

Study on Meta-cognitive Strategy Training

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Abstract. Since the 1970s, researches concerning language teaching and learning have shifted from teaching methodology to learner's characteristics. Learning strategy training has also begun to draw the attention of some researchers in the hope that strategy training will help learners improve their ways of English learning. The present research tends to investigate the effect of meta-cognitive strategy training on the learners' English learning performance in higher vocational settings. An experiment was conducted on first-year students in Qinghuangdao Technical and Vocational College. The research began with an English learning questionnaire, hoping to obtain the situation of current English learning of the participants. Two tests were employed, one as a pre-test, the other as a post-test to see whether there was any difference between the two groups. Independent T-test and paired T-test were used to explore the between-group differential on the development of English learning performance. The training, which lasted ten weeks, was based on CALLA model with its focus on meta-cognitive strategy training. Results generated from the research show that the meta-cognitive strategies training has positive impact on the English language development of the students.

Keywords: Learning strategies; Meta-cognitive strategies; Strategy training

1. Introduction

Since the 1970s, there has been a marked shift in the focus of language instruction and research, from how to teach towards how to learn, from researches on teachers and teaching methodology to researches on learners and learning methods. Researchers (O'Malley & Chamot, Oxford, and Wen Qiufang) show that learning strategies are the key to learner's success. Successful learners appear to use learning strategies more frequently and in qualitatively different ways than learners who are less successful.

Nowadays, higher vocational education (HVE) has become an important part for higher education in our country since HVCs have been increasing rapidly in recent years. Learning strategy research on HVC students should attract more and more attention. This present study focuses on HVC students in training them some effective meta-cognitive strategies in their English learning performance. Theoretically, the present research is significant in the following ways: 1) The training in meta-cognitive strategies represents the student-centered notion in pedagogy. Language learners should be

encouraged to become more independent and more autonomous. 2) The study can enrich the foreign language researches, in which the learner's individual variation in language learning began to be turned attention to. By training the students in meta-cognitive strategies, the present study will confirm some assumptions in language learning strategy instruction and discover some effective ways of foreign language learning strategy training; 3) It is the task of the foreign language teaching theory to discuss the meta-cognitive aspect of language learners (Wen Qiufang, 2000). The practical significance of the research lie in the two aspects: 1) It promotes the students autonomy in English learning. If trained in meta-cognitive strategies, they can use these strategies to become more active and proficient learners; 2) It converts research findings in meta-cognitive strategies into practical classroom activities by strategy training and cultivates the field of researches in meta-cognitive strategy training in higher vocational setting.

2. Literature Review

As early as the beginning of the 20th century, researchers had realized that language learning included meta-cognitive process such as planning, monitoring and evaluating. In the field of education and psychology, American educator Dewey (1910) clearly pointed out and illustrated the importance of developing active monitoring ability and critical evaluation ability.

Meta-cognitive strategy was first definitely advanced by the American psychologist J.H. Flavell in the 1970s. He points out that meta-cognitive strategy has usually been broadly and loosely defined as any knowledge or cognitive activity taken as its object, or regulated any aspect of any cognitive enterprise. It is called meta-cognitive strategy because its core meaning is "cognition about cognition" (Flavell, 1985). According to Flavell (1979), meta-cognitive knowledge plays an important role in many cognitive activities related to language use. Learners may call upon their meta-cognitive knowledge when the learning task requires conscious thinking, and when previous learning has not been correct or complete. It is generally believed that effective achievement of a cognitive task is to a large extent determined by students' monitoring and evaluating their

cognitive activity, or by meta-cognitive experience. Graham (1997) believes that meta-cognitive strategies, that allow students to plan, control and evaluate their learning, have the most central role to play in the improvement of learning. Anderson (2002b) believes that developing meta-cognitive awareness may also lead to the development of stronger cognitive skills. O'Malley (1985) says that students without meta-cognitive approaches are essentially learners without direction or opportunity to review their progress, accomplishments, and future directions.

Strategy training is intended to help students explore ways that they can learn the target language more effectively, as well as encourage students to self-evaluate and self-direct their learning (Cohen, 1998). Chamot & O'Malley (1994) suggest that learning strategy instruction may help learners in three ways: Firstly, learning strategies instruction can help students become better learners; Secondly, skill in using learning strategies assists them in becoming independent and confident learners; Finally, they become more motivated as they begin to understand the relationship between their use of strategies and success in learning languages.

3. Meta-cognitive Strategy Training

The present study focuses on explicit meta-cognitive strategy instruction and its impact on English learning for the students in a HVC. It aims to improve the students' meta-cognitive knowledge and facilitate their language acquisition. A further goal of this strategy training is to promote learners' autonomy and their self-direction by enhancing their strategy awareness, widening their selective scope of strategies and training and fostering their ability in self-monitoring and self-adjustment.

The hypothesis in this study is based on the results of the related previous researches conducted at home and abroad: Meta-cognitive strategy training has positive impact on the English learning and it contributes to the improvement of their English proficiency.

This experiment was conducted on the first-year students in Qinhuangdao Technical and Vocational College. 120 participants were selected from two different departments. They were naturally divided into two expanded classes upon entering college. One was randomly selected as the experimental group (EG) and the other as the control group (CG). The number of the students in both EG and CG was 60. Both groups have been offered the same English course since they entered the college by the same teacher, thus their study environment is more or less alike. Before the experiment, they were also given a pre-test, the result of which show that there was no significant difference between the two groups.

The instrument selected in the present research to assess the English learning strategies is a questionnaire designed by

the author. It is based on Oxford's Strategy Inventory for Language Learning (SILL), which is regarded as a standardized measure to identify and assess the learning strategies used by the subjects. Some revisions were made in order to suit this study and the practical situation of the Chinese students. The questionnaire, which examined the students' use of strategies in their English learning by asking them to respond to each statement on a five-point scale, consisted of two parts: Part one concerned some personal information of the subjects, such as name, sex, age, major, etc. The students were also asked to offer their English scores of National Entrance Exam. Part two includes 13 statements identifying their strategies in English learning which were divided into meta-cognitive strategies and cognitive strategies. The former was subdivided into 4 categories: advance organizers, selective attention, self-evaluation and self-management while the latter was subdivided into 9 categories, namely rote-rehearsal, grouping, word analysis, contextualization, association, imagery, keyword method, guessing and practice strategies. Each subcategory of strategies was constituted of different kinds of learning behaviors.

In order to examine the effects of the strategy training on the students' English learning efficiency, two similar tests – pre-test and post-test were given to the students to examine the results before and after the training, respectively. Two PRETCO-Level B test papers (one as the pre-test paper and the other, the post-test paper) were applied to ensure the authority of the tests.

Since the English language teaching in the college follows a fixed syllabus, the training was integrated into the regular classroom setting. The teacher was served as the researcher as well, who is responsible for arousing the students' awareness of learning strategy use, introducing systematic strategy use in class, integrating strategy-based activities into daily teaching plans. The EG received explicit meta-cognitive strategy instructions during their language learning while the CG only got normal learning strategy instructions. The meta-cognitive strategy training in the present study was based on this CALLA model developed by Chamot & O'Malley (1994), which includes a five-phase procedure: preparation, presentation, practice, evaluation, and expansion.

(1) Preparation: The purpose of this phase is to help students identify the strategies they were already using and to develop their meta-cognitive awareness of the relationship between their own mental processes and effective learning. In this stage, activities included class discussions about the language learning strategies which are very helpful to the students. By identifying the students' prior knowledge about and their current use of language learning strategies, the teacher then explained the importance of meta-cognitive learning strategies in vocabulary learning by defining them and renaming them.

(2) Presentation: This phase focuses on modeling the use of these meta-cognitive strategies. The students

received explicit instruction on how to use these strategies. The preparation and planning, the selection of language learning strategies, monitoring of strategy selection and use, orchestration of several strategies, and evaluation of the effectiveness of meta-cognitive strategies for language learning were one by one illustrated through several examples. It was the most powerful way for the teacher to accomplish this purpose by modeling her own personal use of the strategy. The students now not only knew what meta-cognitive strategies were, but also were taught when and how to use them.

(3) Practice: This phase involved students' practice and familiarity with these meta-cognitive strategies. The students, by the teacher's assistance, practiced monitoring while using multiple strategies available to them. After class, students were asked to reflect what they had learnt in class, what was still confusing them, how they mastered the language learning strategies and how they planned to counteract their weaknesses. After this period of training, students may have been accustomed to use the meta-cognitive strategies for their language acquisition in their learning process.

(4) Evaluation: The main purpose of this phase was to provide students with opportunities to evaluate their own success in using learning strategies as well as the contributions the strategies make to their learning, developing their meta-cognitive awareness of their own learning processes. Self-evaluation is an important key to increasing motivation, because students learn to attribute their level of achievement to their own efforts rather than to unchangeable innate ability.

(5) Expansion: In this final phase students are encouraged to make personal decisions about the strategies that they found most effective, apply these strategies to new contexts and devise their own individual combinations and interpretations of meta-cognitive learning strategies. By this stage, the goal of learning strategies instruction should have been achieved, for students have become independently strategic and are able to reflect on and regulate their own learning.

As time went by, less time was spent on the checking since it was believed that the use of strategies has changed from factual knowledge to procedural and as a result automatic.

4. CONCLUSIONS

In this experiment, there are two kinds of data being collected. One is the information gathered from the responses to the language learning questionnaire, the other is the scores of both tests. Data from the pre-test and post-test were analyzed and compared separately by independent-sample T-tests and paired-sample T-test.

Data analysis of the questionnaire shows that the students in both EG and CG do use some meta-cognitive and cognitive strategies to enhance their retention while learning English. However, most students are not capable of regulating their language learning. They seldom plan their learning in advance and have no clear acquiring objective and seldom self-evaluate their English learning. But they do make use of different cognitive strategies to assist their language learning. The students are more familiar with the cognitive strategies than the meta-cognitive ones. So, it is very necessary to raise the students' strategy awareness and provide them with the training opportunity.

The scores of the pre-test and post-test are the main data for the experiment. The independent t-test for pre-test was conducted to see if there was any difference between the two groups at the beginning of the experiment. The result shows the two groups do not differ significantly from each other. They are equivalent and comparable. The independent T-test for post-test showed the EG greatly surpassed the CG at the end of the experiment. A paired sample t-test was conducted to see whether there existed significant difference between the pre-test and post test in both the EG and CG. The hypothesis we wish to test was that the students in both EG and CG performed better in the post-test than the pre-test. The result shows that the students in EG performed much better in the post-test than the pre-test. While in CG, we concluded that though slight improvement was made in CG, it did not reach the significant level.

The reason why there was significant improvement in the EG while there was no significant improvement in CG is that EG received extra meta-cognitive instructions as well as normal strategy training while the CG only received normal strategy training. In other words, without a meta-cognitive approach, strategy training is incomplete and will naturally not be so much fruitful. By now, we can assume that the achievement of such great progress in EG correlates highly with the meta-cognitive strategy training. Meta-cognitive strategy training is efficient to improve students' vocabulary learning.

The findings of this study indicate:

(1) Explicit meta-cognitive strategy training has positive impact on the English language development. The quantitative data showed that the students in EG made big and significant progresses after they received explicit strategy instructions and practice about how to plan their language learning, set specific goals within a time frame, select the most appropriate learning strategies, monitor strategy use, use a combination of strategies, and finally evaluate the whole learning process.

(2) Meta-cognitive strategy training affects the language proficiency of the higher vocational college students in the following aspects: Firstly, it activates the students' motivation. The meta-cognitive strategy instruction enables them to make first step towards progress. The students now show more interest in English learning

and have the confidence that they can do better than before and tend to make efforts in their future learning; Secondly, it improves the students' strategy awareness. The students are more familiar with various language learning strategies. The training makes the students better understand their learning tasks, determine weakness that can be overcome by constructing new learning strategies, and thus better manage their English learning process; Thirdly, it makes the students more autonomous learners. The students are less dependent on the teacher. They begin to think about their learning performance themselves rather than wait for the teacher to tell what they should do to improve their learning proficiency.

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