A Study of Metacognitive-Strategies-Based Writing Instruction for Vocational College Students

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Abstract

Effective English writing has long been a challenge in English language teaching. With the development of cognitive psychology, metacognition has drawn more and more researchers' attention and provides a new perspective for EFL writing. Metacognitive theory mainly includes metacognitive knowledge and metacognitive strategy. Among all the learning strategies, metacognitive strategy is a higher-order executive skill which includes planning, monitoring and evaluating. Once learners have a good command of metacognitive strategy, they will become more independent and autonomous and will be more capable of planning, monitoring and evaluating their learning process and thus become efficient learners.

However, the study of metacognitive strategies-based writing instruction for vocational college students has been neglected for the past years. The author, therefore, carried out an empirical study to investigate the effect of metacognitive strategy training on students' writing performance in the hope of finding an optimal teaching approach for English teachers of vocational colleges. This teaching approach really embodies the teaching idea "student-centered" and is targeted to foster students' metacognitive strategy, monitoring and evaluating abilities in English writing.

Keywords: Metacognitive strategies, CALLA Training Mode, Vocational College Students

1. Literature Review

Metacognitive strategy is a term used in information-processing theory to indicate an "executive" function and it refers to the strategy that is used by learners as the means to manage, monitor and evaluate their learning activities. To put it simply, metacognitive strategies are skills, approaches, and thinking and actions learners use to control their cognition and learning process. Researchers (Brown, 1983; O'Malley & Chamot 1990; Cohen, 1998) of FL /SL learning shared similar view with regard to definition and function of metacognitive strategies. They all emphasized that the essential nature and general function of metacognitive strategies is planning, organizing, and evaluating one's own learning (Wu Hongyun, 2004).

O'Malley and Chamot (1990) pointed out that metacognitive strategies are "higher order executive skills". O'Malley and Chamot's (2001:8) definition for metacognitive strategies is that "metacognitive strategies involve thinking about the learning process, planning for learning, and self-evaluation after the learning activity has been completed". Based on information -processing theory and procedural and declarative knowledge, O'Malley and Chamot (1990) classified metacognitive strategies into three categories: (1) planning, (2) monitoring, (3) evaluation.

According to the definitions and classifications of metacognitive strategies listed above, it is clear that O'Malley and Chamot's definition and classifications are more accurate and more widely accepted. Therefore, O'Malley and Chamot's definition and classifications are adopted as the basis of the research in this study. The following are more detailed classifications of O'Malley and Chamot's theory.

O'Malley and Chamot held that "planning" is a procedure for conflict resolution among competing action statements that applies to the conditional clause in the production system. In other words, "planning" involves in directing the course of language reception and production. "Planning" includes five strategies: (1) Advance

organizers; (2) Directed attention; (3) Selective attention; (4) Self-management; (5) Functional planning.

"Monitoring" is a response to ambiguity in comprehending language where an individual selects a best guess of the message's meaning based on available meaning. "Monitoring" can also be described as being aware of what one is doing. There is only one strategy in this subcategory: (6) Self-monitoring.

"Evaluation" is mental process conscious inspection of learning outcomes, one's own progress in the new language. This category consists of only one strategy: (7) Self-evaluation.

O'Malley and Chamot (2001) concluded that metacognitive strategies involve thinking about the learning process, planning for learning, monitoring the learning tasks, and evaluating how one has learned.

The first type, planning, involves two kinds of strategies: advance organization and organizational planning.

The next type, self-monitoring involves checking, verifying or correcting one's comprehension or performance in the course of the language task. It involves more specific metacognitive strategies as follows: (1) Comprehension monitoring; (2) Production monitoring means checking, verifying or correcting one's language production. It is primarily applied in writing and speaking; (3) Auditory monitoring; (4) Visual monitoring; (5) Styling monitoring; (6) Strategy monitoring; (7) Plan monitoring and (8) Double-checking monitoring.

The last type, self-evaluation subsumes five metacognitive strategies. They are: (1) Production evaluation; (2) Performance evaluation; (3) Ability evaluation; (4) Strategy evaluation and (5) Language evaluation.

2. Methodology

The author will unfold an empirical study of metacognitive strategies-based writing instruction in EFL writing.

2.1 Hypotheses and Research Objectives

Built upon the literature review, the study asks the following three research questions:

(1) Does metacognitive strategies-based writing instruction effectively enhance students' positive writing experience?

(2) Does metacognitive strategies-based writing instruction play a positive role in students' actual writing performance?

(3) Which has greater effect on students' actual writing performance, metacognitive strategies-based writing instruction or students' language ability?

Based on these research questions, we put forward three kinds of research hypotheses that metacognitive strategies-based writing instruction will enhance students' positive writing experience and this positive effect will produce a positive impact on students' writing performance. It is also assumed that metacognitive strategies-based writing instruction will have greater effect on students' writing performance than their language ability.

2.2 Subjects

The subject samples were randomly chosen from the students of the year of 2008 who consisted of 86 first-year non-English majors from two natural classes in Laiwu Vocational College. (This kind of Sample-Choosing is called Cluster Sampling according to Statistics.) One class of 44 students with 36 females and 8 males comprised the experimental group; another class of 42 students with 33 females and 9 males served as a control group. In order to control the elements of teaching research, the researcher taught both the experimental and control groups. The experimental groups (EG) received metacognitive strategies-based writing instruction whereas the control group (CG) received only the routine writing instruction---Product Approach. In order to guarantee the reliability and validity of the experiment, both EG and CG were not informed about the experiment.

2.3 Instruments

In this empirical study, the author applied comparatively various instruments which included three writing tests; writing journals and interview. The details are presented as follows:

2.3.1 Writing Tests

All subjects from the experimental and control groups were required to take one pre-test, one mid-training test (post-test one) and one post- writing test (post-test two) to determine whether there were gains in writing performances over a semester. The test provided data for measuring subjects' writing performance.

A pre-test was carried out before the experiment so as to confirm that the writing abilities of these two classes were at the same level. Two post-tests were carried out to test the students' writing performances to see if there were gains after training.

The three tests were in-class writing tests in which students were given respectively 50 minutes to plan, write and revise a piece of writing within 120 English words. After their writings were handed in, they were checked by two teachers who have been teaching English for more than eight years and have been trained on the standard of the writing scores. Each of the writing was calculated by both of the two teachers and the scores of each of the writing were calculated by the mean scores of the two teachers.

2.3.2 Writing Journals

Keeping writing journals is an effective way to evaluate students' writings in that they are able to reflect on their progress and develop more accurate self-assessment skills. After finishing each piece of writing, students were required to write down their writing process and their writing experiences according to a self-prompting card.

2.4 Procedures

This is an experimental study of metacognitive strategies-based writing instruction for 86 non-English majors in Laiwu Vocational College. It covered one semester, from March 3rd to July 13th of the year 2008.

2.4.1 Pre-test

All subjects of the two classes were required to take a pre-test at the very beginning of the semester without being informed of the purpose of the experiment so as to confirm that the writing abilities of these two classes were really at the same level. The test was an in-class writing test in which students were given 50 minutes to plan, write and revise a piece of writing within 120 English words. After their writings were handed in, they were checked by both teachers who had been teaching English for more than eight years and had been trained on the standard (taken from PETS) of the writing scores. The full scores of the writing are 20. Each of the writing was calculated by the two teachers and the scores of each of the writing were calculated by the mean scores of the two teachers.

2.4.2 The Training Program

This is an experimental study that covered one semester, from March 3rd to July 13th of 2008. Only experimental group received explicit instruction on metacognitive writing strategies while control group received routine writing practice----Product Approach.

In this part, the author offered a detailed account of the training which consists of three contents: raising students' metacognitive knowledge and awareness; enriching students' metacognitive experiences and the detailed training procedures.

2.4.2.1 Developing Students' Metacognitive Knowledge &Raising Metacognitive Awareness

To begin with, we provided a list of questions for self-asking. The questions concern three aspects: individual writer' cognitive level and writing level; the comparison between self and other students' writings; and the factors that affect writing level and writing activities.

Secondly, we helped the students to get understanding of writing tasks. We informed the students of the nature of writing; the basic writing knowledge and methods; then we helped them analyze the writing purposes and the writing requirements of a concrete writing task.

As for the knowledge about writing metacognitive strategies, we mean the knowledge about cognitive and metacognitive writing strategies and the knowledge about how to optimize the utilization of these strategies. The knowledge about learning methods is the most valuable for students. Therefore, we integrated the strategies training into our class setting. First, we provided students a series of necessary learning strategies and explained explicitly how to use them in specific tasks and why they are important for learning writing; then came to the cued practice in which students were exposed to a lot of writing activities and were supposed to finish writing tasks by using these strategies; after that, students were required to evaluate their application of strategies, their products, process and so on.

2.4.2.2 Enriching Students' Metacognitive Experience

Metacognitive experience in writing refers to cognitive experience and emotional experience which occur during the writing process. As for cognitive experience, we helped students to ignite and adjust it by self-questioning. For example, students can ask themselves questions like "Am I really clear about the topic? Is my train of thought clear? Is my writing well-organized and logical? Are the words properly used? Have I taken readers into account? Are the strategies useful?" and so on.

Emotional experience can be strengthened by arousing students' writing motivation and interest as well as bringing their passion and desire into play. Writing passion is the source of good writing products, so the author

tried every means to arouse students' writing desire and passion which included eliciting students to talk about whatever they like; offering chances to have free talk. What's more, the author adopted free debating for students to compete for expressing their ideas or feelings; provided beautiful essays, good music, classic movies to mold their temperament and inspired their writing aspiration.

2.4.2.3 The Implementation of Metacognitive Strategies-Based Writing Instruction

As we have discussed in previous part, metacognitive strategy consists of three components: self-planning; self-monitoring and self-evaluation. In this stage, we carried out our training in real class settings by integrating the three components into CALLA mode of teaching strategy.

Preparation In the phase of preparation, the researcher first helped students to identify what they knew about the contents and strategies, what gaps in prior knowledge should be addressed. Elaboration, advance organization and selective attention are most commonly taught and practiced in this stage. Then the teacher offered metacognitive writing strategies to students and explained the importance of it and helped students to set positive, practical, feasible goals.

Presentation In this phase, the metacognitive strategies in writing were presented and explained to students in English which were supported by contextual clues. The researcher first handed out a list of the metacognitive strategies in writing including self-planning, self-monitoring and self-evaluation. Then, the characteristics, usefulness, and applications of the strategy were explicitly explained through examples. The key point is that the researcher should make sure that students comprehend the new strategies so that they can practice the strategies meaningfully in the next phase. Therefore, the teacher should explicitly explain how, when and where to apply these strategies in writing which help facilitate strategy transferring.

The author integrated metacognitive strategy training into each regular course and practiced by doing specific language tasks including vocabulary and reading. In each reading class, the author not only instructed the students reading skills but also gave great importance to writing skills and encouraged students to employ the writing skills to their own writings. By integrating strategy use and instruction into regular language classes, can learners be provided with hand-on practice and reinforcement of strategy use (Cohen, 1988:91) and thus can help learners become more efficient in their efforts to learn as well as can provide a meaningful way to focus one's teaching efforts.

Practice Students were offered opportunity of practicing new strategies with authentic writing activities in this stage. They were required to recall writing strategies including cognitive and metacognitive ones that were presented in the presentation stage; then students began to plan their writings according to self-planning strategy.

Self-planning included the following writing activities: students examined and identified the topic, considered readers, gathered information, brainstormed, made an outline and discussed the writing. During writing process, students were encouraged to employ self-monitoring strategy which helped students to assess their ongoing writing and take some sort of remedial action when they encountered some difficulties. In order to help students to assess and revise their writings during the process and avoid writing blindly and randomly, a detailed self-monitoring card.

Evaluation In this phase, students were asked to check the level of their writings so that they could well understand what they had learned about new strategies, skills and what needed to be reviewed. Self-evaluation activities included self-questioning; debriefing discussions after strategies practice; learning Blogs in which students recorded the results of their learning strategies applications; checklists of strategies used; and open-ended questionnaires in which students expressed their opinions about the usefulness of particular strategies. We carried the evaluation activities through three stages: self-evaluation, peer-evaluation and teacher-evaluation.

Expansion This phase provides the subjects with opportunities to exercise higher order thinking skill (Chamot and O'Malley:1990). In this phase, students were inspired to apply the strategies that they thought to be the most effective; to transfer new strategies to different context; and to devise their own individual combinations and interpretations of metacognitive strategies. This phase aimed to help students to practice, consolidate, evaluate, automate and internalize the strategies that they just learned which mainly include self-planning, self-monitoring and self-evaluation.

2.4.3 Post-tests

Many researchers (Polio, 1997, cited by Coming & Riazi 2000:61; Schoonen 2003:194) stated the limitations of one writing performance as the subjects' writing level. Therefore, the author employed two post-tests to evaluate the subjects' writing performance. About half a semester later, both control and experimental groups were

required to take a post-test writing. And then after the experiment was finished, both control and experimental groups were required again to take another post-test writing. The topics were selected from PETS 3. The two writings were revised by the same teachers who had evaluated the pre-test writing.

3. Data Analysis

In order to investigate the effectiveness of the training, the author analyzed the scores for the following instruments in the quantitative analysis based on the above empirical study. The findings are as follows.

3.1 Findings of Pre-test

We adopted SPSS.10.0 to make an analysis of the T-test of pre-test writing performance between CG (control group) and EG (experimental group) and presented the data in table. As is shown in table 1, we can learn that there is no significant difference in pre-test writing performance between experimental group and control one (t=-.0894, p=.374>.05); what's more, the mean score of the experimental group is a little lower than that of the control group. Based on the data, we can conclude that the classification of experimental group and control group is reasonable and effective.

3.2 Findings of Post-test One

After we carried out our training for half a semester about 8 weeks, we had a mid-term examination. Students were required to write a composition within 120 English words in 50 minutes by referring to a card of metacognitive strategy in writing. The card was applied to the following procedures: writers were asked to put the card on desks. In the course of writing, they should first look at the items of the card, and then think over until finishing the writing. Writers were required to do so, as it could help writers be more initiative and conscious rather than aimless and blind in writing. Then the compositions were immediately collected and checked by the same two teachers who had evaluated the pre-test writings. SPSS.10.0 was adopted to analyze the statistics. First, we made an ANOVA of the post-one writing performance caused by the writing approach training and students' language ability. The results were offered in table 2. As is shown from table 2, we can say that our writing approach training has main effect in our experiment (F=53.011, P=0.000<0.01); meanwhile, language ability also has main effect in our experiment (F=59.461, P=0.000<0.01). According to the F-value, we know that students' language ability plays a little more important role than the writing approach training in the improvements of students' writing performance in post-test one (F-value of W.A.M. is 53.011 while F-value of Ability is 59.461). However, the writing approach training and language ability have no inter-effects (F=0.418; P=0.520>0.05). Then we had T-test of the post-test one writing scores between EG&CG caused by this approach training and language ability. The statistics were presented in table 3 and 4 respectively.

From table 3, we know that there is a significant difference between the experimental group and control group in their post-test one writing performance (T=4.873, P=0.000<0.01).This result indicates that the writing teaching approach training really has positive effects on students' writing performance.

From T-test of table 4, we learn that high-ability group outperforms low-ability group; that's to say, there is a significant difference between high-ability group and low-ability group in their writing performances (T=5.303,P=0.000<0.01) which means language ability also plays an important role in students' writing performance.

3.3 Findings of Post-test Two

We continued our training for nearly another 8 weeks till the end of the semester. Students were required to finish one composition within 120 words in 50 minutes as the final examination. Then the compositions were immediately collected and revised by the same two teachers who had evaluated pre-test and post-test one writings. Different from the post-test one, this test didn't provide the metacognitive strategy card. We collected the scores of three tests and made ANOVA and Multiple Comparisons of the three writing performances in EG. The statistics were presented in the following tables. Table 5 and 6 tell us there is significant difference among the three writing performances in EG (P=0.000<0.01) which further demonstrates that our writing approach training really has a positive effect in students' writing performance. The following table gives us a further analysis of the three writing scores.

From table 7, the statistics show that there is remarkable difference between pre-test and post-test one writing scores which means that students in EG have made great progress in their writing performance (MD=-1.8409; P=0.000<0.05); this is true of the difference between pre-test and post-test two (MD=-2.4091; P=0.000<0.05). As for the comparison between the two post-tests, there is a slight increase in their writing performance, however, there is no significant difference between post-test one and post-test two writing scores (MD=0.5682; P=0.234>.01). In order to show the changes among the three tests in students' writing performances clearly and

directly, we provided the figure1 Means Plots to illustrate the trend.

Figure 1 vividly shows that the scores of the students in EG are going up which means the students in EG have made progress after the writing approach training over one semester.

Then we proceeded to have an analysis of the three writing scores in CG to see if there was a significant difference among them. The following tables provided us the statistics.

Table 8 tells us the mean scores of the students in CG: the mean scores of pre-test are 9.7143; the mean scores of post-test one and post-test two are 8.9048 and 8.9762 respectively. Then we made further analysis to see if there was significant difference among the three tests.

Table 9 tells us there is no significant difference among the three writing performances in CG (P=.174>.05) which mean that students in CG have made no distinct improvement in their writing performances over one semester.

Like the analysis of post-test one, we then followed the same procedures to analyze post–test two. First, we made an ANOVA of the post-two writing performance caused by the writing approach training and students' language ability. The results were offered in table 10.

As is shown from table 10, we can say that the training has main effect in our experiment (F=66.323, P=0.000<0.01); meanwhile, language ability also has main effect in our experiment (F=47.782 P=0.000<0.01). According to the F-value, we know that writing approach training plays a little more important role than students' language ability in the improvements of students' writing performance in post-test two (F-value of W.A.M. is 66.323 while F-value of Ability is 47.782). However, the writing approach training and language ability have no inter-effects (F=.108; P=.744>.05). Then we have T-test of post-test two writing scores between EG&CG caused by the writing approach training and language ability. The statistics were presented in table 11.

From table 11, we know that there is a significant difference between the experimental group and control group in their post-test two writing performances (T=5.988, P=0.000<0.01). This result indicates that the writing approach training really has positive effects on students' writing performances and also students' language ability has main effect on their writing performances.

4. Implications and Suggestions

In this part, the researcher moves on to talk about what we can learn from the above study and provides some suggestions and points out some limitations of this study.

4.1 Pedagogical Implications

The data from the empirical study proves that writing approach training is fruitful and it helps to improve the writing performance of the students of vocational colleges. Some implications are drawn from the study.

4.1.1 The Necessity of Enriching Students' Positive Writing Experience

4.1.2 The Indispensability of Enhancing Students' Metacognitive Ability and Metacognitive Awareness

4.1.3 The Feasibility of Improving Writing via Reading

4.1.4 The Significance of Strengthening Students' Self-Monitoring in Writing

4.1.5 The Effectiveness of Stressing Students' Basic Writing Knowledge

4.1.6 The Effectiveness of Explicit, Eliciting Metacognitive Strategy Training

4.2 Limitations and Suggestions for Further Research

Although this pilot empirical study has got some encouraging results, there are still some limitations because of the restrictions of the objective conditions and the author's inadequate academic knowledge.

4.2.1 Limitations

The present study is a tentative one, so it is far from perfect owing to the limitations of the researcher' academic knowledge as well as some objective and subjective limitations.

First, the study has somewhat limited sample size and limited training length. Only 86 students from only one vocational college were randomly chosen as subject samples which are quite limited and far from typical and can't represent the general conditions of ESL students in all vocational college. And the training period only covers 18 weeks and lasts one semester is also quite limited.

Second, the scoring of students' compositions might be rather subjective.

Third, in this study, the researcher didn't take other factors into account like students' individual style of cognition, affection, motivation, or social environment, etc.

Fourth, the present study only explores the effectiveness of metacognitive strategies training and students' writing performance. The relationship between metacognitive strategies and English proficiency is somehow ignored.

4.2.2 Suggestions

In the light of the above implications and limitations, we can say that this study leaves a number of avenues open for further study.

First, in future research, there is a need to have a larger subject sample size and longer training period. The more subjects and the longer the experiment lasts, the greater reliability and validity it will have.

Second, unlike the present study which only talks about the effect of metacognitive strategy training on writing performance, later research can focus on the impacts on overall English proficiency; and the training can also be carried out in other aspects including vocabulary, listening, speaking and reading so that the influence of metacognitive strategies can be maximally highlighted.

Third, many different variables of cultural background, students' individual personality, style of cognition, affection, motivation, or social environment, learning style, attitudes and beliefs may affect the use and learning of metacognitive strategies, so future training should taken these variables into account and it should be thoroughly investigated with other learning strategies together, such as cognitive strategies as well as social strategies.

Fourth, in previous studies, researchers chose their participants only by referring to their one writing performance before determining students' writing ability, which is quite limited; therefore the future researcher may refer to at least two writing performances to confirm students writing ability.

Fifth, the scoring of writing has been always subjective which affects the reliability and validity of participants' writing performance. Hence, it is a must for the future research to focus on designing more objective scoring guideline.

Sixth, some limitations of the researchers including academic knowledge, personality may hinder certain kinds of investigation, so it is crucial to improve researchers' professional competence.

To sum up, metacognitive strategy training in English writing is still at an exploratory phase and the present research is the first one conducted in vocational college, needless to say, there exists some limitations, so it is hoped that future researches may overcome them and take warning and offers more valuable information about metacognitive strategy training in writing; and it is desirable that more researches be carried out in vocational colleges and more researchers concern themselves with vocational college students.

5. Conclusion

In the context of the deficiency of vocational college students' writing ability and the significance of metacognitive strategy, the author carried out a study of metacognitive strategies-based writing instruction for Vocational College Students in an authentic EFL classroom setting for one semester based on CALLA mode with combinations of metagonitive strategies and cognitive strategies. The primary intention was to explore the relationship between metacognitive strategy and students' writing performance and tried to provide some suggestions on the application of metacognitive strategy in English writing for vocational colleges.

Unlike the previous studies mainly focused on college students or high school students, this is an empirical study conducted in Laiwu Vocational College which is the first case study concerned with vocational college students. Therefore, to some extent, this study has its own characteristics and strong points. As the present study is a tentative one, it is far from perfect and has its inherent weaknesses. Research is on-going, non-stop and continuous cycle within which answers to questions may pose new questions; therefore, the author hopes that this study will offer some stimulus or insight in the field of vocational college English writing.

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Table 1. Independent-sample T-test of the pre-test writing scores between high-ability and low-ability groups

	Mean	SD	T	DF	P
High-ability (n=47)	11.2979	1.1780	13.98	84	.0000
Low-ability (n=39)	7.2821	1.4859			

Table 2. Independent-sample T-test of pre-test writing scores between the EG & CG

	N	M	SD	T	DF	P
EG	44	9.2500	2.6512	-.894	84	.374
CG	42	9.7143	2.1217			

Table 3. T-test of pre-test writing scores between the EG & CG

	N	M	SD	T	DF	P
EG	44	9.2500	2.6512	-.894	84	.374
CG	42	9.7143	2.1217			

Table 4. ANOVA of the post-one writing scores caused by the writing Training and students' language ability

Source	SS	DF	MS	F	P
Writing Training	135.085	1	135.085	53.011	.000
Ability	151.522	1	151.522	59.461	.000
Training*Ability	1.065	1	1.065	0.418	.520
Total	9106.00	86			

Table 5. T-test of post-test one writing scores between EG&CG caused by the writing training

	N	M	SD	T	DF	P
EG	44	11.0909	2.1762	4.873	84	.000
CG	42	8.9048	1.9731			

Table 6.T-test of post-test one writing scores between EG&CG caused by language ability

	N	M	SD	T	DF	P
High-Ability	47	11.0851	2.0729	5.303	84	.000
Low-ability	39	8.7436	1.9963			

Table 7. Multiple comparisons of the three writing scores in EG Dependent Variable: Test LSD

(I) TIME	(J) TIME	MD(I-J)	Std. Error	P
Pre-test	Post-test one	-1.8409*	.4766	.000
	Post-test two	-2.4012*	.4794	.000
Post-test one	Pre-test	1.8409*	.4766	.000
	Post-test two	-.5603	.4794	.245
Post-test two	Pre-test	2.4091*	.4748	.000
	Post-test-one	.5682	.4748	.234

Table 8. Descriptives of the three writing scores in CG

	N	M	SD
Pre-test	42	9.7143	2.1217
Post-test one	42	8.9048	1.9731
Post-test two	42	8.9762	2.4243
Total	126	9.1984	2.1946

Table 9. ANOVA of three writing scores (pre-test, post-test one and post-test two) in CG

	SS	DF	MS	F	P
Between Group	16.873	2	8.437	1.773	.174
Within Group	585.167	123	4.757		
Total	604.040	125			

Table 10. ANOVA of the post-two writing Scores caused by the training and language ability

Source	SS	DF	MS	F	P
Writing Training	195.873	1	195.873	66.323	.000
Ability	126.348	1	126.348	47.782	.000
Training* Ability	.318	1	.318	.108	.744
Total	9757.000	86			

Table 11. T-Test of post-test two writing scores between EG &CG caused by the writing training and language ability

	N	M	SD	T	DF	P
EG	44	11.6818	1.7223	5.988	84	.000
CG	42	8.9762	2.4243			
High-Ability	47	11.2766	2.1336	4.080	84	.000
Low-Ability	39	9.2564	2.4572			

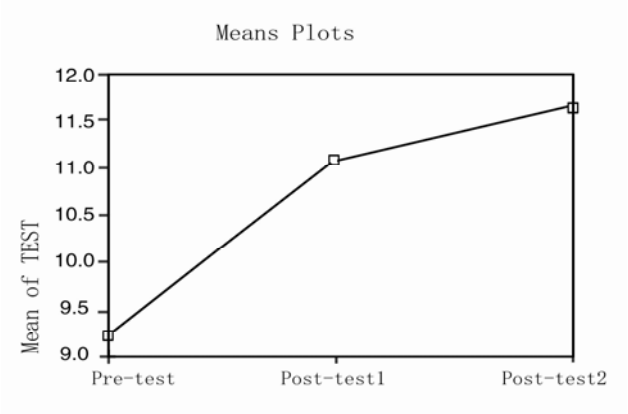

Figure1. Means plot of three writing scores in EG