

Research on Applying Formative Assessment to Developing College English Learning Strategies

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ABSTRACT: Formative assessment is a progressive assessment, which provides students with an effective means to adjust their learning strategies and methods, improve their learning efficiency and achieve the desired learning effects. The research explores how to apply formative assessment to developing college English learning strategies by means of an experiment. The result shows formative assessment can, to a certain extent, promote the use of learning strategies and improve students' learning ability and proficiency.

KEYWORD: formative assessment; college English learning strategies; research

1 INTRODUCTION

Since 1980s formative assessment has been explored and applied in the west with governments highly valuing and funding the research projects and a great many experts participating in the researches. A large number of theoretical and empirical studies have been conducted. The findings lead to a greater understanding of assessment than ever before. Humanism, cognitive, constructivism psychology and theory of multiple intelligences provide theoretical foundation for formative assessment in terms of diverse participant, content, criteria and method.

College English Curriculum Requirements was officially issued by the Ministry of Education in 2007, which provides the theoretical bases and principles for the implementation of formative assessment in college English teaching practice. Formative assessment can provide students with an effective means to adjust their learning strategies and methods, improve their learning efficiency and achieve the desired learning effects. The Assessment Reform Group of UK published ten principles for formative assessment in March, 2002, the second of which is that formative assessment should focus on how students study. Students and teachers must consider the study process and pay attention to the learning methods.

Therefore it is of great significance to develop students' English learning strategies in the process of the implementation of formative assessment in college English teaching practice. Based on these theories this experiment explores how to apply

formative assessment to developing college English learning strategies.

2 SUBJECTS

The subjects are freshmen in North China Institute of Science and Technology in Hebei province. There are 65 students in the experimental class and 67 in the control one. Students enrolled in this institute are distributed to two levels of classes — A and B according to their grades in the placement test they are required to take as soon as they enter the institute. Level A students account for about 35%, Level B students about 65%. Both the experimental class and the control one are from Level B—from the same majors but different natural classes. And there is no statistically significant difference between them in English proficiency.

3 OBJECTIVES

The purposes of the experiment are: (a) to identify the range of learning strategies used by non-English major students of level B (medium in English proficiency) in North China Institute of Science and Technology; (b) to determine the practical value of formative assessment on the development of English learning strategies; (c) to determine the influence of effective English learning strategies on students' academic performance.

4 INSTRUMENTS

In the current study, two methods, questionnaire and test are used to collect data for the experiment. Strategy Inventory for Language Learning (SILL) proposed by Oxford (2008) is the most frequently used strategy scale around the world to assess the frequency of language learning strategies use. There are two versions of the SILL. One 80-item version is for foreign language learners whose native language is English and the other 50-item version is for ESL/EFL learners. The SILL of 50-item version consists of six subscales which are designed to collect data about memory strategies (nine items), cognitive strategies (fourteen items), compensation strategies (six items), meta-cognitive strategies (nine items), affective strategies (six items) and social strategies (six items). The first three belong to direct strategies and the last three indirect ones.

In addition, two term final English test papers randomly selected from the test paper corpus of *College English* (New Edition) published by Shanghai Foreign Language Education Press are used as pretest and post test. They are English proficiency tests with the same question types as CET-4 and there are little statistical differences between two test papers in reliability and validity according to the statistics of the corpus.

5 RESEARCH PROCESS AND METHODS

The experiment lasted the whole second semester from late February to late June, 2012. First of all, the first term final English test was used as the pretest. Secondly, the teacher asked the students of two classes to fill in the first questionnaire before the experiment. Thirdly, during the experiment the experimental class and the control class were given parallel instruction by the same English teacher except for the training of learning strategies the experimental class received during the formative assessment. The teacher gave the control class the normal instruction in which summative assessment was mainly employed. For example, teacher only gave scores to students' assignments as feedback instead of comments. At the end of the experiment the teacher directed the students to fill in the second questionnaire (with same contents as the first one) and the second term final English test was used as post test.

The Statistical Program for the Social Sciences (SPSS, version 17.0) was employed to analyze the data collected. In the current study *t*-tests were carried out and the significance level for the mean value was set at *sig.*<0.05.

The current study also employed Oxford & Burry-Stock's (1995) classification of frequency of language learning strategy use, which regarded

average scores of 3.5-5.0 as high strategy use; average scores of 2.5-3.4 were designated as medium strategy use; and 1.0-2.4 were treated as low strategy use.

6 DATA ANALYSIS AND DISCUSSION

6.1 Statistical Results and Discussion of Two Questionnaires within the Experimental Class

The mean scores and standard deviations as well as *t* and *sig.* values of the two questionnaires within the experimental class before and after the strengthening of formative assessment are demonstrated in Table1.

Table1 Statistical Results of Two Questionnaires within Experimental Class

| Var. | Before Experiment | | After Experiment | | <i>t</i> | <i>sig.</i> |
|------|-------------------|-----------|------------------|-----------|----------|-------------|
| | Mean | <i>SD</i> | Mean | <i>SD</i> | | |
| Mem. | 2.58 | .54 | 3.25 | .59 | -6.43 | .000 |
| Cog. | 2.50 | .51 | 2.89 | .45 | -4.41 | .000 |
| Com. | 3.25 | .70 | 3.63 | .56 | -3.19 | .002 |
| Met. | 2.49 | .70 | 3.74 | .48 | -11.27 | .000 |
| Aff. | 2.79 | .73 | 3.07 | .80 | -1.99 | .048 |
| Soc. | 2.35 | .69 | 2.88 | .77 | -3.95 | .000 |
| ELS. | 2.66 | .47 | 3.25 | .50 | -6.54 | .000 |

* Var.=Variables, Mem.=Memory strategies, Cog.=Cognitive strategies, Com.=Compensation strategies, Met.=Meta-cognitive strategies, Aff.=Affective strategies, Soc.=Social strategies, ELS=overall English learning strategies; Mean=average score, *SD*=standard deviation, *t*= *t* Test, *sig.*=significance value (two-tailed test)

As can be seen from the statistical results in Table1, the mean scores for the overall English learning strategies jump from 2.66 to 3.25 with significance value less than .05, which signifies there is a significant difference in the overall use of strategies by the experimental class before and after the strengthening of formative assessment.

Among the six categories of English learning strategies the most significant change goes to meta-cognitive strategies with the mean scores jump from 2.50 to 3.74 with significance value less than .05. Statistically significant differences can also be seen in social strategies and affective strategies. This three belong to indirect strategies which support the direct strategies but without using the target language directly to help learners manage their language learning. Indirect strategies include self-evaluating, adjusting learners' emotion, cooperating with others, becoming culturally aware (Oxford, 2008).

The significant difference might result from the intervention of formative assessment. Pintrich (1990) reported that the use of self-regulating strategies, such as comprehension monitoring, goal setting, planning, effort management and persistence, is essential for academic performance on

different types of actual classroom tasks. During the course of the strengthening of formative assessment the teacher directed the students to master indirect strategies through teacher assessment, self assessment and other methods. As a result the students may have learned to use indirect learning strategies to make plans before learning, monitor and regulate the learning process and evaluate their own learning effects afterwards. Meanwhile students' direct learning strategies were also developed, which may explain that there are statistically significant differences in memory strategies, cognitive strategies and compensation strategies as well.

Two questionnaires within the control class before and after the strengthening of formative assessment are also conducted. The Statistical Results illustrates there is also a significant difference in the use of cognitive strategies and meta-cognitive strategies by the control class within the one-semester duration of college study.

6.2 Statistical Results and Analysis of the Pretest and Post Test between Two Classes

A comparative analysis is made to determine whether there are differences between these two classes in English proficiency before the experiment (Table 2).

Table 2 Statistical Results of the Pretest

| | Mean | SD | t | sig. |
|--------------------|---------|---------|-------|------|
| Experimental Class | 56.3378 | 7.67782 | -.414 | .679 |
| Control Class | 56.9063 | 7.70223 | | |

The data in Table 2 show that the difference between the mean scores of these two classes is .57 with similar standard deviation and significance value more than .05, which indicates there is no significant difference between these two classes in English proficiency before the experiment. Therefore it will be meaningful to conduct the experiment.

Another comparative analysis was made to determine whether there were differences between these two classes in English proficiency after the experiment (Table 3).

Table 3 Statistical Results of the Post Test

| | Mean | SD | t | sig. |
|--------------------|---------|---------|-------|------|
| Experimental Class | 61.1290 | 8.77120 | 2.064 | .041 |
| Control Class | 58.0000 | 8.24814 | | |

The data in Table 3 show that the difference between the mean scores of these two classes is 3.13 with significance value less than .05, which indicates there is significant difference between these two classes in English proficiency after the experiment. The experimental class performs better than the control class after the experiment, which also

indicates that the third objective of the experiment has been accomplished.

6.3 Qualitative Analysis and Discussion

Green & Oxford (1995) stressed that learning strategies can be attained by training. [7] So the teacher put emphasis on developing students' learning strategies during the strengthening of formative assessment. A large number of qualitative data were collected through class observations, written assignments, interviews and journals, which could supplement the deficiency of quantitative results to help to testify the positive effect of formative assessment on learning strategies.

(1) Classroom Observation

The teacher made a training plan for every unit. After each instruction, the teacher would fill in the class observation anecdotal record to put down students' performance and learning strategies in particular. Then made adjustments for future teaching and provided timely feedback to students.

Sometimes observation of different types of class could be combined to promote students' learning strategies. For instance, when asking students to read text in intensive class, the teacher could observe their pronunciations and intonations. When having listening class, the teacher could observe students' reactions and noticed the incomprehension was mainly due to long sentence structure. Therefore the teacher suggested the students to do more oral reading to get familiar with long sentence structures. For another example, the teacher noticed that when doing dictation, students missed a letter or misspelled it, which might be related to the fact that they didn't read aloud or they couldn't combine the pronunciation, meaning and form of a word. Therefore the teacher should pay more attention to promote students' memory strategies.

Class observation anecdotal records provided an effective way to supervise and stimulate students to participate in their study actively and promote their direct and indirect learning strategies.

(2) Written assignments

The written assignments are the summary of Text A, essay writing and the Chinese-English translation in each unit of intensive reading, which are productive exercises. In the researcher's opinion, written assignment is the best method to reveal students' cognitive strategies. As are shown in their assignments there are many mistakes in word speeches, spellings, the choice of words, sentence structures, agreement in personal pronouns, tenses, subject and predicate, etc. There are even many Chinese expressions in many students' writing and translation. The teacher spent a lot of time and energy in specifying all the mistakes through special signs and asked the students to correct them by themselves first. Of course specific comments and

suggestions were given to students to follow. And at the end of each unit criteria for self assessment were also provided. A few students even did it for the third time until both the teacher and the students were satisfied.

At the beginning many students ignored the correcting of mistakes. They thought the mistakes didn't matter to their writing and it was unnecessary to waste time. After the teacher made great efforts to explain the importance and necessity and took supervisory measures, gradually students' attitude changed. They are more active to correct mistakes and there were fewer and fewer same mistakes in their assignments. And through productive and courageous comments and suggestions students' confidence and interests in English learning were on the stable increase.

(3) Interview

Through the interview the teacher learned that the students lacked meta-cognitive strategies most. Most of them didn't have a schedule for English study, can't manage their own learning process and seldom evaluate their learning efficiency. Based on the problems, learning plans were made and other measures were taken to promote students' indirect strategies. Through the interview the teacher also learned other direct learning strategies. The teacher would offer her own opinion on learning strategies and encourage students to try different ones to explore the most suitable strategies to themselves.

(4) Journal

On one part of the journal students were required to make weekly plans and put down on their journals. The teacher would check some journals randomly for supervision, regulation and suggestions. As for the other part of the journal, students were free to write down their learning methods, experiences, effects, attitudes, ideas, feelings, and interest. However, many students were not used to writing a diary. So the teacher only got some journals, which turned out to be very informative and did reveal there was a positive change in students' attitudes towards English study and they paid more attention to English learning strategies. Ellis (1994) asserts that learner attitudes have an impact on the level of L2 proficiency achieved by individual learners and consequently this success may influence learners themselves.

In summary both the statistical results and the qualitative data provided some empirical evidence to show students who received formative assessment

did master some valid English learning strategies than those without intervention of formative assessment. As a result they performed much better in the post test than those from control class.

7 CONCLUSIONS

Firstly, compared with traditional assessment, formative assessment is more effective to foster college English learning strategies, which consequently helps to improve students' academic performance to a certain extent.

Secondly the overall strategy was found to be moderately used by Level B students in North China Institute of Science and Technology. This finding in the current study was consistent with most studies. So far most researches have indicated that there is certain connection between the use of learning strategies and language proficiency (Lee & Oxford, 2008, Wang, 2006). Therefore how to further improve academic performance of Level B students by means of learning strategies is still an urgent task.

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