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元认知理论在大学英语写作教学中的应用研究

A Study on the Application of Metacognitive Theory
In the Teaching of College English Writing

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摘　要

　　2004 年国家教育部颁布了新的《大学英语课程教学要求》，该《课程要求》明确规定大学英语的教学目标是使学生在今后工作和社会交往中能用英语有效地进行口头和书面的信息交流，以适应我国社会发展和国际交流的需要。于是大学英语写作教学已经成为目前大学英语教学的重要一环。因此如何提高英语写作教学效率进而提高学生的英语写作水平就成为大学英语研究的主要课题之一。本论文以元认知理论为理论框架，探讨大学英语写作教学的新方法。

　　本文由六部分组成。

　　第一章是引言，阐述了我国大学英语写作教学的现状及本研究的重要意义。

　　第二章为理论基础部分，介绍了元认知的定义、构成要素以及二语习得领域对元认知策略的研究情况。元认知指元认知主体关于自己认知过程、认知结果及其相关活动的知识，以及任何调节认知过程的认知活动。元认知主要包括元认知知识和元认知策略。在二语习得领域关于元认知的研究主要集中在元认知策略方面。

　　第三章进一步探讨了英语写作中的元认知知识和元认知策略。在写作中元认知知识包括个人知识、任务知识和策略知识。个人知识会影响写作者的自我看法以及对将来写作成绩的期望。任务知识指对完成写作任务所需要的知识、技能以及所需的努力程度的认识。策略知识主要包括策略运用知识、策略有效性知识和适当选择策略方面的知识。在写作中，元认知策略包括写作计划、自我监控和自我评估三方面。写作计划指确定写作目标、激活背景知识和组织安排作者观点等。自我监控指写作者对写作过程

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有意识的控制和调节。自我评估可以使学生及时发现自己写作过程中取得的进步以及存在的问题，加强自我意识与反省。

第四章是实证研究。本项研究主要围绕三个问题展开：（1）目前中国非英语专业大学生写作元认知的水平如何？（2）写作元认知培训能否提高大学生的英语写作水平？（3）写作元认知培训对不同水平的学生是否有相同的影响？本研究中的实验主体是 60 名大学二年级非英语专业学生，其中 31 名构成实验组，29 名为控制组。实验组和控制组都遵循正常的课程安排，但实验组同时接受为期 10 周的写作元认知培训。

第五章讨论了本研究的主要发现并提出了一些参考性建议。本研究的主要发现有：（1）目前中国大学生总的写作元认知水平非常低。（2）经过写作元认知培训，学生的英语写作水平都有了明显的提高。提高最显著的是中间组和低分组。根据本实证研究及其他研究者的研究工作，作者就元认知理论应用于大学英语写作教学提出了如下一些建议：（1）进行直接明确的写作元认知培训；（2）提高学生的写作元认知意识；（3）通过教师对作文的反馈及同学间的反馈提高学生的写作元认知水平；（4）在元认知写作教学中教师的角色应该从控制者转变为学生的辅助者。

第六章是本文的结论。元认知在大学英语写作教学中的作用不容忽视，全面的元认知培训需要深入的展开。

关键词：元认知知识　　元认知策略　　大学英语写作教学　　元认知培训

Abstract

In 2004, the new College English Curriculum Requirements was carried out by Chinese Ministry of Education. According to the Requirements, the objective of College English is to develop students' ability to use English in an all-round way, so that in their future work and social interactions they will be able to exchange information effectively through both spoken and written channels. Therefore, English writing becomes an important part of College English teaching. This dissertation reports a tentative study on the application of metacognition in the teaching of College English writing so as to improve students' English writing performance.

The paper includes 6 chapters.

Chapter one is introduction. In this part, the current situation of College English teaching of writing and the significance of this paper are presented.

Chapter Two is the theoretical background. Flavell defined metacognition as one's knowledge concerning one's own cognitive processes and products or anything related to them. Metacognition is composed of two parts: metacognitive knowledge and metacognitive strategies. In foreign language learning, the study of metacognition was focused on metacognitive strategies.

Chapter Three further discussed metacognition in EFL writing. Metacognitive knowledge in writing includes person knowledge, task knowledge and strategy knowledge. Person knowledge refers to the beliefs one has about oneself and others as language learners as well as of factors influencing one's writing. Task knowledge refers to the beliefs that learners develop about the knowledge, skill and resources needed for understanding

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certain writing tasks. Strategy knowledge includes knowledge about strategy use, about the effectiveness of certain strategies, and about the principles underlying the choice of strategies. Metacognitive strategies in writing include planning, self-monitoring and self-evaluation. The planning in writing involves identifying one's purpose, activating background knowledge, and organizing brain-stormed ideas. Self-monitoring represents the conscious control and regulation of writing processes. In self-regulation, writers can recognize weaknesses, identify needs, and try to make changes.

Chapter four is an empirical study. The subjects of the study are 60 non-English major sophomores from two classes. One class of 31 students served as the experimental group, the other class with 29 students comprised the control group. The students in the experimental groups received the mtacognitive training in writing which lasted for 10 weeks

Chapter five discussed the findings of this study and some implications are provided. The findings of this study are: (1) Students' general awareness of metacognitive knowledge in writing is fairly poor. (2) After the training in metacognition, all the students made improvement in their writing. Based on these findings, the author provided some implications: (1) explicit instruction of metacognition; (2) promoting students' metacognitive awareness; (3) improving students' metacognitive proficiency through response; (4) the teachers should change their role from authorities to facilitators.

Chapter five is conclusion.

Key Words: metacognitive knowledge; metacognitive strategies; teaching of college English writing; metacognitive training

Chapter One Introduction

1.1 The Present Situation of College English Teaching of Writing in China

With the new socio-political and economic changes that are taking place in China, more and more comprehensive intellectuals with high English proficiency are needed. Therefore, the higher requirement for English teaching set forth by the new situation should be met. In 2004, the new College English Curriculum Requirements was carried out by Chinese Ministry of Education. According to the Requirements, the objective of College English is to develop students' ability to use English in an all-round way, so that in their future work and social interactions they will be able to exchange information effectively through both spoken and written channels. Therefore, English writing has become an important part of College English teaching.

English writing, as one of students' productive skill and a way of communication, plays an important role in English teaching and learning. Greenia (1992, -cited in Wu Hongyun, 2004) pointed out that second language writing could facilitate language learning and promote students' thinking ability. Brooke and Grundy (2000) reiterated the importance of writing by arguing that while no one would deny the importance of spoken language, there was no reason to neglect the equally important written mode. Wen Qiufang (1996) also claimed that a requirement of English writing ability would become one of the important criteria for qualified personal in the 21st

century. Therefore, it is urgent for English teachers to help students improve their writing competence.

But the present situation of Chinese College English writing teaching is far from satisfactory. On the one hand, writing is always regarded as the most difficult part of the four basic skills and relegated to the last stage in the teaching arrangement. And under the pressure of College English Test Band 4 (CET 4) and Band 6 (CET 6), most English teachers still focus on teaching correct form rather than help the students develop thoughts. On the other hand, there exit long-lasting poor performance on the students' part. According to statistics, students' average scores in the writing task in CET 4 have always been wandering between 5 to 7 (the total score is 15) (Du Aihong, 2004). Li Sen (2000) also reported that among the five basic language skills, writing has always been the weakest aspect for College English test takers. In addition, most of the students' writing lack of original creation, and their writing is almost identical in thought pattern and discourse structure. Therefore, improving students' writing ability has turned out to be one of the key tasks in College English teaching.

1.2 Significance of This Paper

Traditionally, there are two major theoretical models for second language composing. One is the product approach, which centered its attention on the product of composition, that is, the essay to be produced by the writer. Advocates of this approach emphasized form (accuracy and correctness) over content, and centered their attention on the learning of linguistic patterns and

vocabulary items. However, many ESL practitioners criticized this approach by pointing out its weaknesses, such as the discouragement of more personal and creative writing, the lack of concern for content and audience (other than for the teacher), and the emphasis of form over the content.

The other is process approach. Advocates of this approach consider writing as a creative, complex, recursive and goal-directed thinking process, which is undertaken by the interplay of several sub-processes or set of behaviors highly embedded within each other. Despite the fact that process models have been so popular among writing instructors and researchers, and considering that they are still on the increase, they are not without their critics, especially when it comes to their application in an ESL/EFL context. One of the main weaknesses is that this approach is so focused on the writer's composing processes that it does not take into account the task, context, and audience for whom the text is ultimately written (Victori, 1995).

With the development of cognitive psychology, metacognition get more and more attention from the educators and researchers and shed new light on the research of EFL writing. The metacognitive theory added to our understanding of complex cognitive phenomena by providing data on learner's awareness of and control over their cognitive activities (Devine, 1993). The application of metacognition in writing can not only promote students' awareness of themselves as writers and of the writing task, but also improve their control and monitor of writing process. Thus, study foreign language writing from the metacognitive perspective can take account both the dynamic nature of writing and the static knowledge of the writer (Wu Hongyun, 2004).

In the research of EFL writing, studies have showed that the deficiency in

metacognitive knowledge and strategies was a major cause of students' poor performance in writing (Du Aihong, 2004). Devine (1993) pointed out that "metacognitive variables play an even more important role than linguistic competence in successful second language writing". Kasper (1997) also argued that many ESL students fail at writing because their metacognitive models had been inadequately developed. In China, however, the study of metacognition in College English writing is still lacking. The author of this paper, by carrying out an experimental study, intends to explore the general situation of Chinese college students' metacognitive proficiency in writing, and the effects of metacognitive training on students' writing performance, and tries to provide some implications for the application of metacognition in the teaching of College English writing.

The thesis is composed of six chapters. Chapter one introduces the present situation of College English teaching of writing in China and expounds the significance of this paper. Chapter two reviews some basic concepts of metacognition such as its definition and components. The studies of metacognitive strategies in the field of FL/SL learning were also discussed. Chapter three is the further investigation of two major parts of metacognition, metacognitive knowledge and metacognitive strategies, in EFL writing. Chapter four is an empirical study which intends to examine the Chinese college students' metacognitive awareness and the impacts of metacognitive training on students' writing performance. Chapter five discussed the findings of this study and based on these findings, some implications for the application of metacognition in the teaching of College English writing are provided. Chapter six is conclusion.

Chapter Two Theoretical Background

2.1 Basic Concepts of Metacognitive Theory

2.1.1 Definition of Metacognition

Metacognition is one of the prominent constructs in cognitive and educational psychology. The term metacognition was first raised by Flavell, an American psychologist, in 1976. Flavell (1976) gave the definition of metacognition like this:

> Metacognition refers to one's knowledge concerning one's own cognitive processes and products or anything related to them, e.g. learning-relevant properties of information or data. ⋯⋯ Metacognition refers, among other things, to the active monitoring and consequent regulation and orchestration of these processes in relation to the cognitive objects or data on which they bear, usually in the service of some concrete goal or objective." (Flavell, 1976)

In 1982, Flavell further defined metacognition as "knowledge and cognition about cognitive objects, that is, about anything cognitive. However, the concept could reasonably be broadened to include anything psychological, rather than just anything cognitive." "It was the process of using cognitive processes to improve thinking skills. And it was called metacognition because

its core meaning was 'cognition about cognition'" (Flavell, 1985).

Kluwe (1982) identified two general attributes which are common to metacognitive activities: (a) the thinking subject has some knowledge about his own thinking, and that of other persons; (b) the thinking subject may monitor and regulate the course of his own thinking, i.e. may act as the causal agent of his own thinking. The former, usually referred to as metacognitive knowledge, is an individual's knowledge about his shortcomings or strengths with regard to solving problems. The latter refers to an individual's cognitive activity aiming at efficient and appropriate thinking, that is, executive process. Weinert (1987, -cited in Hartman, 1998) described metacognition as "second-order cognitions: thoughts about thoughts, knowledge about knowledge, or reflection about actions". Brown (1987) also stated that, "metacognition refers to understanding of knowledge, an understanding that can be reflected in either effective use of overt description of the knowledge in question."

From above we can see that different psychologists and researchers gave their definition of metacognition from different dimensions. They all made contributions to the development of metacognitive theory, but on the other hand, they also made the connotation of metacognition more complex. In order to have a better understanding of metacognition, the main components of metacognition will be examined.

2.1.2 Components of Metacognition

2.1.2.1 Flavell's Framework

In Flavell's (1987) point of view, metacognition is made up of two parts: metacognitive knowledge and metacognitive experience. Metacognitive knowledge refers to the segment of one's stored world knowledge that "has to do with people as cognitive creatures and with their diverse cognitive tasks, goals, actions and experience" (Flavell, 1976). It is concerned with what a person knows about cognitive abilities, processes, and resources in relation to the performance of specific cognitive tasks.

Metacognitive knowledge can be subdivided into three categories: knowledge of person variables; task variables; and strategy variables (Flavell, 1979). Knowledge of person variables refers to the kind of acquired knowledge and beliefs that concern what human being are like as cognitive (affective, motivational, perceptual, etc.) organisms. It includes those beliefs about the nature of oneself and other people as cognitive processors. There are three subcategories of person variables: intraindividual, interindividual, and universal.

The intraindividual variable is knowledge or belief about one's own or someone else's interests, propensities, aptitudes, and the like. An example of this variable is a person's belief that he or she can learn most things better by listening than by reading. In the case of interindividual variables, the comparison is between, rather than within, person. An example might be the judgment that one of your friends is more socially sensitive than another. The

following is an example of universal variable: most people know that how well they understand or master something now may not be an accurate predictor of how well they will understand or master it later.

The second subcategory is knowledge of task variables. It includes knowledge about the scope and requirements of tasks as well as knowledge about the factors and conditions that make some tasks more difficult than others. For instance, experience has taught that very difficult, very densely packed, and very low redundancy information is troublesome to process. To comprehend and to deal effectively with such information, it is necessary to proceed slowly and carefully and to process deeply and self-critically (i.e. with high comprehension monitoring activity).

The third subcategory is strategy variables. It refers to a great deal of knowledge concerning what strategies are likely to be effective in achieving what sub-goals and goals in what sorts of cognitive understandings. The metacognitive aspect of such knowledge lies in knowing where a strategy can be used and in knowing when and how to apply it. Purely rote strategy usage, although it does involve cognition, does not involve metacognition. For example, one good way to learn and retain many bodies of information is to pay particular attention to the main points and try to repeat them to yourself in your own words.

Finally, it should be emphasized that person, task, and strategy variables always interact, and that intuitions about their interaction are also acquired. Flavell (1987) gave a very good example of the combination of the three, "I may sense that I but not my brother would do better to use strategy A rather than B, because the task is of this type rather than that." Given one's particular

cognitive make-up and the particular task, one develops intuitions about which strategies are better. Metacognitive knowledge can have a number of concrete and important effects on one's cognitive enterprises. "It can lead you to select, evaluate, revise, and abandon cognitive tasks, goals, and strategies in light of their relationships with one another and with your own abilities and interests with respect to that enterprise" (Flavell, 1979).

The other major conceptual entity in the taxonomy is metacognitive experiences. A metacognitive experience can be any kind of effective or cognitive conscious experience that is pertinent to the conduct of intellectual life (Flavell, 1987). Flavell didn't make further analysis of metacognitive experience, and only expounded its characteristics and functions.

Flavell (1979) expounded four characteristics of metacognitive experiences: (1) metacognitive experiences can be brief or lengthy in duration, simple or complex in conduct. (2) Metacognitive experiences can occur at any time before, after, or during a cognitive enterprise. (3) metacognitive experiences are especially likely to occur in situations that stimulate a lot of careful, highly conscious thinking where every major step you take requires planning beforehand and evaluation afterwards. (4) metacognitive knowledge and metacognitive experiences form partially overlapping sets: some experiences have such knowledge as their content and some do not; some knowledge may become conscious and comprise such experiences and some may never do so.

As for the function of metacognitive experiences, Flavell (1979) states that; "metacognitive experiences can have very important effects on cognitive goals or tasks, metacognitive knowledge, and cognitive actions or strategies.

First, they can lead you to establish new goals and to revise or abandon old ones. Second, metacognitive experiences can affect your metacognitive knowledge base by adding to it, deleting from it, or revising it. Finally, metacognitive experiences can activate strategies aimed at either of two types of goals —— cognitive or metacognitve.

2.1.2.2 Brown's Framework

Brown's (1987) framework of metacognition also consists of two parts: knowledge about cognition and regulation of cognition. This framework is adopted and further developed by many other researchers (Jacobs & Paris, 1987; Schraw & Dennison, 1994; Schraw, 2001). Knowledge about cognition refers to individuals' knowledge about their own cognitive capacity and strategies, and knowledge about how to apply these strategies to what situations to bring their cognitive capacity into full play (Brown, 1982). Knowledge about cognition includes three subprocesses that facilitate the reflective aspect of metacognition: declarative knowledge, procedural knowledge, and conditional knowledge.

Declarative knowledge refers to knowledge about self and about strategies. For example, research examining what learners know about their own memory indicates that adults have more knowledge than children about the cognitive processes associated with memory (Baker, 1998, -cited in Schraw, 2001).

Procedural knowledge refers to knowledge about how to do things. Much of this knowledge is represented as heuristics and strategies. Individuals with a

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high degree of procedural knowledge perform tasks more automatically, are more likely to possess a larger repertoire of strategies, to sequence strategies effectively, and use qualitatively different strategies to solve problems (Glaser & Chi, 1998, -cited in Schraw, 2001).

Conditional knowledge refers to knowledge about when and why to use strategies. Conditional knowledge is important because it help students selectively allocate their resources and use strategies more effectively (Reynold, 1992). Conditional knowledge also enables students to adjust to the changing situational demands of each learning task (Schraw, 2001).

The other part of Brown's framework is regulation of cognition, which consists of activities used to regulate and oversee learning. These processes include planning activities, monitoring activities, and checking outcomes.

Planning activities involve the selection of appropriate strategies and the allocation of resources that affect performance. Monitoring activities refers to monitoring, testing, revising, and re-scheduling one's strategies for learning. Checking outcomes refers to evaluating the outcome of any strategic actions against criteria of efficiency and effectiveness. Typical examples include re-evaluating one's goals and conclusions.

Synthesizing previous studies, we can conclude that metacognition covers two essential aspects: "the static nature of metacognition and the dynamic tendency of metcognition in affecting the course and outcome of cognitive enterprises." (Flavell, 1979; Kluwe, 1998; -cited in Wu Hongyun, 2004) Statically, metacognition refers to the accumulated autobiographical information about one's cognition (metcognitive knowledge), whilst dynamically, metacognition stresses the ongoing monitoring and controlling of

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one's own cognition (metacognitive strategies) (Wu Hongyun, 2004). From 1980s, researchers of FL/SL learning began to show great interests in metacognition. Their studies mainly focused on metacognitive strategies, which will be discussed in detail in the following part.

2.2 Metacognitive Strategies

2.2.1 Definition and Classification of Metacognitive Strategies

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).

Brown et al. (1983) defined metacognitive strategies as "higher order executive skills that may entail planning, monitoring, or evaluating the success of a learning activity." These strategies are sequential processes that one uses to control cognitive activities, and to ensure that a cognitive goal has been met.

According to O'Malley & Chamot (1990), metacognitive strategies involve thinking about the learning process, planning for learning, monitoring of comprehension or production while it is taking place, and self-evaluation after the learning activity has been completed. Cohen (1998) describes metacognitive strategies as dealing with pre-assessment and pre-planning, on-line planning and evaluation, and post-evaluation of language learning activities and of language use events. Such strategies allow learners to control

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their own cognition by coordinating the planning, organizing, and evaluating of the learning process.

Metacognitive strategies include an awareness of what one is doing and the strategies one is employing, as well as knowledge about the actual progress of learning. They also include an ability to manage and regulate consciously the use of appropriate learning strategies for different situation. The use of metacognitive strategies ignites one's thinking and can lead to more profound learning and improved performance, especially among learners who are struggling. Students without metacognitive approaches are essentially learners without direction or opportunity to plan their learning, monitor their progress, or review their accomplishments and future learning directions (O'Malley & Chamot, 1990).

There are mainly two attempts to classify metacognitive strategies. According to Oxford (1990), metacognitive strategies can be broadly classified into three groups: (1) centering your learning; (2) arranging and planning your learning; (3) evaluating your learning. But more widely accepted classification is given by O'Malley & Chamot (1990). They divided metacognitive strategies into four categories:

1. Selective attention for special aspects of a learning task, as in planning to listen for key words or phrase;
2. Planning the organization of either written or spoken discourse;
3. Monitoring or reviewing attention to task, monitoring comprehension for information that should be remembered, or monitoring production while it is occurring; and

4. Evaluation or checking comprehension after completion of a receptive language activity, or evaluating language production after it has taken place.

2.2.2 Metacognitive Strategies and Cognitive Strategies

In order to have a better understanding of metacognitive strategies, a distinction between metacognitive and cognitive strategies should be made. First, let's see the distinction between metacognition and cognition. Garner (1987, -cited in Wey, 1999) distinguishes cognition and metacognition as that if cognition involves perceiving, understanding, remembering, and so forth, then metacogniton involves thinking about one's own perceiving, understanding and the rest. Every act of cognition is directed toward a goal and to achieve that goal. However, metacognition, as "thinking about thinking", involves overseeing whether a cognitive goal has been met. This should be the defining criterion for determining what is metacognitive.

Accordingly, one can distinguish cognitive strategies from metacognitive strategies. A cognitive strategy is one designed to get the individual to some cognitive goal or sub-goal, while the purpose of metacognitive strategy is no longer to reach the goal, but rather to feel absolutely confident that it has been reached. For example, sometimes one reads things slowly simply to learn the content (cognitive strategy); other times one reads through things quickly to get an idea of how difficult or easy it is going to be to learn the content (metacognitive strategy).

Therefore, cognitive strategies are seen as mental progress directly

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concerned with the processing of information in order to learn, i.e. from information obtaining, storage, retrieval to the use of it. Metacognitve strategies are those operating at a different and higher level, which involve learners stepping outside their learning, as it were, and looking at it from the outside.

However, the distinction between metacognitive and cognitive strategies is not always clear-cut. Metacognitive and cognitive strategies may overlap in that the same strategies, such as questioning, could be regarded as either a cognitive or a metacognitive strategy depending on what the purpose for using that strategy may be. For example, one may use a self-questioning strategy while reading as a means of obtaining knowledge (cognitive), or as a way of monitoring what one has read (metacognitive). Metacognitive and cognitive strategies are closely intertwined and dependent upon each other, any attempt to examine one without acknowledging the other would not provide an adequate picture.

2.2.3 Metacognitive Knowledge and Metacognitive Strategies

As two main components of metacognition, metacognitive knowledge and metacognitive strategies are "in reciprocal relationship" (Wenden, 1987). On the one hand, it is through metacognitive strategies that metacognitive knowledge is utilized — brought to bear upon or applied to a learning task. The insights gained through the exercise of these "metacognitive strategies" can be assimilated into one's existent metacognitive knowledge base to develop, revise and refine it (Cavanaugh & Perlmutter, 1982).

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On the other hand, the use of metacognitive strategies is to a large extent determined by the user's level of metacognitive knowledge. We know metacognitive knowledge includes knowledge of general strategies that might be used for different tasks, knowledge of the extent to which the strategies are effective, and knowledge of the conditions under which these strategies might be used (Flavell, 1979; Schneider & Pressley, 1997; Pintrich et al., 2000). It is based on this knowledge that learners can develop their ability to choose appropriate strategies in specific learning tasks. In other words, metacognitive knowledge is an essential pre-requisite for proper use of strategies. For example, learners can know about different strategies for reading a textbook as well as strategies to monitor and check their comprehension as they read. Learners also activate relevant knowledge about their own strengths and weaknesses pertaining to the task as well as their motivation for completing the task. Suppose learners realize they already know a fair amount about the topic of a chapter in a textbook (which they may perceive as strength), and that they are interested in this topic (which may enhance their motivation). This realization could lead them to enhance their approach to the task, such as adjusting their reading approach or rate.

In addition, metacognitive knowledge is also very important when the task is difficult or unfamiliar. Without metacognitive knowledge, learners often feel hard if not impossible to use appropriate strategies when dealing with difficult or unfamiliar tasks, which will at last lead to fossilization in strategy application. With the help of metacognitive knowledge, learners reconsider and restructure their strategies, knowing not only "how" but also "why" and "when" to use those strategies in performing tasks. Therefore,

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when facing unfamiliar or difficult tasks, learners can transfer proper strategies into them depending on this knowledge.

2.3 Metacognitive Strategy Training

Metacognitive strategy training is an important part of the study of metacognitive strategies in the field of FL/SL learning. In order to develop autonomous or independent learners, more and more researchers turn to metacognitive strategy training for help. Generally, the training of metacognitive strategies is combined with the training of other learning strategies. In this section we will first introduces some different approaches in training learning strategies. Then some studies on metacognitive strategy training in EFL writing that carried out by previous researchers will be reviewed.

2.3.1 Different Approaches to Strategy Training

2.3.1.1 Separate versus Integrated

There are three arguments about whether instruction in learning strategies should focus only on learning strategies instruction or should be integrated with classroom instruction in the language or content subject. Those in favor of separate training advance the notion that strategies are generalizable to many contexts (Derry & Murphy, 1986; Jones et al., 1987) and students will learn strategies better if they can focus all their attention on developing

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strategic processing skills rather than try to learn content at the same time (Jones et al., 1987).

On the other hand, some researchers are in favor of integrated strategy instruction. They argue that learning in context is more effective than learning separate skills whose immediate applicability may not be evident to the learner (Wenden, 1987) and that practicing strategies integrated with content instruction encourages students to transfer new strategies to similar tasks and discover the applicability of the strategies.

Another argument suggests learning strategy training integrate both content-independent strategies and content-dependent ones (Derry, 1984). They propose a mode of a combination of separate training and integrated training, in which students receive short periods of separate strategy training followed by reminder to use the strategies in content classrooms.

2.3.1.2 Direct versus Embedded

The other two approaches to instruction of learning strategies are direct and embedded approaches, which are also called explicit and blind approach by Cohen (1998) respectively. In direct or explicit instruction, students are informed of the purpose and importance of the strategy training, and provided instruction on the regulation and monitoring of strategies. That is, the metacognitive component has been added to strategy training, which is very helpful in maintaining strategy use over time and in transferring strategies to new tasks (Brown et al., 1986; Palincsar and Brown, 1986, -cited in O'Malley & Chamot, 1990).

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In embedded or blind instruction, students are presented with activities and materials structured to elicit the use of the strategies being taught but are not informed of the reasons why this approach to learning is being practiced. And in embedded instruction, students are not told the rational or intent of the strategy instruction because the researchers wanted to "avoid as much as possible the impact of enthusiasm sometimes generated by an experimental situation" (Barnett, 1988). The criticism of this approach of strategy training is that students who are not aware of the strategies they are using do not develop independent learning strategies and have little opportunity of becoming autonomous learners (Wenden, 1987).

2.3.2 Studies of Metacognitive Strategy Training in EFL Writing

Although there has been considerable studies and researches on strategy training in general, very little of them have focused on strategies that learner use in EFL writing, and the metacogntive strategy trainings in this aspect are even fewer.

Aziz (1995, -cited from Macaro, 2003) compared the effect on overall writing performance and grammatical agreement of two different sorts of writing strategy training. She divided a group of 72 university students into two groups. The first group received strategy training only at the cognitive level. The second group received the same training as the first group but in addition received training in metacognitive strategies, that is, in self-monitoring and self-evaluation. In fact the second group was encouraged to "pair" their cognitive and metacognitive strategies. She found:

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1. On average the overall writing quality on the composition did not improve as a result of the cognitive training alone.

2. The group that received cognitive-strategy training only, did improve on grammatical agreement.

3. Those students who received paired cognitive and metacognitive strategy training did significantly better on both overall writing quality and grammatical agreement.

Conti (2001, -cited from Macaro, 2003) devised a one-year program of writing strategy training for 10 university students ranging from lower to upper intermediate of writing. This training focused on monitoring, which is one important aspect of metacognitive strategies. At the end of the training program the students made gains, when compared to another very similar group of students who had not received strategy training, in that they significantly reduced their number of errors (both lexical and grammatical) without prejudicing or reducing the quality of the content of their writing. The data showed that they did this largely by increasing the monitoring of their writing for familiar errors and that the number of errors that they self-corrected increased.

In China, only recently has metacognitive strategy training begun to receive attention in the teaching of English language writing. Du Aihong (2004) conducted a study on metacognitive strategy training in College English writing. In her study, 269 college students of non-English major were divided into three groups: the metacognitive group, the cognitive group and

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control group. The metacognitive group received metacognitive strategy training in writing class; the cognitive group received instruction on cognitive strategies only and the control group received no strategy training in writing. Results of statistical analyses showed that only the metacognitive group made statistically significant improvement in their writing performance. Therefore, it proves to be an effective way for English learners to learn and practice metacognitive strategies to improve their writing.

From these researches we can conclude metacognitive strategy training is very necessary to improve students' writing proficiency and it also appears to be effective.

So far, the studies of metacognitive strategies in FL/SL learning have been presented. These studies contribute a lot to the improvement of students' learning abilities. However, few of these studies touched metacognitive knowledge, and the study of metacognition in the field of EFL writing is still lacking. Therefore, in-depth study of metacognition, including both metacognitive knowledge and metacognitive strategies in foreign language learning especially in EFL writing is quite necessary.

Chapter Three Metacognition in EFL Writing

In the first part of this section, we will have a more detailed discussion on metacognitive knowledge in the field of foreign language learning, especially in EFL writing; and in the second part, the execution of metacognitive strategies in EFL writing will be discussed.

3.1 Metacognitive Knowledge in EFL Writing

3.1.1　Person Knowledge

In language learning, person knowledge specifically refers to the beliefs one has about oneself and others as language learners as well as of factors influencing one's language learning (Victori, 1995). This knowledge includes the beliefs related to the learners' self-concept (personal attribute, deficiencies, and learning styles), and knowledge about one's language proficiency, about perceived progress over time, and about affective factors that facilitate or hinder learners.

The significance of person knowledge lies in the important effect they have on learner's feeling, future expectations，approach to language learning, and in self-esteem sand self-concept (Tjomas, 1979; Torgessen, 1982; Weiner, 1979, -cited in Victori, 1995) depending on their assessment of whether success is likely. The learners' expectations for future performances are closely

tied with the concept that learners developed of themselves. These expectations will in turn, result in the preservation of the initial self-concept and an increase or decrease of the students' self-confidence, attitude and motivation. Therefore, students who have a high self-concept of their learning ability will be more confident of their own ability to learn and believe that they have a high probability of success at a future task. However, students who hold a low self-concept of ability, lack confidence of themselves as learners and tend to have a low expectancy of success. These learners are likely to feel hopeless, blocked and develop extreme degrees of anxiety as well as an indifferent, passive attitude towards their learning (Victori, 1995).

Although the importance of these factors has not been extensively analyzed in research on EFL writing, there are a number of studies that point out the need to consider those beliefs. In the research of EFL writing, these effects have been termed as "writing apprehension" (Daly, 1985) or "writers' block" (Rose, 1980). According to her study, Miller (1991) found that how the L2 writers view themselves and their confidence precluded them to take the necessary risks for growth in writing, and students, who disliked or hated writing or simply did not care about it, were students who had developed a negative view of themselves as writers. Similarly, in examining the variables associated to the phenomenon of the writer's block, Rose (1980) referred to the distrust of writers towards their own abilities and an aversion toward the composing process itself.

All in all, the conception that L2 students hold of themselves as writers plays a significant role in their writing development as it can affect their self-concept, their feelings and attitude towards their composing as well as the

kind of expectations they develop for their future written outcomes. The problem with person knowledge, therefore, is not with students who are successful but with those who usually experience failure in their writing, as it often leads them to develop negative feelings such as depression, helpless, anxiety, writer's block as well as approaching their learning and writing with passive and counter-productive attitude (Horwitz, 1986; Howard, 1988; -cited in Victori, 1995).

3.1.2 Task Knowledge

In language learning, task knowledge refers to the beliefs that learners develop about the knowledge, skill and resources needed for understanding certain tasks as well as about the degree of effort required and difficulty involved in performing them (Victori, 1995). Task knowledge plays a crucial role in regulating and understanding of the writing task.

In foreign language composition, different bodies of knowledge need to be drawn. The basic one is language knowledge, for example, the spelling of words, the linguistic forms and conventions, such as the knowledge of the grammatical and syntactic rules and other conventions that govern word and sentence order.

Language knowledge is not enough to ensure that the L2 writer will be able to write coherently. The text should have a semantic unity and not simply a unity of form (Halliday & Hassan, 1976). Thus, at a more complex level, the L2 writer needs to draw on other types of conventions that assure the text will have overall coherence and cohesion. For example, Halliday and Hassan (1976)

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identified five types of cohesive "tie": using pronominal references, ellipsis, substitution, lexical repetitions or paraphrases and conjunctions or connectors. Besides these considerations, the writer also has to make sure that the transitions between ideas are clear enough and that they all contribute to the semantic and coherent unity of the text.

At a more abstract level of EFL writing, the knowledge on rhetorical patterns of overall structuring and organization should be drawn. That is, the writer has to consider the genre of text he or she is trying to write, as well as the formal patterns that will shape the text according to that particular genre; for example, the narrative conventions of storytelling, or the logical conventions of exposition and argumentation.

Knowledge about the purpose of writing (whether it is to persuade, inform, warn or explain) also needs to be retrieved when composing. By considering writing purpose, the writer regulates and constrains the types of content knowledge retrieved during the act of writing. Furthermore, it is precisely the purpose the writer sets for writing that directs and guides the unity of the text and the structure of the discourse. Neglecting this aspect, often results in the writing of scattered ideas, usually in several paragraphs, which leave the reader with a confusing sense as to where that writing is headed.

Finally, the audience to whom the text is addressed also needs to be considered. Most of the writing we do is ultimately addressed to a reader, and this is the one that will have to make sense of what we have written. Kirsch and Roen (1990) assert that there are a number of factors within the general concept of audience that constrain the decision of the writer in the process of

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text production. Grabe and Kaplan (1996) identify five parameters of audience influence over the production of discourse. These five parameters include:

(1) the number of persons who are expected to read the text;

(2) the extent of familiarity of the readers with the writer;

(3) the status of the readers in relation to the writer;

(4) the extent of shared background knowledge between the readers and the writer;

(5) the extent of shared specific topical knowledge between the readers and the writer.

These considerations determine the amount, detail, and explicitness with which content will be presented.

Thus far, the different bodies of knowledge needed when undertaking a writing task have been addressed. Each of them needs to be retrieved by the L2 writer if successful written communication is to be achieved.

Task knowledge of writing is essential in appropriately use of writing strategies. In other words, before applying writing strategies adequately, students first need to assess whether they have enough knowledge to undertake the writing task, and second, whether those strategies are appropriate to deal with problem. Expert L2 writers are believed to consider task knowledge in carrying out a writing task, that is, they have domain specific knowledge which helps them undertake their strategic approach effectively. This, and not the amount of strategies they know, is what seems to distinguish them from novice L2 writers (Wenden, 1993, -cited in Victori, 1995).

Enhancing one's knowledge of the nature of the writing task is also necessary to be able to transfer strategies or knowledge previously learned

with new tasks (Wenden, 1995). That is, students have to be able to assess whether the current writing task (type, demands and constraints) is comparable to tasks previously done in order to decide whether the strategies and knowledge previously learnt are also applicable here.

Finally, task knowledge clearly interacts with person knowledge and vice versa. That is, we seem to select, evaluate and abandon tasks, goals, and strategies, according to our perceived abilities and interests with respect to that enterprise (Flavell, 1979). Thus, enhancement of task knowledge, for example, deciding whether a writing task is easy or difficult, allows us to assess whether we have the abilities or are competent enough to cope with the task, or whether the task will be a thread to our self-concept (Wenden, 1995).

To sum up, it is very necessary to develop EFL writer's awareness of task knowledge in writing, that is, the writers should be able to recognize that some writing tasks place more demands than others; that different writing tasks may have different purpose which require domain-specific knowledge; and that the successful application of strategies will mostly depend on consideration of this knowledge (Victori, 1995).

3.1.3　Strategy Knowledge

According to Wenden (1987), strategy knowledge includes: knowledge about strategy use; knowledge about the effectiveness of certain strategies; and knowledge about the principles underlying the choice of strategy. For example, advanced planning may help organize argumentative-type essays, and that leaving the text aside for some days will provide a more objective perspective

for revising one's work.

Personal factors, such as writers' learning style, cognitive style, educational background and experience may clearly influence the choice of writing strategies and their perception of the strategy usefulness. This is very important in strategy training. If students are already familiar with the writing strategies, or else the teacher tries to impose on them strategies that are completely unfamiliar to them, they may perceive strategy training in writing as a waste of time and resist learning them.

For strategies to be effective, these should be task-based, and flexible enough to accommodate to the purpose, demands and constraints of the writing task. Strategy knowledge should entail knowing for which writing tasks and circumstances strategies will be more effective. Without taking into account the degree of difficulty, type of writing task or purpose involved in performing a task, not only affects strategy choice but also its successful implementation.

It is also important to be aware of the rationale for using those writing strategies, and to know how to use them in order to facilitate their application to new writing tasks as well as their maintenance over time. As point out by Brown and Plincsar (1982), when students' strategy knowledge is enhanced, that is, they (a) are told about the significance and correct use of strategies; (b) are shown how to monitor and evaluate their use; (c) are informed about the strategies that are more appropriate for certain types of tasks and purpose, and (d) are shown when to use them, maintenance of strategies over time, and their transfer onto new situations is usually ensured. Providing this rational to students increases the students' motivation for using and maintaining a new

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writing strategy because its significance for the students is immediately revealed.

3.2 Metacognitive Strategies in EFL Writing

Wenden (1993) made a classification of writing strategies according to a metacognitive and cognitive framework. That is, she distinguishes between the general executory metacognitive strategies of planning, monitoring and evaluating, and the more specific cognitive strategies, such as clarification, retrieval, resourcing, avoidance and verification. In this section, we will have a detailed discussion on the three aspects of metacognitive strategies in EFL writing.

3.2.1 Planning

The planning in writing involves several thinking and self questioning strategies, such as identifying one's purpose, activating background knowledge, and organizing brain-stormed ideas. Planning is not limited to a specific stage or time period, but it can be observed throughout the writing process.

Flower and Hayes (1981) differentiates between three different types of planning strategies depending on the focus of the goal: generating ideas, setting procedural goals and organizing. Generating ideas entails strategies as retrieving information from long-term memory, rating old ideas with new information, drawing inferences, making connections, looking for examples,

contradictions, objections, and so on. The information retrieved must be made to fit the constraints of formal prose and the characteristics and needs of the reader.

Setting procedural goals are other forms of planning strategies. Two types of goals that writers typically drawn on are content goals, which set objectives in what to achieve; and process goal, which set objectives in how to proceed. Content goals are defined as plans for content, text structure and audience, and criteria for evaluating these things (Flower & Hayes, 1981). Process goals are generated by the writer at any time in the composing process, following or proceeding generating ideas, revising strategies, and so on. They are usually stated in the form of self-instructions, and they are often the result of monitoring strategies. That is, by monitoring the process of the composing, and identifying problems, the writer is led to take some kind of action, which translates in the planning of new process goals or in the revision of ones already articulated. Therefore, process plans are created to respond to specific situations and contexts and are bound to future revisions.

The function of organizing is to select the most useful materials retrieved by the generating process and to organize them into writing plan. Organizing strategies include grouping and sequencing ideas, deciding on the presentation of the text, planning the introduction and conclusions, and structuring the text according to a particular genre. To undertake these strategies, consideration of audience, topic and rhetorical knowledge is essential.

With respect to the importance of planning in EFL writing, MacArthur, Harris and Graham (1994, -cited in Wey, 1999) examine the difference between expert L2 writers and less skilled L2 writers. Good foreign language

writers spend considerable time planning ways to enhance cognitive processes, and they appear to have more high-level plans and self-conscious control of their planning. However, less skilled EFL writers are less likely to use knowledge of text structure in planning, to use heuristic strategies in searching memory for content and to use goals to direct the writing process. Instead of forming goals and writing to these goals, less skilled L2 writers are more likely to engage in what has been called "knowledge telling", that is, they write down everything they know about a topic, in the order that ideas come to mind. And they stop writing when they feel that they have written down everything they know. Because less skilled writers do not write from goals and plans, they tend to generate ideas by way of associative thinking rather than heuristic search and often do not organize these ideas in any way. As a result, their stories, essays, and arguments often lack conceptual coherence let alone rhetorical coherence. (Byrnes, 2001)

In short, planning in EFL writing is crucial because it determines the writers work in subsequent stages. It brings writers to engage in cognitive activities that allow them to consider purpose and goals for writing, identify their audience, decide upon voice, and generate framework for their papers.

3.2.2 Self-monitoring

Central to difference between cognitive and metacognitive strategies is the ability to monitor the processes (Flavell, 1987). In writing, the monitor represents the conscious control and regulation of processes exercised by the writer. Hayes and Flower (1980) included monitoring in their model of the

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cognitive processes and noted that the ability to monitor the composing process is the important part of strategies in writing.

Charles (1990) claims that self-monitoring makes it easy for L2 students to express uncertainty about any part of their text, and to receive direct answers to their queries, and "encourages students to look critically and analytically at their writing and to place themselves in the position of readers." Macaro (2001, - cited in Macaro, 2003) found that effective writers were those that monitored and check their work as they composed. These students were much more likely to:

1. check the spelling of words;

2. check the word order;

3. check endings of words;

4. that it make sense;

5. read the writing out loud to see if it sounded right;

6. look for mistakes they made all the time.

However, monitoring is not restricted to the local problems, and as Cresswell (2000) pointed out that if the student writer's focus too much on language problems might be at the expense of crucial attention to global concerns, such as checking logicality, relevance of single ideas to the global argumentation pattern, and appropriateness of content to the given reader.

The more important function of monitoring is controlling, directing and sequencing the composing processes as well as one's progress in the task. It is the monitor that allows the writer to take decisions as to whether something needs to be retrieved; whether new ideas have to be further generated; whether a given sub-process has come to end, and so on.

Writing is emphasized as goal-directed activity (Hayes & Flower, 1986). The monitoring allows writers to move from one process to the next determined by the writer's goals. A writing goal may also be reformulated during the composing process, if necessary. And during the formulating process, the writers have to monitor if the plan is stick to the forms of expression in paper or if they should alternate the plan, etc. Self- monitoring allows L2 writers to evaluate the effectiveness of writing strategy, and how and when to invoke writing strategies appropriately, check outcomes of problem-solving processes and strategically regulate process toward cognitive goals (Mayer, 1998, -cited in Wey, 1999).

3.2.3   Self- evaluation

In writing, self-evaluation implies an assessment that the writer makes either of the text produced or of the planned thought. In cognitive research, evaluating has been characterized as a strategy that one displays when considering the outcome of the task undertaken. It is, in fact, perceived as an essential metacognitive strategy that successful learners need to display to execute and control their learning.

Self-evaluation is an essential step in effective EFL writing (Miller, 1982). Self-evaluation — experiencing the quality of one's writing in relation to subjective standards — is crucial to the development of an individual's perception of writing as an important and "natural" way to investigate problems and represent ideas. In self-regulation, students can recognize weaknesses, identify needs, try to make changes, and then note whether or not

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those changes took place in the next writing (Beach, 1975).

In a research project, MaCarthy, Meier, and Rinderer (1985), found a strong relationship between L2 writer's evaluation of their own general skill and the overall quality of their written products. Beach (1975) raised several advantages to extensive use of formal self-evaluation:

1. It can provide the writer with some specific short-term indicators of his growth in foreign language writing; note some consistent changes or improvements. Students may never have been aware of his writing behavior or changes had they not evaluate themselves.

2. Self-evaluation can complement the teacher's evaluation in writing. Teachers have developed some effective criterion-referenced growth measures in writing abilities, but these measures often do not get at the minute day-by-day experiences of students. Teachers have difficulty keeping up with the many unique individual changes that are constantly occurring. A teacher cannot be everywhere at the same time, recalling individual levels of performance. Moreover, teachers are often reluctant to be peering over students' shoulders because they want students to develop some degree of autonomy.

3. Self-evaluation can also encourage students to think about the teacher's evaluation more carefully and critically than is often the case. When a student is evaluated by a teacher, he often accepts it without really thinking about the evaluation — without considering its validity in relation to his behavior. In order to question or react to the teacher's evaluation, he must consider his own behavior from his own perspective and then compare that

with his teacher's perspective.

The self-evaluation process comprise both self-judgments of present writing performance by comparing it to one's writing goal and self-reactions to those judgments by deeming performance noteworthy, unacceptable, and so forth. Positive self-evaluation leads students to feel efficacious about writing and motivated to continue to work diligently because they believe they are capable of making further progress (Schunk, 1991). Low self-evaluation of progress and negative self-reactions will not necessarily diminish self-efficacy and motivation if students believe they are capable of succeeding but that their present approach is ineffective (Bandura, 1986). Such students may alter their self-regulatory processes by working harder, persisting longer, adopting what they believe is a better strategy, or seeking help from teachers and peers (Schunk, 1990).

These and other self-evaluative activities are likely to lead to success in EFL writing (Zimmerman & Martinez-Pons, 1992). A measure of self-evaluation showed that the greater the dissatisfaction and the higher the self-efficacy the stronger was the subsequent effort expenditure (Schunk, 1996). Therefore, practice in writing becomes developmental (instead of merely incremental) only if self-evaluation follows it. Those who do not evaluate their own writing do not gain from having written. When we complete any written task without later valuing it in relation to similar experiences, we may fail to internalize new images of ourselves. Relate a new event to one's prior authentic values completes that event by associating it with our past experiences in writing. Without such judgments, new events are

not occasions for growth. However, in EFL writing, we should also keep one thing in mind, that is, we should not encourage or engage in self-evaluation prematurely. Teaching one's writing as a product to be judged while it remains open to the possibility of revision may prevent completion or at least make improvement impossible.

To summarize, metacognition development is designed to help student writers master the high level cognitive processes involved in composing; to develop autonomous and self-regulated use of effective writing strategy; and to form positive attitude about writing. Metacognitively oriented learners are aware of both their own learner characteristics and the task demands, are able to select, employ, monitor and evaluate their use of strategies. However, in China, the study of metacognition in College English writing is still lacking. In the following chapter, an empirical study will be carried out to explore the present situation of Chinese college students' metacognitive proficiency in English writing and the effect of metacognitive training on students' English writing performance.

Chapter Four An Empirical Study

4.1 Objectives

The present study attempts to answer the following three questions:

1). What is the general situation of Chinese college students' metacognitive proficiency in English writing and to what extent do good English writer differ from poor English writers in terms of metacognitive behavior?

2). Can metacognitive training have a positive effect on the writing performance of Chinese college students?

3). Does metacognitive training have equal impact on the writing performance of students at different levels?

4.2 Subjects

There are totally 60 students from two classes of Changchun Taxation College participated in the study. One class of 31 students with 17 males and 14 females served as the experimental group and received metacognitive training in their writing. The other class of 29 students with 16 males and 13 females comprised the control group and just received the routine writing teaching. All the students are sophomore non-English majors, and none of

them ever received any training on metacognition and writing strategies. The scores of last semester's final examination show that the students of the two classes are at the same level. The average score of the two classes is 72.3 and 71.6. And the results of the pre-test that conducted before the experiment show that there is no significant difference between these two classes in writing proficiency(t=-0.246, p>0.8).

Table 4.1: Independent-sample T-test of pretest scores between the two classes

	N	M	SD	T	P
EG	31	8.55	2.40	-0.246	0.807
CG	29	8.59	2.20		

4.3 Instruments

4.3.1   Open Questionnaire

The Writing Autobiography and Cognitive Style Questionnaire are used to test students' metacognitive knowledge in English writing. Both of these two tools ask students to describe their own behavior and experiences in writing and articulated their understanding of task and strategies. The Writing Autobiography and Cognitive Style Questionnaire have been used by previous researchers (Sandman, 1993; Sandman & Weiser, 1993; Devine, Railey & Boshoff, 1993; and Kasper, 1997) to assess students' metacognitive models in writing. The open questionnaire is administered to all students as both a pre-test and a post-test to determine whether there is any change at students'

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metacognitive knowledge after the training. In order not to have level of English language proficiency affect the results on the questionnaire, the content of the questionnaire is translated into Chinese (See appendix A and B).

4.3.2 Close Questionnaire

There is no settled questionnaire for the testing of metacognitive strategies in the aspect of English writing. After doing relevant research on metacognition, and some questionnaires about writing strategies and metacognition in second language learning set by other researchers (Oxford, 1990; Jiang Yingjie, 2003; Petric & Czarl, 2003; Du Aihong, 2004; Wu Hongyun, 2004), the author designed the close questionnaire by herself (See appendix C). The questionnaire is intended to measure the students' employment of metacognitive strategies in English writing. Before the real administration of the questionnaire, the author asked advices of some veteran teachers and their fellow students. Based on their suggestions, some revisions were made. The final form of the questionnaire consists of 30 items which are divided into 3 parts: planning strategy, self-monitoring strategy, and self-evaluation strategy, with each part contain 10 items. The questionnaire are scored by using the five-point Likert scale: 1=never or almost never true of me; 2=usually not true of me (less than half of the time); 3=somewhat true of me (about half of the time); 4=usually true of me (more than half of the time); and 5=always or almost always true of me. The close questionnaire is also presented in Chinese.

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4.3.3 Composition Test

All subjects of the two classes are required to take a pre- and post-course composition test. The test provided data for measuring subjects' writing proficiency, and to determine whether there is improvement in their writing performance after training. The topic for pre- and post-course composition test is "Students Doing Part-time Work" and "Stop Cheating on Campus" respectively. Before the study, the two tests were given to sophomores of an intact class in the same university. Both tests are completed in class time. The results of the paired-sample T-test shows that the two tests are of the same difficulty (t=-0.171, p>0.8).The original data are provided in appendix E.

Table 4.2: Paired-sample T-test of the two composition tests

	N	M	SD	T	P
Pre-test	31	8.45	2.5	-0.171	0.865
Post-test	31	8.48	2.2		

4.4 Process of the Training

Both the experimental and the control groups followed the normal syllabus. The students in the experimental group also received the mtacognitive training in writing which lasted for 10 weeks. In the instruction, the students' metacognitive knowledge in writing was promoted, and the metacognitive strategies in writing were also taught.

The training was integrated into the regular classroom learning activities

rather than being presented in a separate lesson. The students in the experimental group received explicit metacognitive training in writing, and since metacognitive strategies have best effects when they were combined with other strategies, some other writing strategies were also available to the students in the instruction.

4.4.1　Preparation

In this phase students general situation of metacognitive awareness in writing were examined by the open questionnaire. And the close questionnaire was used to identify the metacognitive strategies that were already used by the students. The following training of metacognition in English writing is based on these information which enable the instructor to develop individualized strategies for supporting each student in the effort to develop English language writing competence. By these methods, students' metacognitive awareness was also promoted. Metacognitive awareness is a pre-requisite for students to efficiently engage in writing process by means of overt cues.

In addition, the importance of metacognitive knowledge and metacognitive strategies as well as the objectives of the training were explained to the students so that students could have a general idea about the purpose, procedures and effectiveness of this instruction.

4.4.2　Presentation

In the presentation phase, the metacognitive strategies in writing were

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presented and explained to students. First, a handout (See appendix F) including different metacognitive strategies in writing was distributed to the students. Then, the teacher talked about the characteristics, usefulness, and applications of the strategies explicitly through examples and illustrated her own strategy use through writing tasks. Learners were explicitly taught about the variety of writing strategies, and how, when, where to use these strategies in writing.

The teachers made sure that students comprehend these strategies so that they would be able to practice them meaningfully in the next phase of the lesson. Some of the writing strategies taught in this phase were planning, exploring ways of expressing, developing text, examining and refining writing, revising and editing, acting as readers, etc. The metacognitive strategies like the preparation and planning, monitoring of strategy selection and use, orchestrating use of several strategies, and evaluation of effectiveness of metacognitive strategies for writing were introduced by demonstrating some model essays.

In this phase, the metacognitive knowledge especially the task knowledge was also introduced to the students. For example, some purposes for writing, such as providing factual information, convincing readers of a point, persuading someone to act or think in a certain way or evoking a certain mood were introduced. Keeping students well aware of the writing task helped them make practical plans for learning. Of course, this knowledge was also enhanced during the instruction.

4.4.3   Examples of Training Activities

In this phase, students were provided opportunities to practice the metacognitve strategies that they were exposed to in the last phase. They were asked to make conscious effort using the metacognitive strategies in combination with other writing strategies in their writing tasks. In addition, the metacognitive knowledge in writing was also enhanced through practice. Some of the examples of the activities were given in the following part.

4.4.3.1 Self-questioning

Rationale:

Questioning and self-questioning are effective ways of promoting self-directed learners. The purpose of self-questioning is to guide the writer's performance before, during and after task performance. Therefore, the metacognitive strategies, planning, monitoring and evaluating can be used consciously by the learners. Self-questioning can also improve self-awareness and control over one's thinking, and improve the ability to apply and transfer knowledge and strategies students learn.

Time: 30 minutes

Materials: 1) a composition topic; 2) a list of questions that students should consider during writing. For example:

Planning	Self-monitoring	Self-evaluation
What is the purpose of this essay? What should be in the introductory paragraph? How should I put these ideas in the best order?	Am I elaborating on all of my main points? How clearly am I expressing my ideas? Am I making any spelling or grammar mistakes?	What was best about my paper? Why did I make those spelling and grammar errors? How can I best prevent those mistakes next time?

Procedure:

1. Give the topic to the students and have them consider the questions in the list when they are writing.

2. After students finished writing, ask them to discuss the questions in the list and the compositions they write in pairs or small groups, so that they can have a deeper understanding of these questions. At the same time, the teacher also gives feedbacks on their questions and answers.

3. Have students generate their own self-questions in writing process and add them to the list. Encourage them to keep a readily accessible prompt sheet for their own self-questions to stimulate their thinking in the process of writing.

4. Have students to consider these questions in their future tasks, so that they can employ the metacognitive strategies like planning, monitoring and evaluating automatically in their writing.

4.4.3.2 Cooperative Writing Response Groups

Rationale:

This activity offers students a valid audience and purpose to write for, and stimulates awareness of what is expected of them. It encourages students to move away from writer-based prose, where there is little consideration for the reader, towards reader-based prose, where the interaction between the writer and the reader is crucial. In addition, cooperative writing response groups lead to consciousness-raising about the writing strategies, especially the monitoring, revising and evaluating of their writing.

Time: 30 minutes

Preparation:

Select one topic through teacher-student negotiation. Then the students developed it at home before bringing their first drafts for the writing response session.

Procedure:

1. Put the students into groups of three or four. Have them take turns to read their paragraphs aloud to group members.

2. After each author has finished reading his/her work, group members should complete the following tasks:

   · write down what you think is the main point;

   · answer the question: "What does the author say that is important?"

   · comment on something you learnt;

   · write down one idea/view you like, and tell the author why you like it;

   · write down one idea/view you disagree with, and offer the author an

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alternative perspective;

- ask the author to reread confusing parts, ask questions, ask for clarification, give your opinion, give examples, make suggestions for improvement on content, etc.

4. Have students revise their compositions based on the response of the group members.

Variation:

This example focuses on the content and meaning of the composition. Similarly, activities can also be designed to focus on the grammar or style of students' writing.

4.4.3.3 Keeping a Writer's Diary

Rationale:

Diary is an effective way for students to evaluate their writing. By keeping a writing diary, they are able to reflect on their progress and develop more accurate self-assessment skills. And since they are the principal readers of their own diary, they are likely to be honest, and even self-critical.

Material: an exercise book or notebook suitable for use as a diary.

Procedure:

On occasions such as when there has been a useful discussion of writing in class, or when a piece of work has been returned, the teacher will ask the students to write a short diary entry. They can write a comment on their own progress, or on a particular piece of work, or on what they learnt, or on the responses they are getting from the teacher, or on how they evaluate their work

and that of classmates. They can also write about their feelings on some writing task; their strategies they used in their writing and the difficulties they met.

Follow-up:

The diaries are taken in from time to time to make sure that they are kept conscientiously, and some comments are also made on them by the teacher.

4.4.4 Evaluating and Revising the Training Program

Although, the training program is well planned beforehand, there are still some instructions that may be unprepared and improvisatory based on the emergent learner needs going with the difficulties of particular tasks. Thus, constant evaluation and revision of the program is necessary. The feedback from the students as well as other relevant factors provides most useful information for the improvement of the program. This immediate revision can adjust the instruction to specific language contexts and individual learner needs.

4.5 Data Collection

The pre-test writing and questionnaires were given to the students of both classes at the very beginning of the training. And after 10 weeks of training all the students were given the post-test of composition and questionnaires. The composition test and questionnaires were both administered during class time under the supervision of the teacher concerned. The subjects were given 30

minutes to finish the composition test first, and then 20 minutes to finish the close questionnaire and open questionnaire. When the students were working on the questionnaire, the teacher helped them with one or two statements when they didn't quite understand. On the whole, there were no big problems of understanding.

Both the pre-test and the post-test compositions were graded by two English teachers both of whom have over five years of English teaching experiences. They used holistic assessment methods, which tend to reward writers for their efforts and strength, and less emphasis is laid on errors and weaknesses. They assigned ratings according to the Test of Writing English (TWE) Scoring Guide (See appendix D). The total score of the writing test was 15. The reliability of the essay rating for the two raters was excellent, with an inter-rater reliability coefficient of 0.961 for the pre-test, and 0.956 for the post-test.

According to the scores of the pre-test of writing, the students of both classes were divided into three groups: the high achievers, the intermediate achievers and low achievers. 9 students (5 from EG and 4 from CG) whose score were above 12 (including 12) in the writing test were considered high achievers; 15 subjects (9 from EG and 6 from CG) with score below 7 (including 7) in the writing test were considered low achievers; and the rest 36 students (17 from EG and 19 from CG) whose score were ranging from 8 to 11 were intermediate achievers. The original data of the close questionnaire and the composition test are provided in appendix G.

4.6 Results and Analysis

4.6.1 Open Questionnaire

Students' response to the open questionnaire provided valuable qualitative data that offered important insight into students' own perception of the experience of writing.

Person knowledge The Writing Autobiographies were designed to evaluate the personal component of the metacognitive model for writing. From students' response to this questionnaire, we found most of the students have little knowledge about themselves as writers. The first two questions asked students to describe the good and bad writing experience respectively. But most of the students only described their bad writing experiences. Many students said they felt worst when they had no idea about a topic, or they didn't know how to express their ideas with proper words. For them, English writing was a painful and boring task for most of the time. A few students mentioned their good writing experiences. They said when they were familiar with the topic or when the topic aroused their interests they felt very happy.

As for the third question, "What are your strengths and weaknesses as a writer?" The high achievers showed greater awareness of their writing abilities than the low achievers. Most of the high achievers could explicitly describe the strengths and weaknesses in their writing. For example, "My strength is that I have clear thinking in my writing for most of the time, which may be because that my Chinese composition was very good when I was in the senior-middle school. My weak point is the limited vocabulary. For example, I

can't use some conjunctions properly, and sometimes I can't spell out some words correctly. This might be because I didn't spend enough time in memorizing words." But for the intermediate and low achievers, their responses to this question were much vague. Most of them only described their weaknesses. For instance, "I have too many problems in my writing. My vocabulary is limited. I always make grammatical mistakes and I don't know how to express myself in writing……" From their responses we can find most of the students overemphasized their weaknesses and can't objectively evaluate their English writing.

Task knowledge The Cognitive Style Questionnaire was designed to evaluate the task and strategy knowledge. The purpose of the first and second question was to assess students' understanding of the writing task and its requirements. From students response to these two questions we found nearly all the students emphasized the importance of developing fluency and clarity and the correctness of spelling and grammar. For example, one student answered the first question like this, "I think good writing should clearly express the writer's idea. The words should be used properly, and there is no spelling and grammatical errors." However, most of the students did not take the needs of the reader into account and did not make clear that the purpose of writing was to communicate a message to another person. They thought a reader would automatically understood them if they used correct grammar. The students' view of writing task may be affected by the criteria of writing assessment of CET4 and CET 6, which they will face in a few months. Since most students' major goal of learning English is to pass the CET4 and CET6, their compositions have to accord with the requirement of these two tests,

which place much importance on grammatical correctness and vocabulary. This result verifies the studies of MacGowan-Gilhooly (1990) and Kasper (1997). In their researches, they also found ESL students would readjust their priorities concerning the requirement of writing task when they were faced with a writing assessment that place great importance on grammatical correctness.

Strategy knowledge The third and fourth questions of the Cognitive Style Questionnaire were designed to assess students' strategy variable. Students' response to these two questions showed that they have very limited knowledge about writing strategies in general. The high achievers performed better than the intermediate and low achievers. The response of a high achiever to the third question is like this, "I try to make my essay well-knit, and have some change in the use of words. The proper use of modifier can make the sentence more accurate. I can consciously use these skills in my writing." While the intermediate and low achievers mentioned less writing strategies and some so-called strategies they mentioned were just used to deal with the examination. For example, one student said, "The only strategy I use is to memorize some model writings." As for the fourth question, the successful writers pointed to the importance of finding their solution to writing problems. This attitude was expressed in the following response, "My problem in writing is that I can't remember some words and phrases when I want to use them. And I haven't grasped some form of writing properly. The solution for the first problem is that I will try to use the new learned words in my writing so that I can grasp the usage of these words. As for the second problem, I will study more model writings and do more practice." In contrast, the low achievers and

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some intermediate students did not express persistent attempts to find solutions to their writing difficulties, or just used the avoidance strategy. One student stated like this, "When I don't know how to spell a word, I will replace it with a word that I'm sure of." The other typical response is, "When I have trouble writing, I'll go to look for friends and relatives who know more English to get help." Furthermore, nearly all the strategies mentioned by the students were cognitive strategies; few of them mentioned any metacognitive strategies like planning, monitoring or evaluating. Although they do use some of these strategies in their writing (this can be seen from their response to the close-questionnaire), they use them unconsciously most of the time.

The comparison of the two groups' post-course response to the Writing Autobiography and the Cognitive Style Questionnaire showed that after 10 weeks of training the experimental group had greater awareness in all the three aspects of metacognitive knowledge. In the experimental group, the high and intermediate achievers made greater improvement than the low achievers. In terms of the person knowledge, an important indication of the growth of self-awareness was their emphasis on the progress they had made. A representative student response is, "This semester, my ability in English writing increased a lot. I not only enlarged my vocabulary, but also grasped many strategies, which were very useful in writing." However, some of the low achievers still showed less confidence in English writing, and did not note any progress they had made. This is evidenced in the following student response, "I think I still have a lot of mistakes in grammar. I have a big problem with spelling too. I will never be a good writer, no matter how hard I try." As for the task knowledge, most students still identify fluency and clarity

as the priority in good writing, and they begin to take the reader into consideration, that is, they begin to pay attention to the communicative aspect of writing. But since the CET4 drawing near, the grammatical correctness became increasingly important for them. In terms of all the three individual components of metacognitive knowledge for writing, the strategy knowledge changed most significantly after 10-week training. Most students reported they were more aware of and familiar with writing strategies, especially metacognitive strategies, and they can apply these strategies more appropriately in their writing. For example, a response is like this, "Before training, I knew I should make plan before writing, but I never heard of the strategies like monitoring and evaluation. After this period of training, I know the functions of these strategies, and I can use these strategies in my writing consciously. I think these strategies are really helpful to my writing."

4.6.2 Close Questionnaire

The pre-test of the close questionnaire revealed the general situation of the employment of metacognitive strategies. From table 4.3, we can see the overall mean of the metacognitive strategies (87.89) is very low, which shows that most students use the metacognitive strategies less frequently. Among the three categories, the mean of monitoring strategy is the highest (32.71), and that of self-evaluation strategy is the lowest (25.39). This shows most students did less plan before writing, and their biggest concern was to have the composition go smoothly. In order to make fewer mistakes, the students could consciously monitor their writing. But from their responses to different items

in self-monitoring section, we can see that most of the students just monitored the correctness of the words and grammar, and seldom monitored the strategy use and execution of their writing plan. For most students, as soon as they handed in the essay, the writing task was finished. Only a few of them would make a reflection on their performance.

Table 4.3: Mean and standard deviation of the metacognitive strategies

	M	SD
Planning	29.79	4.38
Self-monitoring	32.71	5.40
Self-evaluation	25.39	5.70
Overall	87.89	11.81

Table 4.4 shows the employment of various categories of metacognitive strategies by students of different levels. From this table we can find, for all the three levels of students, the score of monitoring strategy is the highest and that of the evaluating strategy is the lowest, which is consistent with the result of table 4.3. But the scores of the students at different levels have significant difference. The average score of the high achievers is the highest in all the three aspects, and that of the low achievers is the lowest. This shows that the high achievers use metacognitive strategies more frequently in their writing than the intermediate and low achievers. These results indicate a potential correlation between the employment of metacognitive strategies and students' writing performance.

Table 4.4: Employment of metacognitive strategies by students of different levels

	High achievers		Intermediate achievers		Low achievers	
	M	SD	M	SD	M	SD
Planning	33.2	2.59	30.27	4.28	26.75	3.77
Self-monitoring	36.8	4.66	32.93	4.80	28.5	5.93
Self-evaluation	28.6	5.13	25.8	6.28	22.63	3.89
Overall	98.6	6.80	89	11.80	79.13	7.79

The results from the independent-sample T-test of the post-test scores between the experimental group and the control group showed that the experimental group outperformed the control group in both the employment of metacognitive strategies and composition test.

Table 4.5: Independent-sample T-test of post-test metacognitive strategy scores between the two groups

Class	N	M	SD	T	P
EG	31	94.68	9.05	3.33	0.001
CG	29	86.52	9.92		

Data in table 4.5 shows that there is significant difference in the employment of metacognitive strategies in writing between the experimental group and control group (t=3.33, p<0.01). The students in the experimental group use the metacognitive strategies much more frequently than the control group. From this result we can conclude that after certain period of training,

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students can consciously use metacognitive strategies, like planning, monitoring and evaluating in their writing process.

Table 4.6: Independent-sample T-test of post-test writing scores between the two groups

class	N	M	SD	T	P
EG	31	10.16	2.37	2.61	0.011
CG	29	8.62	2.19		

From table 4.6, we learn that there is a significant difference between the experimental group and control group in their writing performance (t=2.61, p<0.02). This result demonstrates that the metacognitive training really has positive effects on students' writing performance.

Table 4.7: Paired-sample T-test of pre- and post-test metacognitive strategies of the EG

	Pre-test		post-test		T	P
	M	SD	M	SD		
High achievers	98.6	6.80	101.8	4.44	-2.30	0.083
Intermediate achievers	88.88	11.05	97.18	9.90	-5.79	0.000
Low achievers	79	7.30	85.67	8.44	-2.20	0.058

As we can see from table 4.7 and table 4.8 that all the students in the experimental group make improvement in both the employment of

metacognitive strategies and writing performance. But the degree of improvement is different for students at different levels. In the employment of metacognitive strategies, table 4.7 shows that only the intermediate students made significant improvement (t=-5.79, p<0.001).The changes of high and low achievers are moderate.

Table 4.8: Paired-sample T-test of pre- and post-test of composition scores of the EG

	Pre-test		post-test		T	P
	M	SD	M	SD		
High achievers	12.6	0.55	12.8	0.84	-0.53	0.621
Intermediate achievers	8.76	0.97	10.88	1.65	-5.40	0.000
Low achievers	5.89	0.78	7.33	0.87	-5.96	0.000

As for the composition test, table 4.8 shows both the intermediate and low achievers made significant improvement (t=-0.540, p<0.001 and t=-5.96, p<0.001). This result indicates that these two levels of students benefit most from the metacognitive training in writing.

Chapter Five Findings and Implications

In this chapter, we will first discuss the findings of this study. Then based on these findings, some implications for the application of metacognition in the teaching of College English writing are provided.

5.1 Findings of This Study

5.1.1 The Present Situation of College Students' Metacognition in English Writing

5.1.1.1 Insufficient Metacognitive Knowledge

From the study we find that the student' general awareness of metacognitive knowledge is fairly poor. Most of the time, students' attitude toward writing task was conditioned by the topic given to them, that is, when the topic was difficult or they did not have enough ideas or vocabulary to write about it, they dislike composing in English, and therefore, the bad writing experience occurred. Topic knowledge was, thus, clearly perceived by some writers as a handicap to their successful performance in writing. This is a common phenomenon in foreign language writing, since the writers are usually constrained by the linguistic deficiencies of the target language in which they are writing. As for other aspects, differences between good and

poor writers still exist. According to the results, good writers would more likely to hold a higher self-concept of themselves as EFL writers than the poor ones. This, in turn, might have an influence on the way they approach their composing, as the former also reported feeling more confident than the latter.

Concerning what is a good essay, the good and poor writers have a similar view, which could be summarized as: clarity of ideas, a coherent discourse, grammatical correctness, good and interesting content and so on. But the poor writers are more likely to emphasize the importance of the grammatical and lexical accuracy. As for considering the audience, the results revealed slightly more preoccupation on the side of the good writers. However, what becomes evident with these writers is that in an EFL context, considering audience when writing is not a realistic goal since most of the essays they write are usually addressed to a single reader, namely, their language teacher. These students held the belief that when the text is addressed to the teacher, then, content, and therefore, their opinion is not as important as linguistic accuracy is.

As for the strategy knowledge, the students at all levels have little awareness of metacognitive strategies. Most of the time, they just use these strategies unconsciously in writing. The strategies that they can consciously employ are usually cognitive strategies, and most of them are test-oriented. That is, these strategies are just used to produce compositions more acceptable to the teachers or examiners. However, these strategies are not much beneficial to improve their actual writing proficiency. In addition, these strategies are not appropriately or systematically used by the students most of the time, which may be because of their inadequate metacognitive model.

5.1.1.2 Infrequent Use of Metacognitive Strategies

Generally speaking, the students employ metacognitive strategies infrequently in their writing. However, good writers performed better than the poor ones. The good writers usually use more planning strategies throughout the task and use them more frequently than the poor writers. From their responses to different items we can see the good writers not only generate more ideas and alternatives but also set a larger number of procedural and organizational goals. While the poor writers usually lack clear plan and clear purpose in their writing, and they are less selective about the generated ideas and write down everything that come into their mind. However one point should be mentioned, that is, the good writers do more plan than the poor ones, but they seldom write an outline, and just devise a mental plan. This may be because, in timed writing, one of their major concerns is to finish the writing task in time, and they can't "waste" too much time in pre-writing planning.

The score of the self-monitoring strategy is the highest among the three metacognitive strategies. However, there are still some differences between good and poor writers. During writing, poor writers are more likely to be worried about problems of grammar and vocabulary than good writers. Comparatively, the good writers are worried about a wider scope of concerns when composing. These concerns are not limited to grammatical accuracy but they range from global and rhetorical aspects, such as presenting ideas with coherence, clarity and certain organization, to more stylistic and surface-level aspects, such as avoiding repetitions, checking spelling but especially,

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providing accurate and appropriate words in the context.

Self-evaluation is the least frequently used strategy by the writers. For the students, they know there are many problems in their writing, but they seldom closely examine these problems. Therefore they can not clearly realize their strengths and weaknesses in writing. After finishing a writing task, they are less likely to reflect on their merits and demerits in their writing. And they seldom talk about their writing with their classmate and to learn from each other. As for reading the response of the teacher, it is just a habit for them, and usually they will not think too much about it.

5.1.2 The Effects of Metacognitive Training

After 10-week training, the experimental results show that metacognitive training is effective to improve students' metacognitive knowledge and metacognitive strategies in writing and to improve students writing performance.

The post-test of the open questionnaire shows that students made improvement in all three metacognitive variables. The training can help student develop more accurate view of themselves as writers and of the writing task and its requirements. Some activities, like cooperative writing response groups made students consider audience when they write. By these ways, therefore, students' task knowledge was enhanced, and their interests in writing were also increased. By writing diaries, students could closely examine their strengths and weaknesses and observe their progress in writing. Accordingly, their self-concept or self-confidence would be increased.

As for the metacognitive strategies, we can find out from the results of the investigation that more students begin to apply metacognitive strategies in their writing and are clear of the strategies they were using and should use during the writing process. The metacognitive strategy training not only increases the frequency of students' application of metacognitive strategies to different writing tasks, but also promotes their awareness of other writing strategies. But the statistic analysis shows that only the intermediate students made significant improvement in their use of metacognitive strategies. For the high achievers, their metacognitive strategy scores were already the highest before training (98.6), so it is difficult for them to make a statistically significant improvement. As for the low achievers, their original level was too low (79.13), and they need more time and more training to make greater progress.

The improvement of students' writing performance is also obvious. The quantitative data of the writing performance on two sets of writing tasks shows that the students in the experimental group especially the intermediate and low achievers made big progress after they received metacognitive training in writing, whereas the control group, which received the normal teaching of English writing made slight progress which might be taken as a natural improvement of the course study. The comparison between the two groups reveals that metacognitive training is the key to writing success and points to us the way to effective classroom instruction. In the experimental group the intermediate and low achievers made statistically significant improvement. The changes of the high achievers were moderate.

All in all, the metacognitive training has been proved to be an effective

way to improve students' writing proficiency. The use of appropriate metacognitive strategies can enable students to take responsibility for their own writing by enhancing learner autonomy, independence and self-direction.

5.2 Implications

5.2.1 Explicit Instruction

Generally speaking, the concept of metacognition is still alien to most Chinese college students. Therefore, the explicit instruction of metacognitive knowledge and metacognitive strategies is very necessary. The teachers should first of all give students an introduction to the metacognitive theory and the important role that metacognition plays in students' English writing. The students should also have a general idea about the purpose, procedures and effectiveness of metacognitive instruction in their English writing.

Explicit instruction of metacognition involves the direct and systematic presentation of metacognitive knowledge and metacognitive strategies in English writing. Rosenshine (1986) identified the major components of explicit instruction as (a) teaching in small steps, (b) guiding students during initial practice, and (c) providing students with high levels of successful practice. The explicit instruction is a combination of content (i e. what the teacher said about the metacognitive knowledge and metacognitive strategies) and pedagogical processes including modeling, highlighting, feedback, review, practice and application.

The explicit instruction in understanding of metacognition is particularly

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necessary for the intermediate and low achieving writers. As Brown and Campione (1990) noted, a considerable amount of research indicates that less capable students do not acquire a variety of metacognitive knowledge and metacognitive strategies unless detailed and explicit instruction is provided.

In addition, explicit instruction is especially important in understanding and application of metacognitive strategies. Explicit instruction makes strategies overt, sensible, and purposeful. The essence of strategy instruction is explanation followed by challenging and extensive practice. To accomplish understanding, strategies are extensively modeled by the teacher with verbal explanations of the complete strategic sequence and with information (and concrete examples) about the utility of the strategy being taught. Moreover, the students also need to experience success in actually using these strategies. This experience can be accomplished by providing guided practice with appropriately difficult writing tasks, carefully monitored success, and focused assistance when students experience failure and difficulties (Borkowski & Muthukrishna, 1992). It is essential that failures occurred that each failure occasion be used as an opportunity to repair or perfect an incomplete strategy.

However, explicitness does not necessarily equate with isolated strategy training, passive learning, and the teaching of gradually accruing basic strategies. Rather, what must be taught is the reflective flexible use of empowering strategies (strategies that students will make their own through modifying and personalizing them) within appropriate meaningful contexts and environments. Therefore, the instruction should be flexible and modifiable, and the level of explicitness can be adjusted to student need. Thus, teachers can explicitly teach single or complex strategies, or can modify the procedures

of instruction to assist students in deducing or inducing a strategy, guide students in the discovery of a predetermined strategy, or assist them in creating their own strategy.

5.2.2 Promoting Students' Metacognitive Awareness

Promoting students' general metacognitive awareness is a fundamental step for the instruction of metacognition in English writing. Metacognitive awareness allows individuals to plan, monitor and evaluate their writing in a way that directly improve writing performance. This is particularly important for low-achieving students who experience frustration and failure due to ineffective metacognitive strategy development or application. Generally speaking, metacognitive aware learners are more strategic and perform better in English writing than unaware learners. Studies showed that differences in strategy use and performance were related to differences in metacognitive awareness rather than differences in intellectual aptitude. Raphael et al. (1989) reported that students' writing ability improved significantly following instruction designed to enhance metacognitive awareness of writing.

The major aspect of promoting students' metacognitive awareness is to improve their awareness of metacognitive knowledge related to writing. This and other studies have indicated that poor writers often develop negative or limited beliefs about their capacity to perform certain writing tasks; about the nature, demands and difficulties of English writing; and about adequate strategies they may use in their composition. Therefore, it is necessary to deal with these beliefs by enhancing students' awareness of their personal

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weaknesses and strengths, as well as of their task and strategy knowledge.

Schraw (2001) raised several instructional principles for teachers regarding the promotion of metacognitive awareness. The first is for teachers to take the time to discuss the importance of metacognitive knowledge and regulation, including the unique role it plays in successful English writing. Second, teachers should make effort to model their own metacognition for their students. Too often teachers discuss and model their cognition (i.e. how to perform a writing task) without regarding metacognition (i.e. how they think about monitor their performance in writing process). Third, teachers should allot time for group discussion and reflection, despite the many pressure from jam-packed curricula and district performance demands.

In addition, previous researchers have used two tools to help promote students' awareness of the various factors involved in the writing experience (Sandman, 1993; Sandman & Weiser, 1993; Devine, Railey & Boshoff, 1993; Kasper, 1997). These two tools are the Writing Autobiography and the Cognitive Style Questionnaire.

By increasing students' awareness of their own writing experience and knowledge, the Writing Autobiography reflects self-knowledge and can be used to help students define the personal component of the metacognitive knowledge of writing. The Writing Autobiography provides instructors with a metacognitive "baseline" for each student and helps students to monitor their own development as writers and assists students in developing sound criteria for assessing their own writing performance (Sandman, 1993). Cognitive Style Questionnaire directs students' attention to the goals they set and the strategies they use when writing.

Both of these learning tools help to bring the writer's complex, often subconscious metacognitive knowledge to the level of consciousness, thereby promoting awareness as the writer engages in the cognitive task of composing. Further, response to the Writing Autobiography and the Cognitive Style Questionnaire provide the instructor with data concerning each student's unique metacognitive model.

5.2.3 Learning through Response

Responding to student writing is an important part of teaching of writing and these responses reveal the assumptions teachers hold about writing. Teacher's response can influence students' perception of metacognitive knowledge and the strategies they adopted in English writing. However, what is particularly striking about college English teachers' response is that the teachers overwhelmingly view themselves as language teachers rather than writing teachers. Their responses, therefore, do not take into account the writer's intention and the actual playing out of that intention in the process of composing or the writer's relation to audience in any full way. Influenced by this kind of responses students also revise on the basis of local corrections and accept these superficially better texts.

Therefore English teachers need to change their responding behaviors so that students can better understand the nature of writing and know how to revise their writing. English teachers had better offer text-specific comments, that is, they should adopt a flexible standard that takes into account the constraints of the task. Rather than a concern with whether or not a particular

form was applied to the construction of the text, the concern is with the communicative effectiveness of the text.

Furthermore, the teachers need to establish priorities in their response to drafts and subsequent revisions. By probing, challenging, raising questions, and pinpointing ambiguities, teachers can help students understand that meaning-level issues are to be addressed first. This understanding is especially crucial in the College English writing classroom, where students may be convinced that accuracy and correctness are primary importance and where, because of their concern with language and their inexperience with writing, they may be trying to attend to all of the various demands of composing simultaneously. Kasper (1997) also suggested that for instruction to be most effective, the English teacher should adopt a nonjudgmental response style that encourages students to explore their ideas freely and one that redirects responsibility for their writing development from the instructor to the students themselves.

All in all, teachers should consider how they can respond as interested readers rather than as judges and evaluators, that is, they should respond not so much to student writing but to student writers.

Beside the response provided by teachers, the students can also get response from their classmates, that is, "peer response". Peer response is student-centered approach that rely on collaboration as a powerful learning tool 一 to promote interaction between reader and writer, to promote dialogue and negotiation, and to heighten writers' sense of audience. This approach moves the students from the traditional passive stance of receiving knowledge from an authority to an active involvement which makes talk integral to

writing.

Peer response is effective in improving critical thinking, organization, and appropriateness of writing; increasing the amount of revision; and reducing apprehension. The benefits of peer response include the experience of writing and revising for less threatening audience than teacher, of learning to discriminate between useful and non-useful feedback, of learning to use awareness of anticipated audience response as writers revise, and to develop a sense of community. The assumption is that the more the students read and responds, the more their critical skills improve. The more the writers hear reader response, the stronger their sense of audience will be.

5.2.4 The Role of Teachers

The metacognitive instruction in writing is student-centered; the teachers just facilitate the students to promote their metacognitive awareness and increase the appropriate application of metacognitive strategies in writing. Therefore, in the instruction, the teachers should no longer present themselves as controllers or authorities but act instead as consultants, assistants, and facilitators, whose role is to help their students to become more independent, more responsible for their own writing. In this role, the teachers become partners in the learning process. Just as Richard (1990, -cited in Zhuli, 2003) summarized that, in metacognitive training, a English teacher should be "a facilitator, who organize writing experience that enables the learner to develop effective composing strategies, and an investigator of the writing processes employed by the students through using observation and discussion to identify

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successful approaches to different aspect of the writing processes." English teachers need to establish a collaborative relationship with the students, assessing the strategies currently used by writers, diagnosing possible underlying problems in students writing, suggesting strategies to try, and offering needed supports during the composing struggle. In addition, teachers should also help students find their own strengths and weaknesses as English writers and give the students proper praise for their writing performance, so as to cultivate the students' confidence of being a good writer.

In the instruction of metacognitive strategies, teachers can help students both consciously and subconsciously to practice successful writing strategies, and help them to become aware of their own style preferences and the strategies that are derived from those styles. Moreover, the teachers should also deal with the writer's anxiety, poor motivation, cultural confusions, ineffective or dysfunctional composing strategies, lack of metacognitive knowledge, or inability to follow assignment directions.

Chapter Six Conclusion

Metacognition plays a crucial role in language learning. Metacognitive strategies together with metacognitive knowledge are essential to successful writing because they enable individuals to be more aware of themselves as writers, to better understand their writing tasks, to apply writing strategies under control, and to better manage their writing process. In her research, the author adopts a metacognitive training in English writing to promote college students' metacognitive awareness and appropriate application of metacognitive strategies in their writing. As it is shown, the training can equip the learners with metacognitive and cognitive strategies; empower the learners to apply these strategies appropriately to different writing tasks and accordingly improve their writing proficiency.

However, one point should be mentioned, that is, the metacognitive training would inevitably require more class time, and affect the normal teaching progress. But considering the benefits to the students, it is worthwhile. Once the students promoted their metacognitive knowledge and mastered the strategies, they can improve their writing ability significantly. And furthermore, they can transfer these strategies to other aspects of language learning and improve their overall language proficiency.

Finally, in spite of the careful design of the present study, there are still some limitations because of the restrictions of the objective conditions and the author's inadequate academic knowledge.

The first limitation is the limited population of the subjects. It is the question whether the thirty-one experimental subjects could represent the whole population of college students. The second limitation is that the time period for this study is not long enough to show more effects that metacognitive training could make on college students' writing ability. The third limitation is that the instruments used in this study are only open and close questionnaires, both of which have their shortcomings in collecting data. Finally, some personal factors of the students, like cognitive style, beliefs and motivations are not given enough consideration.

Research of metacognitive training is still new and lacking. There is a need to conduct more comprehensive studies with a larger number of subjects at various levels, and with a long time period to confirm the findings in this research. Future research could also include some case studies, so that a clearer and more comprehensive picture can be revealed. In addition, the training of metacognition can also be conducted in other aspects of language learning, such as listening, speaking or reading to develop college English teaching and learning in our country.

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Appendix A

写作自传

前测问卷包括 1 至 3 题, 后测问卷包括 1 至 4 题。

1. 请详细描述一次令你感到高兴的英文写作经历。是什么原因使你有这样的感受？

2. 请详细描述一次令你感到痛苦的英文写作经历。并说明是哪些原因使你有这样的感受？

3. 请具体分析你英语写作中的强项（或优势）和弱项（或困难）。是什么原因使你认为自己有这些强项和弱项？

4. 通过这段时间的学习，你对自己的写作能力有没有新的认识？你认为自己的英文写作水平在哪些方面有所提高？你的英文写作仍需要哪些改进？

Appendix B

认知风格问卷

1. 请给优秀的作文下定义。

2. 请根据你自己的想法，按照重要性给下列写作标准排序。（从最重要到最不重要）

① 表达清晰　　②有创新性　　③语法正确　　④结构合理

⑤有探究性　　⑥ 语句流畅　　⑦内容丰富

3. 在英语写作过程中遇到困难时你会怎么做？

4. 你知道的英语写作策略有哪些？你在写作中是否有意识的使用这些策略？

Appendix C

写作元认知策略问卷

同学，你好！本问卷旨在调查大学生英语写作元认知策略的应用情况，请根据您的实际情况在相应的答案前打勾。本问卷只为有关研究提供数据，不作为考试成绩。非常感谢您的支持与合作！

性别：——　　年龄：——

1．写作前，我会认真阅读题目和相关要求直至自己完全理解题目及要求。
　　□完全符合　□ 符合　□ 一般符合　□ 不符合　□ 完全不符合

2．我会有目的的甄别，筛选所需材料。
　　□完全符合　□ 符合　□ 一般符合　□ 不符合　□ 完全不符合

3．我对文中各部分的内容安排会有粗略的想法。
　　□完全符合　□ 符合　□ 一般符合　□ 不符合　□ 完全不符合

4．我对文章各部分所占的篇幅有大致的预计。
　　□完全符合　□ 符合　□ 一般符合　□ 不符合　□ 完全不符合

5．我对文中各部分将用到的句型词汇有一个预计。
　　□完全符合　□ 符合　□ 一般符合　□ 不符合　□ 完全不符合

6．我对自己能将文章写成什么样子会有预计。

□完全符合 □ 符合 □ 一般符合 □ 不符合 □ 完全不符合

7．我会以最佳的方式安排自己的观点。

□完全符合 □ 符合 □ 一般符合 □ 不符合 □ 完全不符合

8．我会列出写作提纲，形成文章整体上的逻辑框架结构。

□完全符合 □ 符合 □ 一般符合 □ 不符合 □ 完全不符合

9．我只会稍打腹稿，边想边写。

□完全符合 □ 符合 □ 一般符合 □ 不符合 □ 完全不符合

10．我没有写作计划，通常是想到什么写什么。

□完全符合 □ 符合 □ 一般符合 □ 不符合 □ 完全不符合

11．在写作中我会及时采取措施，对发现的错误进行改正。

□完全符合 □ 符合 □ 一般符合 □ 不符合 □ 完全不符合

12．在写作中我会注意文章结构的条理性。

□完全符合 □ 符合 □ 一般符合 □ 不符合 □ 完全不符合

13．我会注意语法的正确性。

□完全符合 □ 符合 □ 一般符合 □ 不符合 □ 完全不符合

14．我会注意自己是否按照写作计划进行。

□完全符合 □ 符合 □ 一般符合 □ 不符合 □ 完全不符合

15．我会注意自己的主要观点是否都清楚、充分的表达。

□完全符合　□ 符合　□ 一般符合　　□ 不符合　　□ 完全不符合

16．我会根据情况调整写作计划。

□完全符合　□ 符合　□ 一般符合　　□ 不符合　　□ 完全不符合

17．我会注意单词拼写的正确性。

□完全符合　□ 符合　□ 一般符合　　□ 不符合　　□ 完全不符合

18．我会注意使用新学的词汇或语法方面的语言知识。

□完全符合　□ 符合　□ 一般符合　　□ 不符合　　□ 完全不符合

29．我会避免重复使用某些单词。

□完全符合　□ 符合　□ 一般符合　　□ 不符合　　□ 完全不符合

20．我会根据已有的写作经历避免以前写作中常犯的错误。

□完全符合　□ 符合　□ 一般符合　　□ 不符合　　□ 完全不符合

21．写作任务结束后，我会思考如果下次遇到类似题目该如何处理。

□完全符合　□ 符合　□ 一般符合　　□ 不符合　　□ 完全不符合

22．如果可能我会找一篇题目类似或相关领域的文章进行对比学习。

□完全符合　□ 符合　□ 一般符合　　□ 不符合　　□ 完全不符合

23. 我会反思自己在写作中遇到的最大困难是什么，并有针对性的进行弥补、提高。

□完全符合 □ 符合 □ 一般符合 □ 不符合 □ 完全不符合

24. 我会将本次写作任务与上次写作任务进行比较，并判断自己在写作上有无进步。

□完全符合 □ 符合 □ 一般符合 □ 不符合 □ 完全不符合

25. 我会评价这次写作中表现出的优点是什么。

□完全符合 □ 符合 □ 一般符合 □ 不符合 □ 完全不符合

26. 我会思考这次写作中存在的不足是什么，并找出原因。

□完全符合 □ 符合 □ 一般符合 □ 不符合 □ 完全不符合

27. 我会思考如何在下次写作时避免这次犯的错误。

□完全符合 □ 符合 □ 一般符合 □ 不符合 □ 完全不符合

28. 我会回顾写作中使用的策略，并评价这些策略是否有效。

□完全符合 □ 符合 □ 一般符合 □ 不符合 □ 完全不符合

29. 我会和同学交流以期扩展自己的思维广度和深度，并互相取长补短。

□完全符合 □ 符合 □ 一般符合 □ 不符合 □ 完全不符合

30. 如果试卷会被反馈回来，我会仔细阅读老师的披阅并及时与之交流。

□完全符合 □ 符合 □ 一般符合 □ 不符合 □ 完全不符合

Appendix D

Test of Writing English (TWE) Scoring Guide

Scores: 14 11 8 5 2

14	Clearly demonstrates competence in writing on both the rhetorical and syntactic levels though it may have occasional errors. A paper in this category －is well organized and well developed －effectively addresses the writing task －uses appropriate details to support a thesis or illustrate ideas －displays consistent facility in the use of language －demonstrates syntactic variety and appropriate word choice －may have occasional errors in grammar
11	Demonstrates competence in writing on both the rhetorical and syntactic levels, though it will have occasional errors. A paper in this category －is generally well organized and well developed －may address some parts of the task more effectively than others －displays good command in use of language －demonstrates some syntactic variety and range of vocabulary －will probably have occasional errors in grammar
8	Demonstrates minimal competence in writing on both the rhetorical and syntactic levels. A paper in this category －is adequately organized and developed －addresses the writing topic adequately but some parts are not dealt with －uses some details to support a thesis or illustrate ideas －demonstrates sufficient but not complete ease with grammar and usage －may contain some serious errors that occasionally obscure meaning
5	Demonstrate some developing competence in writing, but it remains flawed on either the rhetorical or syntactic level or both. A paper in this category may reveal one or more of the following weaknesses:

	－inadequate organization or development －failure to support or illustrate generalizations with appropriate or sufficient detail －an accumulation of errors in sentence structure and/or usage －a noticeably inadequate choice words or word forms
2	Suggests incompetence in writing. A paper in this category is seriously flawed by one or more of the following weaknesses: －serious disorganization or underdevelopment －little or no detail, or irrelevant specifics －serious and frequent errors in usage or sentence structure －serious problems with focus

Appendix E

实验前两作文题目的测试成绩

学生编号	前测	后测
1	9	10
2	8	7
3	10	9
4	12	12
5	6	7
6	5	5
7	7	8
8	9	8
9	8	8
10	8	9
11	11	9
12	13	12
13	10	10
14	9	10
15	3	4
16	5	5
17	6	8
18	8	9
19	7	6
20	12	11
21	9	8
22	9	10
23	12	13
24	9	8
25	5	6
26	4	5
27	9	10
28	12	12
29	10	8
30	9	8
31	8	8

Appendix F

元认知策略列表

计划策略	自我监控策略	自我评估策略
• 考虑写作目的 • 确定写作对象，考虑读者情况 • 对文章内容进行构思 • 对文章结构有所计划 • 对所需材料进行筛选 • 写出简要的写作提纲 • 估计各部分所占的篇幅 • 写下可能会用到的关键单词 • 对将用到的写作方法有所预计	• 注意文章结构的条理性 • 注意语法正确性 • 注意内容逻辑性 • 注意避免重复 • 注意正确使用标点 • 注意句式丰富 • 注意选择准确恰当的单词 • 注意使用修辞技巧 • 注意内容深度 • 注意内容新颖性 • 注意使用新学的词汇和语法 • 注意写作计划的执行	• 反思写作中遇到的最大困难是什么 • 思考本次写作中的最大收获是什么 • 思考写作中存在的不足 • 思考写作中存在的优点 • 思考如何避免这次的错误 • 评估写作策略的有效性 • 与同学交流写作经验与体会 • 与老师交流写作心得 • 思考写作中你觉得比以前容易的部分，并分析原因 • 思考写作中你觉得比以前困难的部分，并分析原因

Appendix G

实验组英语写作和元认知策略测试成绩

	学生编号	写作成绩		元认知策略成绩	
		前测	后测	前测	后测
高分组	1	12	12	94	99
	2	13	13	107	105
	3	12	13	103	107
	4	13	14	99	102
	5	13	12	90	96
中间组	6	8	9	86	90
	7	8	10	83	95
	8	8	8	119	120
	9	9	12	81	93
	10	10	12	98	103
	11	8	11	76	82
	12	9	10	92	90
	13	8	13	82	98
	14	8	12	95	99
	15	9	8	88	100
	16	10	13	74	91
	17	11	12	91	103
	18	8	12	104	105
	19	8	9	77	89
	20	10	12	89	99
	21	9	10	88	95
	22	8	12	88	100
低分组	23	6	8	79	85
	24	7	7	71	85
	25	5	7	91	88
	26	6	7	77	80
	27	7	9	75	85
	28	5	7	83	90
	29	5	6	69	92
	30	6	8	88	80
	31	6	7	78	86

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控制组英语写作和元认知策略测试成绩

	学生编号	写作成绩		元认知策略成绩	
		前测	后测	前测	后测
高分组	1	12	12	112	116
	2	13	13	106	102
	3	12	12	99	97
	4	12	13	100	99
中间组	5	8	7	87	87
	6	9	8	78	80
	7	8	8	92	95
	8	8	9	88	86
	9	11	10	99	105
	10	10	10	77	80
	11	8	8	76	75
	12	8	8	88	90
	13	9	10	91	91
	14	10	9	82	89
	15	8	7	75	80
	16	9	11	89	87
	17	8	9	79	90
	18	10	9	89	87
	19	8	8	90	89
	20	8	7	80	80
	21	9	8	82	85
	22	8	9	84	80
	23	8	8	90	90
低分组	24	6	7	75	77
	25	5	6	77	78
	26	7	5	76	80
	27	6	7	81	76
	28	6	6	73	70
	29	5	6	77	76

摘　要

2004 年国家教育部颁布了新的《大学英语课程教学要求》，该《课程要求》明确规定大学英语的教学目标是使学生在今后工作和社会交往中能用英语有效地进行口头和书面的信息交流，以适应我国社会发展和国际交流的需要。于是大学英语写作教学已经成为目前大学英语教学的重要一环。因此如何提高英语写作教学效率进而提高学生的英语写作水平就成为大学英语研究的主要课题之一。本论文以元认知理论为理论框架，探讨大学英语写作教学的新方法。

本文由六部分组成。

第一章为引言，阐述了目前我国英语写作教学的现状及本研究的重要意义。长期以来，写作一直是我国英语教学的一个薄弱环节。传统的写作教学法：写作成果法和写作过程法都存在一定的不足。而元认知理论既强调元认知知识也注重元认知策略对认知过程的控制，所以，"用元认知理论来研究二语写作可以兼顾写作的动态特征以及认知主体所具备的静态性知识"（吴红云，2004）。

第二章是理论基础部分。元认知这一术语由美国心理学家 Flavell 于 1976 年提出。Flavell（1976）认为，元认知指认知主体关于自己认知过程、认知结果及其相关活动的知识，以及任何调节认知过程的认知活动。它所以被称为元认知是因为其核心是关于认知的认知。

Flavell 和 Brown 等人对元认知的构成要素作了进一步的研究。Flavell 认为元认知由元认知知识和元认知体验两大要素构成。其中，元认知知识指个人所具有的作为认知主体的知识以及对不同的认知任务、目标、活动和经历的知识。具体来说，元认知知识包括个人变量、任务变量和策略变量三方面内容。元认知体验指伴随认知活动而产生的有意识的认知体验与

情感体验。对元认知体验的构成 Flavell 没有做进一步的分析，他只是阐述了元认知体验的一些特征及作用。

Brown（1981）的理论模型中元认知主要也由两部分构成：认知知识和认知调控。认知知识指个人关于自身认知能力和策略的知识，以及在什么条件下应用这些策略从而使他们的认知能力得到充分发挥的知识。认知知识主要包括陈述性知识、程序性知识和条件性知识。认知调控指认知主体对认知过程进行控制的一系列活动，包括计划活动、监控活动和检查结果。综合前人的研究，我们总结出，元认知主要包括元认知知识和元认知策略两部分。

在二语习得领域关于元认知的研究主要集中在元认知策略方面。研究者对二语学习中元认知策略的定义趋于一致。这些定义几乎都涵盖了元认知对认知活动的计划、监控和评估的功能。至于元认知策略的分类，不同的研究者给出不同的分类方式，其中最被认可的是 O'Malley & Chamot 的分类方式。他们将元认知策略分为选择注意、监测和复习以及评估和检查。元认知策略与认知策略的区别在于认知策略的目的是实现某种认知目标，而元认知策略的目的是监控、促进并评价认知过程的进展，确保认知目标的实现。另外元认知知识与元认知策略也相互影响。一方面元认知知识通过元认知策略得以应用到具体学习任务中。另一方面，元认知知识是元认知策略有效应用的必备前提。元认知策略训练也是元认知策略研究的重要方面。元认知策略训练是提高学生学习效果和学习自主性的有效途径。尽管在二语习得领域策略训练的研究并不少，但是关于元认知策略尤其是二语写作的元认知策略训练却非常有限。

第三章对英语写作中的元认知知识和元认知策略进行了进一步的探讨。元认知知识在写作中包括是个人知识、任务知识和策略知识。在写作中个人知识会影响写作者的自我看法，他们关于写作的态度以及对将来写

作成绩的期望。任务知识指对理解某项写作任务所需要的知识、技能以及完成写作任务所需的努力程度的认识。成功完成写作任务需要语言知识、文章结构知识、写作目的意识及对读者的考虑等等。策略知识主要包括关于策略运用的知识、关于策略有效性的知识以及关于适当选择策略的知识。策略的选择和对策略有效性的认识受个人因素的影响，如学生的学习风格、认知风格、教育背景和个人经历等。

在写作中元认知策略包括写作计划、自我监控和自我评估三方面。写作计划主要指确定写作目标、激活背景知识以及组织安排作者观点等。写作计划又包括生成过程、程序目标设定和组织过程。自我监控是元认知与认知的主要区别。在写作中，自我监控指写作者对写作过程的有意识的控制和调节。自我监控既包括整体监控又包括局部监控。自我评估是有效写作的一个重要部分。自我评估有助于写作者采取各种方式评估其写作效果并根据实际情况对自己的计划和写作进程进行及时的调整。通过自我评估，学生可以及时发现自己写作过程中取得的进步及存在的问题，加强自我意识与反省，从而提高元认知水平及英文写作水平。

第四章是实证研究。本项研究主要围绕三个问题展开：（1）目前中国非英语专业大学生写作元认知的水平如何，不同水平写作者的元认知情况有何差异？（2）写作元认知培训能否提高学生的英语写作水平？（3）写作元认知培训对不同水平的学生是否有相同的影响？本研究中的实验主体是 60 名大学二年级非英语专业的学生，其中 31 名构成实验组，29 名为控制组。调查工具包括：（1）开放式问卷，调查学生的写作元认知知识的意识；（2）封闭式问卷，调查学生的写作元认知策略的运用情况；（3）写作测试，测量学生的写作水平。实验组和控制组都遵循正常的课程安排，但实验组同时接受为期 10 周的写作元认知培训。该培训既包括提高学生的写作元认知知识意识，又包括在写作中运用元认知策略的训练。最后本

章对开放式问卷和封闭式问卷的结果进行了分析。

第五章讨论了本研究的主要发现并对元认知应用于大学英语写作教学提出了一些参考性的建议。本研究的主要发现有：（1）目前中国大学生总的写作元认知水平非常低。一方面表现在学生的写作元认知意识不够。多数学生不能正确评估自己的写作能力；对写作任务的要求认识不足，没有充分意识到读者的重要性；写作策略知识也非常有限，学生有意识应用的写作策略多数是为了应付考试。另一方面，写作元认知策略的运用率也很低。学生最常用的是监控策略，而运用的最少的是评估策略。总体来讲，高分组的写作元认知情况比低分组要好。（2）经过写作元认知培训，学生的英语写作水平都有了明显的提高。提高最显著的是中间组和低分组。另外学生的整体写作元认知水平也有所提高。中间组的学生提高最显著。根据本次实证研究及其他研究者的研究工作，作者就元认知理论应用于大学英语写作教学提出了一些参考性的建议：（1）进行直接明确的写作元认知培训；（2）提高学生的元认知意识；（3）通过教师对作文的反馈及同学间的反馈提高学生的写作元认知水平；（4）在元认知写作教学中教师的角色应该从控制者转变为学生的辅助者。

第六章为本文的结论。在英语写作教学中加强学生的元认知知识意识并有针对性的对学生进行写作元认知策略培训，可以有效提高大学生的英语写作水平。元认知理论在英语写作教学中的作用不容忽视，全面的元认知培训仍需要深入的展开。

关键词：元认知知识　　元认知策略　　大学英语写作教学　　元认知培训

Abstract

In 2004, the new College English Curriculum Requirements was carried out by Chinese Ministry of Education. According to the Requirements, the objective of College English is to develop students' ability to use English in an all-round way, so that in their future work and social interactions they will be able to exchange information effectively through both spoken and written channels. Therefore, English writing has become an important part of College English teaching. This dissertation reports a tentative study on the application of metacognition in the teaching of College English writing so as to improve students' English writing performance.

The paper includes 6 chapters.

Chapter one is introduction. In this part, the current situation of College English teaching of writing and the significance of this paper are presented. Writing has long been one of the weakest aspects in College English teaching. The traditional approaches to the teaching of writing, production approach and process approach, have their weaknesses respectively. Metacognitive theory emphasizes both the metacognitive knowledge and the control of cognitive processes. Thus, study foreign language writing from the metacognitive perspective can take account both the dynamic nature of writing and the static knowledge of the writer (Wu Hongyun, 2004).

Chapter Two is theoretical background. The term metacognition was first raised by Flavell, an American psychologist, in 1976. According to Flavell (1976), metacognition refers to one's knowledge concerning one's own cognitive processes and products or anything related to them, as well as the

metacognitive monitoring and consequent regulation and orchestration of these processes. It was called meatacognition because its core meaning was cognition about cognition.

Flavell, Brown and many other researchers made further investigation on the components of metacognition. Flavell's framework of metacognition consists of metacognitive knowledge and metacognitive experience. Metacognitive knowledge refers to the segment of one's stored world knowledge that "has to do with people as cognitive creatures and with their diverse cognitive tasks, goals, actions and experience" (Flavell, 1976). Metacognitive knowledge can be subdivided into three categories: knowledge of person variables; task variables; and strategy variables. A metacognitive experience can be any kind of effective or cognitive conscious experience that is pertinent to the conduct of intellectual life. Flavell didn't make further analysis of metacognitive experience, but only expounds its characteristics and functions.

Brown's framework of metacognition also consists of two parts: knowledge about cognition and regulation of cognition. Knowledge about cognition refers to individuals' knowledge about their own cognitive capacity and strategies, and knowledge about how to apply these strategies to what situations to bring their cognitive capacity into full play. Knowledge about cognition includes three sub-processes that facilitate the reflective aspect of metacognition: declarative knowledge, procedural knowledge, and conditional knowledge. Regulation of cognition refers to activities used to regulate and oversee learning. These processes include planning activities, monitoring activities, and checking outcomes. Synthesizing previous studies, we can

conclude that metacognition is mainly composed of two parts: metacognitive knowledge and metacognitive strategies.

In the field of foreign language learning, the study of metacognition was focused on metacognitive strategies. The researchers of FL/SL learning share similar views in the definition and function of metacognitive strategies. They all emphasize that the essential nature and general function of metacognitive strategies is planning, monitoring and evaluating one's own learning. However, the classification of metacognitive strategies is diverse. The most widely accepted one was given by O'Malley & Chamot (1990). They classified metacognitive strategies into four categories: selective attention, planning, monitoring or reviewing, and evaluation or checking. The difference between metacognitive strategies and cognitive strategies is that a cognitive strategy is one designed to get the individual to some cognitive goal or sub-goal, while the purpose of metacognitive strategies is to monitor and evaluate the cognitive process and make sure that the cognitive goal has been reached. Metacognitive knowledge and metacognitive strategies are in reciprocal relationship. On the one hand, it is through metacognitive strategies that metacognitive knowledge is utilized. On the other hand, metacognitive knowledge is an essential pre-requisite for proper use of strategies. Metacognitive strategy training has been regarded as an effective way to improve students' learning autonomy. Although there are considerable studies on strategy training in general, very little of them have focused on metacognitive strategies and the training of metacognitve strategies in EFL writing are even fewer.

Chapter Three further discussed metacognition in EFL writing.

Metacognitive knowledge in writing includes person knowledge, task knowledge and strategy knowledge. In language learning, personal knowledge specifically refers to the beliefs one has about oneself and others as language learners as well as of factors influencing one's language learning. In students' writing development person knowledge can affect their self-concept, their feelings and attitude towards their composing as well as the kind of expectations they develop for their future written outcomes. Task knowledge refers to the beliefs that learners develop about the knowledge, skill and resources needed for understanding certain tasks as well as about the degree of effort required and difficulty involved in performing them. When composing, the writers should have the language knowledge, the knowledge of text structure and knowledge about the purpose for writing a piece of text. Strategy knowledge includes: knowledge about strategy use; knowledge about the effectiveness of certain strategies; and knowledge about the principles underlying the choice of strategy. Personal factors, such as students' learning style, cognitive style, educational background and experience clearly influence the choice of strategies and the learners' perception of the strategy usefulness.

Metacognitive strategies in writing include planning, self-monitoring and self-evaluation (Wenden, 1993). Planning is an integral part of the composing process. The planning in writing involves several thinking and self-questioning strategies, such as identifying one's purpose, activating background knowledge, and organizing brain-stormed ideas. Depending on the focus of the goal, planning strategies can be differentiated into three types: generating ideas, setting procedural goals and organizing. Self-monitoring is the crucial difference between cognitive and metacognitive strategies. In writing, the

monitoring represents the conscious control and regulation of processes exercised by the writer. Self-monitoring includes global and local monitoring. Self-evaluation is an essential step in effective writing process (Miller, 1982). In self-regulation, students can recognize weaknesses, identify needs, try to make changes, and then note whether or not those changes took place in the next writing (Beach, 1975).

Chapter four is an empirical study. The study focused on three questions: (1) What is the general situation of Chinese college students' metacognitive proficiency in writing and to what extent do good English writers differ from poor English writers in terms of metacognitive behavior? (2) Can metacognitive strategy training affect the writing performance of Chinese college students? (3) Does metacognitive strategy training have equal impact on the writing performance of students at different levels?

The subjects of the study are 60 non-English major sophomores from two classes. One class of 31 students served as the experimental group, the other class with 29 students comprised the control group. The instruments of the study include: (1) open questionnaire, for testing students' awareness of metacognitive knowledge in writing; (2) close questionnaire, for examining students' employment of metacognitive strategies; (3) composition test, for testing students' writing proficiency. Both the experimental and the control groups followed the normal syllabus. The students in the experimental groups also received the mtacognitive training in writing which lasted for 10 weeks. The training includes promoting students' awareness of metacognitive knowledge and teaching students how to use metacognitive strategies appropriately in their writing. In the last part of this chapter, the result of the

open questionnaire and closed questionnaire are analyzed.

Chapter 5 discussed the findings of this study and some implications for the application of metacognition in the teaching of college English writing are provided. The findings of this study are: (1) Students' general awareness of metacognitive knowledge in writing is fairly poor. Most students can not asses their writing ability objectively; they do not have sufficient knowledge of writing tasks; and their strategy knowledge is very limited. On the other hand, most students use metacognitive strategies less frequently in their writing. The most frequently used strategy is self-monitoring, while self-evaluation is used least frequently. Generally speaking, the high achievers performed better than the low achievers. (2) After the training in metacognition, all the students made improvement in their writing. The improvement of the intermediate achievers and low achievers is most significant. In addition, students' metacognitive proficiency was also improved. Based on these findings, the author provided some implications: (1) explicit instruction of metacognition; (2) promoting students' metacognitive awareness; (3) improving students' metacognitive proficiency through response and; (4) the teacher should not present themselves as controllers or authorities but act as consultants, assistants and facilitators in the instruction.

Chapter five is conclusion.

Key Words: metacognitive knowledge; metacognitive strategies; teaching of College English writing; metacognitive training

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