# A Survey of Use of Metacognitive Strategies by Chinese Students in Language Learning

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**Abstract**

This study reports on a survey of the use of metacognitive strategies by Chinese students in English learning. The results showed that although Chinese college students do use some kinds of metacognitive strategies while learning English, they are still not frequent users of many of them. Based on the findings of the study, some constructive suggestions are made for teachers about how to enhance students' awareness of metacognitive use in English learning process.

**Key words:** metacognitive strategies; cognition; language learning;

## 1. Introduction

Over the last 20 years, in the face of the growing scale and complexity of language education, researchers have gradually been concerned with the theories and classifications of language learning strategies, shifted focus on the study of use of metacognitive strategies in English learning process. Since metacognitive strategies involve "thinking about the learning process, planning for learning, monitoring the learning task, and evaluating how well one has learned" (O'Malley & Chamot 1990:137), they are closely linked with students' learning strategies in the course of a learning enterprise, namely, they showed what students actually know about their learning process. Researchers have indicated that language learners' metacognitive knowledge plays a crucial role in the development of learning. Then how do Chinese college students use metacognitive strategies while they are learning English as a foreign language? What implication can be gotten from the study? In this paper, we attempt to tackle these questions to identify students' use of metacognitive strategies and try to make

some constructive suggestions.

## 2.  Definition of metacognition

According to Flavell (1976, 1987), metacognition refers to one's knowledge concerning one's cognition processes or anything related to them and any knowledge and cognition in reflecting and regulating cognitive activities, because metacognition has to do with the active monitoring and regulation of cognitive processes. Baker & Brown (1984) described metacognition as "awareness and control of the cognitive field", because "metacognition is relevant to work on cognitive styles and learning strategies as the individual has some awareness of their thinking or learning processes" (Huitt 1997). So, in Huitt's book (1997), metacognition is defined as "the process of thinking about thinking" or "cognition of cognition". In O'Malley's view, metacognition refers to higher order thinking which involves active control over the cognitive processes engaged in learning (O'Malley & Chamot 1990). It refers to activities such as planning how to approach a given learning task, monitoring comprehension, and evaluating progress toward the completion of a task. Although there are some distinctions between the definitions, all emphasize the role of executive processes in the overseeing and regulation of cognitive processes. As "knowledge of knowledge" or "learning of learning", metacognition plays an important role in learning a language. The fact is that although most individuals of normal intelligence engage in metacognitive regulation when confronted with an effortful cognitive task, some are more metacognitive than others. Those with great metacognitive abilities tend to be more successful in their cognitive endeavors (Sternberg 1986).

## 3.  Cognitive and metacognitive strategies in language learning

In cognitive theory, individuals are said to "process" information, and the thoughts involved in this cognitive activity are referred to as "mental processes". Learning strategies are special ways of processing information that enhance comprehension, learning, or retention of information (O'Malley & Chamot 1990). According to this theory, controlling processing places an extra burden on attentional processes, and the controlling factor is the faculty for language that all human being have. It controls all the information process stages with awareness for the purpose of learning a language. Thus the process contains an executive, or

metacognitive function in addition to an operative, or cognitive-processing function. Namely, language learning strategies may be described as either metacognitive or cognitive activities. Metacognitive strategies are therefore, used to describe those strategies involving thinking about the learning process, planning for learning, monitoring the learning task and evaluating how well one has learned; cognitive strategies, would include using operations or steps in learning or problem-solving that require direct analysis transformation or synthesis of learning strategies (Brown 1987). Metacognitive experiences usually precede or follow a cognitive activity. They often occur when cognition fails, such as the recognition that one did not understand what one just read. Such an impasse is believed to activate metacognitive processes as the learner attempts to rectify the situation (Roberts & Erdos 1993). Research in metacognitive and cognitive language learning strategies indicates that much of the reported failure of learning strategy transfer to new tasks can be attributed to a failure of combining metacognitive information with a cognitive approach to learning strategies. It is suggested that students without metacognitive approaches are learners without the direction and ability to review their progress, accomplishments and future learning directions. The interaction of cognitive and metacognitive strategies in the process of language learning can be illustrated by the following figure.
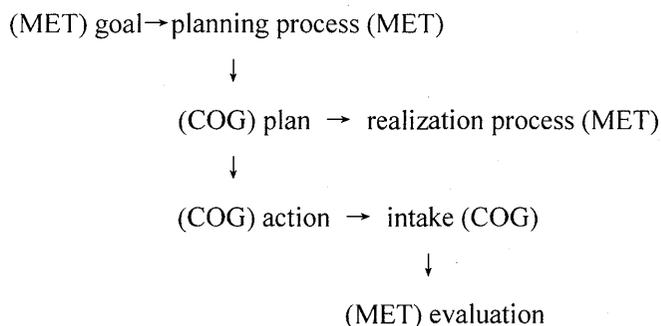
(MET) goal→planning process (MET)
↓
(COG) plan　→　realization process (MET)
↓
(COG) action　→　intake (COG)
↓
(MET) evaluation

**Figure 1**

## 4. The Present study

### 4.1 Participants and the questionnaire

The 268 participants in this study are all students in Northeastern University in China. The

questionnaire sought primarily to target use of metacognitive strategies in foreign language learning. Questionnaire items were generated mainly on the basis of Oxford's Strategies Inventory for Language Learning (SILL) with minor alterations. The initial pool of items consisted of 12 metacognitive strategy statements (listed below in part 4.3) concerning English learning. All the questions were designed as multiple-choice type involving 3 choices a), b) and c). Each choice stands for one degree: a) = often; b) = sometimes; c) = never.

## 4.2 Procedures

The questionnaire was conducted by English teachers at the interval of English classes. Before delivering the questionnaire items, teachers explained the nature of the study to the participants and told students some basic knowledge about language learning strategies and encouraged the students to ask questions if they were confused. Students were advised that there was no right or wrong answers on the questionnaire and their responses would not affect their course grades, so they were urged to answer forthrightly. In addition, specific care was taken to remind the subjects that the questionnaire did not measure their beliefs, that is, what they think about learning English, but did measure their strategies, that is, how they actually go about learning English.

## 4.3 Results and discussion

After the questionnaires were collected, each of them was examined individually, and at last 268 papers were selected as valid. The items are listed according to their use frequency reported by the subjects.

| Items | often | sometimes | never |
|---|---|---|---|
| 1. I prepare for English classes | 134(50%) | 104(38.8%) | 30(11.2%) |
| 2. In my spare time, I make a choice of learning purposely | 108(40.3%) | 138(51.5%) | 22(8.2%) |
| 3. I plan the study time before learning | 66(24.6%) | 150(56%) | 52(19.4%) |
| 4. I try to look for opportunities for study | 78(29.1%) | 146(54.5%) | 44(16.4%) |
| 5. I choose materials for my study | 80(29.9%) | 110(41%) | 78(29.1%) |
| 6. I try to concentrate on my study | 196(73.1%) | 68(25.4%) | 4(1.5%) |

| | | | |
|---|---|---|---|
| 7. I try to make good condition for study, e.g. to sit where I can hear the teacher clearly at class | 184(68.7) | 66(24.6%) | 18(6.7%) |
| 8. while learning, I check if I have made mistakes | 154(57.5%) | 90(33.6%) | 24(9%) |
| 9. After learning, I try to find out the correct answers | 140(52.2%) | 110(41%) | 18(6.7%) |
| 10. After learning, I evaluate my learning | 58(21.6%) | 148(55.2%) | 62(23.1%) |
| 11. I give myself rewards when my job is well done | 108(40.3%) | 108(40.3%) | 52(19.4%) |
| 12. I encourage myself to do some learning regularly | 110(41%) | 130(48.5%) | 28(10.4%) |
| **Average** | 44% | 42.5% | 13.5% |

**Table 1**　Use of Metacognitive Strategies by Chinese Students (268)

From Table 1 we can see that among the 268 participants, more than 95% of them reported that they can concentrate on study and make good condition for study in English learning. That is to say they have good self-management ability in their learning process (items 6 and 7). More than 52-57% of subjects have the habit of checking their learning by seeking the correct answers or finding out their mistakes. That means in the learning process more than half of the students like to know whether their performance is justified or not, and are eager to know the key to their exercise. Also, half of the students have the good habit of preparing for English class often, and 38.8% of them sometimes do that. It is out of our expectation that there are still 11.2% of them reporting that they never preview their lessons before class, which needs special attention from the teachers. For the other 7 types of metacognitive strategies, it is noticed that less than half of the participants reported having used them often in their English learning, for example, about 40% of the students know to encourage or stimulate themselves to study hard at other times, before and after the learning; only about a quarter of the students spend time planning or evaluating their study often, more than half of them don't do that regularly, and some of them never do.

## 5. Conclusion and implications for pedagogy

This survey has shown that some college students reported that they are good at using some kinds of metacognitive strategies, most of them, are not frequent users of them. Metacognition enables students to benefit from instruction and influences the use and maintenance of cognitive strategies. Use of these strategies has been associated with successful learning

While there are several approaches to instructing students' use of metacognitive instruction, the most effective involve promoting the learners' awareness of the use of metacognitive strategies by encouraging students to know some knowledge about them and practice in their cognitive processes. Teachers should tutor their students to evaluate the outcomes of their efforts. Simply providing knowledge without experience or vice versa does not seem to be sufficient for the development of metacognitive control (Livingston 1996).

The study of metacognition has provided educational psychologists with insights into the cognitive processes involved in learning and what differentiates successful students from their less successful peers. It also holds several implications for instructional interventions, such as teaching students how to be more aware of their learning processes and products as well as how to regulate those processes for more effective learning.

Given all the above, the core is that English teachers would do well to create an awareness of and foster the acquisition of metacognitive strategies. The following suggestions can help teachers develop "metacognitive awareness" in their students:

1 ）Teachers should use teaching strategies that promote the acquisition of metacognitive strategies such as: planning, monitoring, self-management, selective attention and evaluating. Since many students already appear to be familiar with a number of these strategies, special emphasis should be placed on activities that nurture planning, direct attention and promote evaluation.

2) Preview is crucial to good foreign language pedagogy. Teachers need to prepare students for what they will read and what they are expected to do. Assignment from teachers can draw on students to become more autonomous and train them to use strategies.

3) Teachers can encourage self-evaluation and reflection by asking students to evaluate the effectiveness of strategies used and the production of their work. The evaluation process can be fostered by discussing it with the whole class or encouraging group discussion on the success of the approach taken to the text. Students should be encouraged to share individual routes

leading to success, for example, how someone guessed the meanings of certain words or how someone modified a particular strategy.

4) Currently there are many chances for them to learn English after class when information resources are very rich and facilities are well equipped at university. One of the tasks for teachers is to tell students how to take advantage of the reference sources around them. Teachers should at the same time try to help students create an authentic English environment by organizing different kinds of extracurricular activities and teaching them how to make good use of these opportunities that are available.

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