measures what it has been supposed to measure.

Here are some descriptive statistics regarding this questionnaire.

Table 5.3
Scale Statistics

Mean	Variance	Std. Deviation	N of Items
57.53	44.720	6.687	16

5.3 Reliability of R1 Based on Cronbach's ALPHA

For the R1 Test (Comparative Writing) we have the detailed score of the 78 respondents graded by three different referees. We could use this information to compute the Cronbach's alpha which is formally used as a (n) (lower bound) estimate of the reliability of a Test. Here we used Split-Half method, which split the grades into two parts graded by one grader, and examined the correlation between the parts. First, take a look at the test for grader 1 and 2

Table 5.4
Reliability Statistics

Cronbach's Alpha	Part 1	Value	.900
		N of Items	10 ^a
	Part 2	Value	.841
		N of Items	10 ^b
	Total N of Items		20
Correlation Between Forms			.973
Spearman-Brown Coefficient	Equal Length		.986
	Unequal Length		.986
Guttman Split-Half Coefficient			.982

a. The items are Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, Q10.

b. The items are Q21, Q22, Q23, Q24, Q25, Q26, Q27, Q28, Q29, Q210.

As we can see the computed value of alpha using both graders is high, 0.90 by grader 1 and 0.841 by grader 2. This shows a reliable test. Since the inter-correlation by Guttman Split-Half Coefficient is high, too, equal to 0.982, we conclude that the two gradings has been in concordance.

Following the same procedure but this time using grader 1 and 3, we see that the results are nearly the same.

Table 5.5
Reliability Statistics

Cronbach's Alpha	Part 1	Value	.900
		N of Items	10 ^a
	Part 2	Value	.833
		N of Items	10 ^b
	Total N of Items		20
Correlation Between Forms			.943
Spearman-Brown Coefficient	Equal Length		.971
	Unequal Length		.971
Guttman Split-Half Coefficient			.964

a. The items are Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, Q10.

b. The items are Q31, Q32, Q33, Q34, Q35, Q36, Q37, Q38, Q39, Q310.

In the end, we could say that the test really measures the scale it has been created to measure since the reliability of the test questions is high, using Cronbach's Alpha, and the grading has been in concordance.

5.4 Reliability of R2 Based on Cronbach's ALPHA

For the R2 Test (Informative Writing) we have the same information, and we then follow the same analysis as before. First, go over Reliability analysis of the informative writing test using grader 1 and 2 by split-half method.

Table 5.6
Reliability Statistics

Cronbach's Alpha	Part 1	Value	.790
		N of Items	10 ^a
	Part 2	Value	.804
		N of Items	10 ^b
Total N of Items			20
Correlation Between Forms			.962
Spearman-Brown Coefficient	Equal Length		.981
	Unequal Length		.981
Guttman Split-Half Coefficient			.981

a. The items are Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8, Q9, Q10.

b. The items are Q21, Q22, Q23, Q24, Q25, Q26, Q27, Q28, Q29, Q210.

We see that the test is reliable since the Cronbach's alpha is high in both grading. The inter-reliability using Guttman Split-Half Coefficient is high (equals 0.981), which means the grading has been in concordance with each other. Now for grader 2 and 3:

Table 5.7
Reliability Statistics

Cronbach's Alpha	Part 1	Value	.804
		N of Items	10 ^a
	Part 2	Value	.778
		N of Items	10 ^b
Total N of Items			20
Correlation Between Forms			.938
Spearman-Brown Coefficient	Equal Length		.968
	Unequal Length		.968
Guttman Split-Half Coefficient			.967

a. The items are Q21, Q22, Q23, Q24, Q25, Q26, Q27, Q28, Q29, Q210.

b. The items are Q31, Q32, Q33, Q34, Q35, Q36, Q37, Q38, Q39, Q310.

The results are repeated which show both a reliable test and a reliable grading.

5.5 Tests of Normality

The next table provides information on the normality assumption test for the distribution of scores on writing skills.

Table 5.8
Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Comparing and Contrasting	0.210	78	0.000	0.828	78	0.000
Writing to Inform	0.239	78	0.000	0.824	78	0.000

a. Lilliefors Significance Correction

We can interpret, with the confidence level of 95%, that the scores are NOT normally distributed in each writing skill since the p-value is less than 0.05 in both.

Now, if we add the two scores of comparative and informative skills, we will have the writing skills scores of the students. The following table provides descriptive statistics for the writing skills of the students. The range of scores would be from 1 to 100.

Table 5.9
Descriptive Statistics

	Mean	95% CI for Mean		Median	Std. Deviation	Minimum	Maximum
		LB	UB				
Writing Skill	66.53	62.17	70.88	58.00	19.30	45.00	98.00

We can see that almost all the statistics is the sum of each writing statistics.

5.6 Descriptive Statistics for Self-Efficacy Questionnaire

The frequency tables for the responses in each question have already been generated. The following bar graph shows the average of responses in questions from 1 to 16.

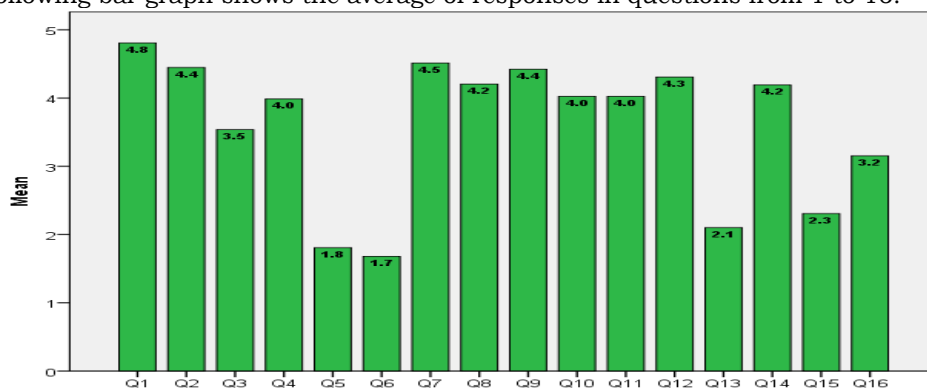


Figure 5.1

The Bar graph for mean of Components of Self-Efficacy

As you can see, question 6 has received the least positive response. The average response is close to Disagree. On the other hand, question 1 has received the most positive response. The average response is close to strongly agree.

5.7 Inferential Statistics

First, let us study the relation between the comparative writing score and self-efficacy score. The correlation is high and statistically significant at 0.01 level that is with 99% confidence.

Table 5.10
Pearson Correlations

	Comparing Contrasting	and	SE
Comparing Contrasting	1		.724** .000
SE			1

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

The same can be said about informative writing score and self-efficacy score

Table 5.11
Pearson Correlations

		Writing to Inform	SE
Writing to inform	Correlation	1	.713**
	Sig. (2-tailed)		.000
SE	Correlation		1
	Sig. (2-tailed)		

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

Therefore, the hypotheses

H03: Self-efficacy does not have any relationship with EFL learners' comparative writing.

H04: Self-efficacy does not have any relationship with EFL learners' informative writing.

are rejected with 99% confidence.

Moving on to each component of self-efficacy score, the following table shows the estimated Pearson correlation coefficient for each component of self-efficacy with the informative and comparative writing score.

Table 5.12
Pearson Correlations

		Writing to Inform	Comparing and Contrasting
Q1	Correlation	.403**	.434**
	Sig. (2-tailed)	.000	.000
Q2	Correlation	.527**	.574**
	Sig. (2-tailed)	.000	.000
Q3	Correlation	.914**	.834**
	Sig. (2-tailed)	.000	.000
Q4	Correlation	.808**	.740**
	Sig. (2-tailed)	.000	.000
Q5	Correlation	-.682**	-.738**
	Sig. (2-tailed)	.000	.000
Q6	Correlation	-.775**	-.821**
	Sig. (2-tailed)	.000	.000
Q7	Correlation	.552**	.600**
	Sig. (2-tailed)	.000	.000
Q8	Correlation	.718**	.764**
	Sig. (2-tailed)	.000	.000
Q9	Correlation	.605**	.655**
	Sig. (2-tailed)	.000	.000
Q10	Correlation	.708**	.661**
	Sig. (2-tailed)	.000	.000
Q11	Correlation	.795**	.791**
	Sig. (2-tailed)	.000	.000
Q12	Correlation	.755**	.804**
	Sig. (2-tailed)	.000	.000
Q13	Correlation	-.796**	-.748**
	Sig. (2-tailed)	.000	.000
Q14	Correlation	.682**	.738**
	Sig. (2-tailed)	.000	.000
Q15	Correlation	-.834**	-.803**
	Sig. (2-tailed)	.000	.000
Q16	Correlation	.863**	.839**
	Sig. (2-tailed)	.000	.000

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

Obviously, all the questions have significant relationship with both the informative and the comparative writing scores at 0.01 level. Moreover, the relationship of some of the questions is negative for example question 5. The important observation is that wherever the relationship is negative on comparative writing, it is negative with informative writing as well.

These results reject the following null hypotheses:

H05: There is not any relationship between components of self-efficacy and informative writing.

H06: There is not any relationship between components of self-efficacy and comparative writing.

5.8 Regression

Having computed the average score of the three raters for each writing task, we have a reliable scale for both comparative and informative writing skills. The following table shows that Self-efficacy scores are significantly correlated with both writing tasks. The writing tasks are significantly correlated as well.

Table 5.13
Correlations

		Self-Efficacy	Comparative Writing	Informative Writing
Self-Efficacy	Pearson Correlation	1	.868**	.787**
	Sig. (2-tailed)		.000	.000
Comparative Writing	Pearson Correlation	.868**	1	.966**
	Sig. (2-tailed)	.000		.000
Informative Writing	Pearson Correlation	.787**	.966**	1
	Sig. (2-tailed)	.000	.000	

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

Using this correlation, we can predict the writing scores using self-efficacy by applying regression techniques. First, we remove the two-outlier cases (77, and 78) which are away from the cluster of data.

The following shows the results of regression of self-efficacy on comparative writing. The ANOVA table shows that the linear regression is significant with 95% confidence since the significant level in column Sig. is less than 0.05.

Table 5.14
ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1472.241	1	1472.241	1134.656	.000 ^b
	Residual	96.017	74	1.298		
	Total	1568.258	75			

a. Dependent Variable: Comparative Writing

b. Predictors: (Constant), Self-Efficacy

Coefficients table gives the regression coefficients to be used for prediction purposes. Using the table, we see that both intercept (Constant) and slope (Self-Efficacy) of the regression line are significant since both significant levels are less than 0.05.

Table 5.15
Coefficients ^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-2.878	1.374		-2.094	.040
	Self-Efficacy	.793	.024	.969	33.685	.000

a. Dependent Variable: Comparative Writing

The model summary table shows the R-Square which measures the goodness of fit of the model. Since it is close to one, R-Square is equal to 0.939, the model great for prediction.

Table 5.16
Model Summary ^b

Model	R	R Square	Std. Error of the Estimate
1	.969 ^a	.939	1.1391

a. Predictors: (Constant), Self-Efficacy

b. Dependent Variable: Comparative Writing

But a regression model is only good when the residuals satisfy two conditions, they have to be distributed normally and have equal variance. These conditions are met after investigating the residuals using the following histogram of residuals and plot residual versus predicted values.

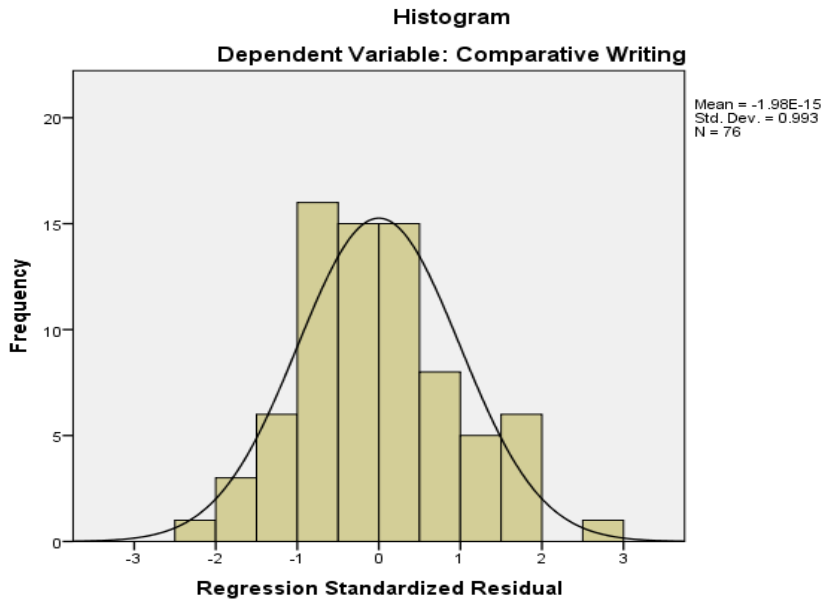


Figure 5.2

The Histogram for Regression Standardized Residual Related to the Comparative Writing

The histogram of residuals shows normality. The normal curve nicely fits the frequency distribution of the residuals. The scatter plot of the residuals versus predicted values

shows no pattern, and the dots are distributed in a rectangular form. So the residual variance seems to be constant. Overall, the model is good for prediction purposes.

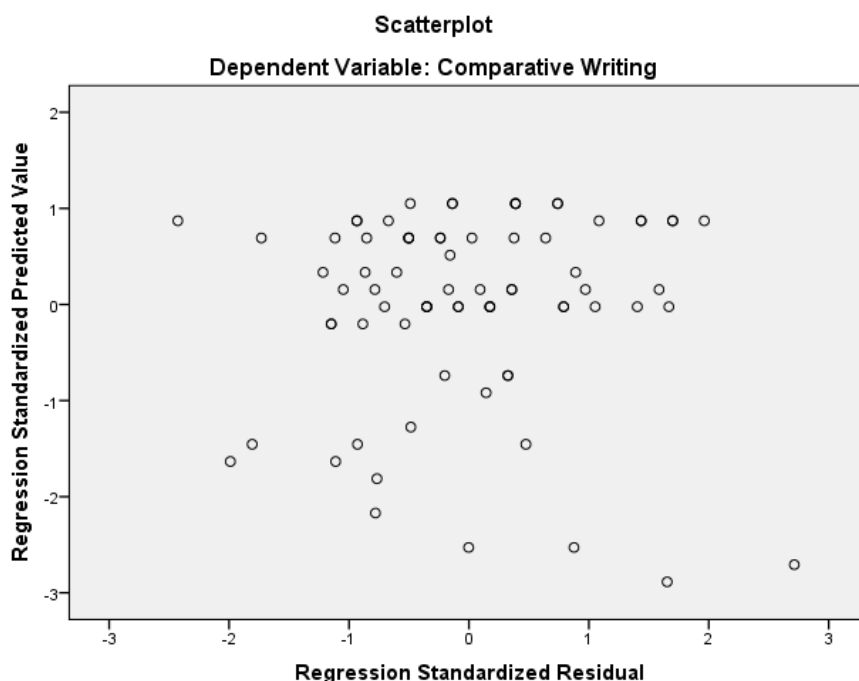


Figure 5.3

The Scatter Plot for Regression Standardized Residual Related to the Comparative Writing We repeated the same analysis for informative writing. The following table shows the ANOVA results concluding the significance of linear regression with 95% confidence.

Table 5.17
ANOVA ^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	999.479	1	999.479	460.402	.000 ^b
	Residual	160.645	74	2.171		
	Total	1160.124	75			

a. Dependent Variable: Informative Writing

b. Predictors: (Constant), Self-Efficiency

Both intercept and slope are significant since significant levels given in Sig. column are less than 0.05.

Table 5.18
Coefficients ^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.361	1.778		3.016	.004
	Self-Efficacy	.653	.030	.928	21.457	.000

a. Dependent Variable: Informative Writing

The model summary shows a high value for R-Square, 0.862, meaning that 86% of the variation in the scores can be determined using the estimated regression line.

Table 5.19
Model Summary ^b

Model	R	R Square	Std. Error of the Estimate
1	.928 ^a	.862	1.4734

a. Predictors: (Constant), Self-Efficacy

b. Dependent Variable: Informative Writing

Based on the histogram of the residuals, they seem to be normally distributed.

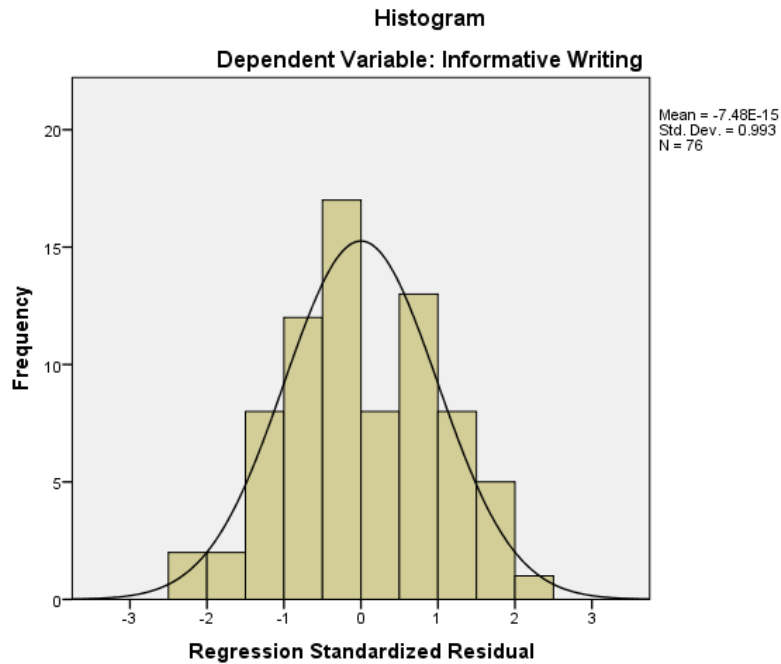


Figure 5.4
The Histogram for Regression Standardized Residual Related to the Informative Writing
The residual variance also seems to be constant.

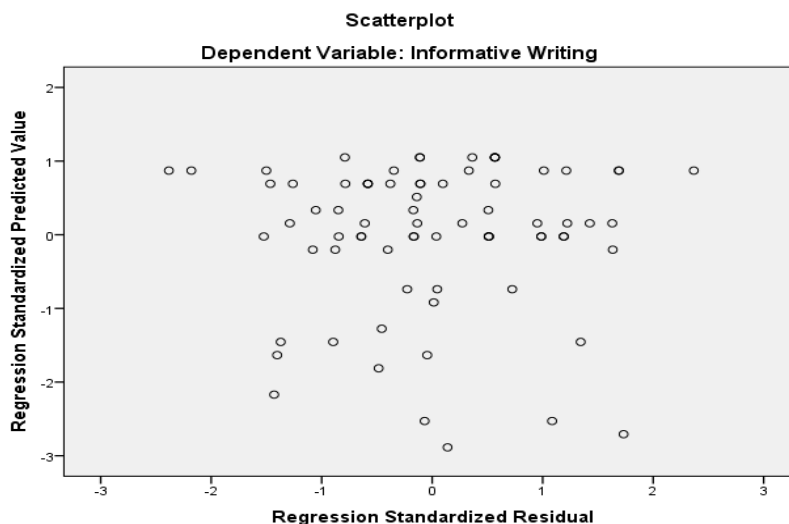


Figure 5.5
The Scatter Plot for Regression Standardized Residual Related to the Informative Writing

The model is good for prediction purposes since it is significant with high goodness of fit measure and befitting the pre-requisite requirements.

Since both writing scores are highly correlated with the self-efficiency score, we expect their summation to be highly correlated as well. This can be seen from the following correlation table. The case numbers are 76 since we have removed two outlier observations.

Table 5.20
Correlations

		Total Writing Score	Self-Efficiency
Total Writing Score	Pearson Correlation	1	.957**
	Sig. (2-tailed)		.000
	N	76	76
Self-Efficiency	Pearson Correlation	.957**	1
	Sig. (2-tailed)	.000	
	N	76	76

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

Moving on to the regression results, the following ANOVA table approves the significance of regression line. As we can see, the Significance level under Sig. column is less than 0.05 which implies the significance of the regression line at 95% confidence.

Table 5.21
ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4897.807	1	4897.807	806.116	.000 ^b
	Residual	449.610	74	6.076		
	Total	5347.417	75			

- a. Dependent Variable: Total Writing Score
- b. Predictors: (Constant), Self-Efficacy

The estimated coefficients show that the constant term is not significant and can be removed from the regression line (Sig. is not less than 0.05).

Table 5.22
Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.483	2.974		.835	.406
	Self-Efficacy	1.446	.051	.957	28.392	.000

- a. Dependent Variable: Total Writing Score

Thus, we remove the constant term and repeat the estimation process. The following table shows the estimation of the model parameters.

Table 5.23
Coefficients^{a,b}

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	Self-Efficacy	1.488	.005	1.000	307.995	.000

- a. Dependent Variable: Total Writing Score
- b. Linear Regression through the Origin

The R-Square of the model is 0.999, which is really high reminding that it can reach 1 representing perfect linear relation between the two variables.

Table 5.24
Model Summary^{c,d}

Model	R	R Square ^b	Std. Error of the Estimate
1	1.000 ^a	.999	2.4599

- a. Predictors: Self-Efficacy
- b. For regression through the origin (the no-intercept model), R Square measures the proportion of the variability in the dependent variable about the origin explained by regression. This CANNOT be compared to R Square for models which include an intercept.
- c. Dependent Variable: Total Writing Score
- d. Linear Regression through the Origin

The histogram of the residuals shows normality. This assumption is verified through inspecting the following graph.

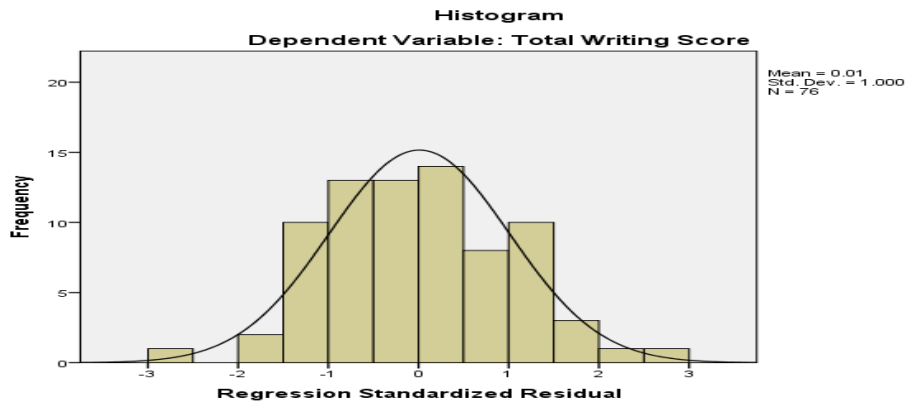


Figure 5.6
Histogram for Regression Standardized Residual Related to Total Writing Score
The Residuals versus Predictions shows no specific pattern and is distributed in a rectangular form which approves the constant variance of the residuals.

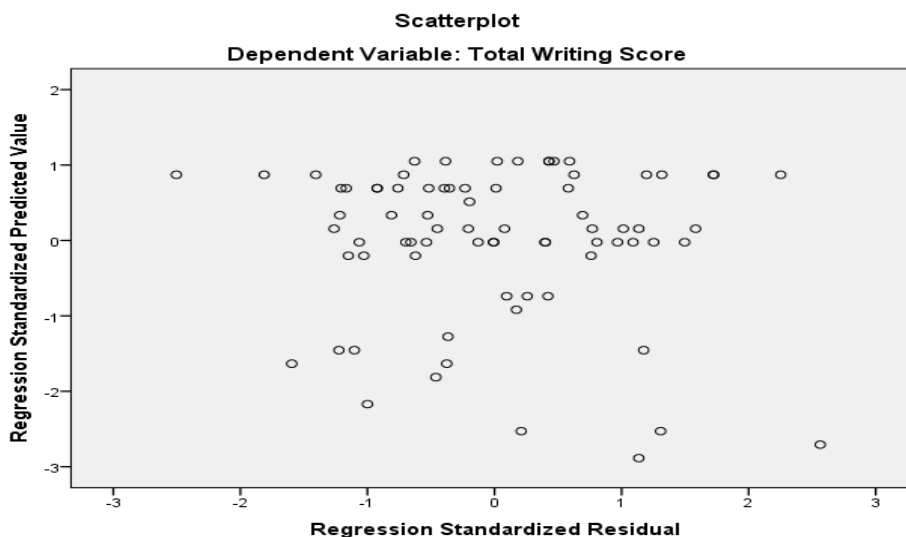


Figure 5.7
The Scatter Plot for Regression Standardized Residual Related to the Total Writing Score

Overall, the model is good for prediction purposes.

6. Discussion

This study attempted to investigate a key factor that affects writing performance, i.e. self-efficacy. Schunk and Zimmerman (2007) believed that the effects of self-efficacy may depend on student's conceptions of ability. A learner with high self-efficacy is the learner who wants to achieve a goal and who is willing to invest time and effort in reaching that goal because believes that he can. The same thing happened in the present study. Since, learners with higher self-efficacy gained the higher writing achievement. So, there are relationships between learners' writing achievements whether informative or comparative writing with their own self-efficacy, also the components of self-efficacy are related with

learners' writing performance in both informative and comparative ones. Because, those learners who gained the higher score in the self-efficacy questionnaire which showed that their self-efficacy in a specific item is higher than the others, also acted better in their informative writing and comparative writing, too.

According to many researchers (Anderman, 1992; Zimmerman & Kitsantas, 1999; Shell, Colvin & Bruning, 1995; Bandura, 1997; Evans, 1991; Spaulding, 1995; and Pajares & Johnson, 1996), the relationship between these two factors has been emphasized. Graham, Schwartz, and MacArthur (1993) (investigated the knowledge of writing and the composing process, attitude toward writing, and self-efficacy for students with and without learning disabilities). Pajares and Valiante (1999) attempted to find out whether middle school students' writing self-efficacy beliefs make an independent contribution to the prediction of their writing competence and to explore grade level and gender differences in writing self-beliefs. Bandura (1977) ascertained that self-efficacy plays an important role in language learning. Zimmerman and Kitsantas (1999), found that self-efficacy enhance writing skill significantly. Putting all such studies together, it is concluded that it is the self-efficacy in language learning specially in writing skill has its own place. As Page-Vote and Graham (1999) maintained, student's writing self-efficacy was not influenced by goal setting or strategy use.

The present study was quite harmonious with some previous studies. Different aspects of self-efficacy have been studied such as the response format in self-efficacy: greater discrimination increase prediction (Pajares & Valiante, 2001), goal setting and self-efficacy during self-regulated learning (Schunk, 1990) development of self-efficacy and outcome expectancy for reading and writing: a regression and causal modeling approach (Shell, Morphy, & Bruning, 1989); Zimmerman and Kitsantas (1999) focusing on the bearing of self-efficacy on the writing skill, which are convergent with the present study as well as those done by Page-Voth & Graham (1999) and Graham & Harris (1989b), focusing on self-efficacy related to learners with learning disabilities.

Some studies found that more emphasis is needed on fostering positive motivational beliefs, even when achievement is low (Shell, Colvin, & Bruning, 1995). Students who lack confidence in their writing abilities may perform better if they perceive the teacher's psychological presence (Spaulding, 1995). "children must have positive experiences with reading and writing activities and they must understand that they can be successful in these activities through their own efforts" (Bruning, Shell, & Morphy, 1987).

Some scholars believed that longitudinal research on self-efficacy is needed. Further investigations point into gender differences in academic self-belief (Pajares & Valiante, 1999). Additionally, Graham Sschwartz and MacArthur (1993) emphasized multiple-methods assessment; specific methods designed for assessing children's self-efficacy are needed. On the other hand, some researchers claimed that there is a need to attend to student's perceived self-efficacy during teaching (Wong, Butler, Ficzer, & Kuperis, 1997). Remediating writing difficulties will be difficult if student's perceived self-efficacy is not taken into account. Also, teachers should take care to prevent the development of student's negative perceptions (Pajares & Johnson, 1996).

According to Evans: "Educators should place a much greater emphasis on the relationships between motivational and affective factors with strategy use" (Evans, 1991, p.9) so, they could increase their students self-efficacy as well and it will increase their performance, too. Pajares and Valiante (1999) found that schools need to work on increasing student's competence and confidence.

7. Implications of the Study

The present study has some pedagogical implications for various target groups. For researchers, it will be interesting to explore the sources of discrepancy in the results. Axiomatically, when language learners have high self-efficacy in learning a language, they will have better or higher language achievements. As for the present study, the participants have shown acceptable results. Some future researchers with some other subjects in some other settings can explore more about the nature of the most complicated factor involved in language learning; that is, self-efficacy.

For EFL teachers, the results of the present study will have some specific and tangible implications. Teachers will find the close link between the self-efficacy and writing performance since in the present study these two variables have shown high correlation together. Teachers will conclude that self-efficacy is quite linked to writing performance. When they can increase their student's self-efficacy in learning a foreign language either instrumentally or integratively, they can enhance their students' language achievement as a whole and particularly in their writing skill, and as special items about their informative writing and comparative writing. EFL teachers also infer from the results of this study that there are many factors which might influence self-efficacy and informative writing and comparative writing weakly or strongly. They may either look for the causal relationship between such factors or they may look for correlational relationship between these variables.

For language learners, the results of the present study have some implications. EFL learners know that self-efficacy is an important factor in language learning. They should know the wide applicability of a foreign language or English language specifically, then to be determined and decided enough to start learning a foreign language. When they have high self-efficacy toward learning English language it will be more and more positive, and their performance in the target language will be greatly enhanced. It will have some more implications for EFL learners in that they should account for many other variables beyond self-efficacy which are responsible for their weak or good performance in language skills-based activities in general and writing performance in particular, specially informative and comparative writing.

In most cases, language learners have higher self-efficacy because of the attraction and familiarity of the topic they write. It is important to choose stimulating ideas, attracting, and familiar topics to motivate language learners to write enthusiastically. Material developers should increase self-efficacy among language learners along an educational term.

8. Conclusion

It can be concluded from the present study that self-efficacy and writing performance in the case of informative writing and comparative writing are two interrelated and interdependent variables which greatly influence the process of language learning. As a matter of fact, all the other factors engaged in EFL learning achievement to some extent presuppose self-efficacy and without adequate self-efficacy, even people with the most outstanding abilities cannot achieve long-term goals. High self-efficacy also can make up for significant deficiencies in both individuals' language ability and learning conditions (Bandura, 1977).

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