

北京外国语大学 2005 年学术著作系列

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A Data-based Theoretical Construction**

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吴红云 著

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序

近年来,借自认知心理学的“认知”和“元认知”成了二语习得研究领域中使用频率颇高的术语。初涉“元认知”者,常有一种隔雾观天的感觉。“认知”为何意尚且不甚明了,词前冠以“元”字的“元认知”究竟为何意确实是一个看法纷争的问题。我想,理解上的困难除了可能出在“认知”与“元认知”的关系上,还有可能出在带有另一层涵义的“元”字上。“元”字的常见意思有“开始的、居首的、主要的、根本的、构成整体的”等。显然,望文生义不能解决“元认知”的释义问题。学习过语言学的人知道,“元语言”是用于描写和分析语言的语言,当然也可以用来控制别人的语言运用。以此类推,可以猜想“元认知”是用来控制和归纳认知活动的。

认知心理学关于认知和元认知的讨论印证了我们的猜想。心理学把“认知”界定为感知、学习和思考的心理行为或结果,是人们对世界的认识、了解和把握。一言以蔽之,“认知”离不开人的思维。如果把“认知”看作思维(thinking),那么“元认知”就是对思维进行思考(thinking about thinking)。

元认知不是一个十分容易界定的概念,其抽象性不亚于语言能力、语言知识等被人争论不休的概念。就像人们对语言的理解一样,元认知不但包含元认知知识而且还包含元认知策略,是人们认识自身思维、自身发展的综合性概念,内部构成难以切分。因此,对元认知进行测量、描述和解释有较大的困难,尤其是难以对抽象的

元认知知识系统进行系统、明确的梳理和分析。

二语习得属于认知范畴,是人脑消化吸收新语言材料、构建新语言体系的认知过程。学习者对语言输入和语言输出的思考无不涉及认知心理过程。二语新体系的发展明显带有意识和潜意识的色彩,二语的运用(听、说、读、写)亦如此。在语言运用过程中,学习者少不了对其输出及产出过程进行思考、监控、评估,对其语言运用进行反思就是二语学习过程中认知的一部分。而学生的元认知水平是影响他们完成这一认知任务的重要因素,认知水平的高低能折射出学习者的语言能力发展倾向。因此,对学习者的元认知知识、元认知策略、元认知水平进行系统的研究有着非常重要的理论意义和应用价值,既有助于构建更完整的二语习得理论又有益于增进对二语教学的理解。

然而,正如元认知在认知心理学中难以准确定义一样,元认知知识在二语习得研究中的界定也非常困难。虽然研究者对元认知策略的理解相对比较一致,有关研究充分肯定了元认知策略对认知行为的计划、监控和评价等所起的作用,但是,目前元认知策略的描述和分类依然比较混乱,更谈不上完全统一,学者们的看法仍然是仁者见仁、智者见智。究其原因,不外乎实证研究的设计和和实施太难。国外研究尚且如此,国内的研究则更加艰难:一难无经费,二难缺资料,三难少合作对象。

在这样艰难的研究条件下,居然出现了一位敢吃螃蟹的元认知探索者。中国人民大学的吴红云同志花了整整三年的时间,阅读了数百份文献,调查了全国160余所高校的近2000名在校大学生,采用定量和定性相结合的方法,对中国学生二语写作的元认知知识和策略进行了大型实证研究,用翔实的数据、细致的统计和可

信的分析结果构建了一个中国学生二语写作认知理论框架。作者根据自己阅读的文献和调查的数据撰写成一篇质量上乘的博士论文,获得评阅专家和答辩委员会的一致好评,被评选为北京外国语大学 2004 年度优秀博士论文。

作者为此付出了巨大努力,我有幸见证了作者从选题、收集文献到试验设计、实施调查、撰写论文等过程,作者那种刻苦钻研、排除万难的精神令人敬佩,作者取得的成绩令人欣喜。

现在呈现在读者面前的《二语写作元认知理论的实证研究》是吴红云博士根据论文修改而成的学术专著。全书共三部分,第一部分追述了元认知理论研究的缘起、认知与元认知概念内涵及研究中存在的不足,阐述了元认知与二语写作的关系及其作用。第二部分为实证研究,通过横向与纵向研究对二语写作元认知进行精细的调查、分析和讨论,寻找写作元认知理论构成的因子,构建了一个内部结构复杂而不失美感的结构方程模型,以便探索二语写作元认知能力与写作水平的因果关系。第三部分讨论了实证研究结果的理论意义及应用价值。

目前,国内的语言学与应用语言学研究与十年前相比,研究方法有了大幅度的改进,研究成果取得了长足的进展,原创性研究越来越多,二语习得研究也是如此。但是由于时间、精力、财力、资料的限制,多数研究局限于小问题及小规模研究,而大型实证研究较少见,因此很难取得理论上的突破性进展。相比之下,《二语写作元认知理论的实证研究》选题意义重大,研究规模宏大,作者构建的二语写作元认知理论框架取得了相当大的理论突破:更全面地阐述了二语写作元认知构成要素(即元认知主体评估、元认知策略和元认知任务评估),更清晰地展示了元认知要素之间的相互作用关

系及因果关系,更准确地揭示了元认知对认知行为的动态调控作用,更有力地证明了元认知理论的可操作性。该项研究得出的框架有助于我们深入了解元认知的重要特征。这不但是对二语习得研究的贡献,而且也是对元认知理论发展的贡献,更是对我辈同仁的鼓舞。

作者严谨务实、一丝不苟的科学研究态度在实证调查的设计和实施中表现得淋漓尽致,作者心细如发的敏锐和智慧散落在全书朴实的行文中,使阅读这样一本理论创新著作成为精神享受。因此,我乐于向读者推荐此书,也祝愿作者产出更多更好的成果!

戴曼纯

于北京外国语大学中国外语教育研究中心

内容提要

自 Flavell(1976)提出元认知理论三十多年以来,有关元认知的心理学研究层出不穷。大量的研究表明,元认知是影响个体完成认知任务的一个至关重要的因素。自 20 世纪 90 年代以来,越来越多的二语习得研究者关注外语学习中的元认知现象(Wenden 1991,1998,1999,Li & Munby 1996;Goh 1997;Zhang 2001)。他们主要探讨了 Flavell 元认知理论框架中元认知知识要素的构成:主体知识、策略知识或任务知识,对 Flavell 理论框架中另一要素(即元认知体验)的研究,几乎是空白。为了全面了解元认知的构成、作用及其本质,充分验证 Flavell 元认知理论框架的合理性,我们对我国大学英语写作中的元认知现象,进行了一系列的实证研究,并建立了一个对二语写作有较强解释力的写作元认知模型。

全书共分三个部分。第一章至第三章为第一部分,主要阐述了心理语言学家和二语习得研究者在元认知理论研究方面的重要研究成果,并分析了该领域研究中的争议与不足。第四章至第七章为第二部分,也是本书的主体部分,翔实报告了作者所进行的四项实证研究的过程与结果。第八、九章为本书的综合讨论部分。第八章总结了本研究中的主要调查结果,并讨论了它们对元认知理论研究与我国大学英语写作教学的重要启示和实践意义。第九章分析了本研究在调查方法方面的贡献与不足,并探讨了今后二语学习

与元认知研究中值得重视的问题。

我们从以下三个方面对全书的主要内容作个扼要介绍。

一、相关研究及其不足

Falvell 关于元认知构成要素的理论框架“开创了发展认知心理学研究中的一个崭新领域”(Falvell 1979:4)。该理论框架的建立,具有研究视角转换的方法论意义;我们可以从“元”的角度研究人类的认知行为。Nelson 与 Narens 有关元认知监控的理论框架(1990,1994)的出现,由于引入了“客体水平”、“元水平”、“监测”和“控制”等动态概念,进一步揭示了元认知对认知的动态调控过程,标志着元认知理论研究进入了一个新的“现代”时期。但是,这两大理论框架所包括的要素仍然存在很大的差异,而且还主要停留在理论层面上的探讨。在实际研究中,Falvell 理论框架中的“元认知知识”和“元认知体验”以及 Nelson & Narens(1990;1994)理论框架中的“客体水平”和“元水平”都具有一定程度的抽象性与模糊性,我们很难对它们进行准确的描述和测定。

就元认知在二语学习中的研究来说,研究者对元认知策略的定义都趋于一致,他们也几乎都肯定了元认知策略对认知行为的计划、监测和评估等方面的作用。但是,他们对元认知策略具体类别的看法,不仅存在较大的差异,甚至出现互相矛盾的现象。比如,有的研究者将“翻译成母语”和“通过上下文猜测词义”等策略归类为认知策略,而有的研究者却将这些策略归类为元认知策略。对于“预测或猜测语篇内容”与“猜测生词意义”这两个具有相同性质的策略,有的研究者将前者归类为元认知策略,却将后者归类为认知策略。

总之,虽然学界在元认知的作用研究等方面,基本达成了共识,但元认知理论框架的构成要素及其具体作用方面的研究,仍有许多问题有待更深入的探讨。

二、实证研究

实证研究部分由四项既相对独立又互相关联的子研究组成:1)探索性纵向研究;2)对成功英语学习者与不成功英语学习者作元认知能力的横向研究;3)因子分析研究;4)结构方程模型研究。全国160余所大学近2000名在校学生先后参加了调查。调查实施地点包括全国5个地区6个城市。调查持续时间约1年。

研究的总体设计是在Flavell(1979)的元认知理论框架下探究我国大学生英语写作中的元认知现象。但研究并没有停留在对以往元认知理论框架的验证阶段,而是力图在吸取前人相关研究成果的基础上,采用纵向研究与横向研究、定量研究与定性研究相结合的研究方法,通过交叉使用问卷(questionnaire)、访谈(interview)、观察(observation)、周记(weekly journal)、限时与非限时作文测试(timed and untimed writing)、有声思维实验(think-aloud experiment)等调查手段,从各种不同角度探究二语写作中的元认知现象。最后,我们借助比较先进的结构方程模型统计软件,进一步考察写作元认知与作文成绩之间的因果关系,建立一个对二语写作解释力更强、可操作性更强的模型。

三、二语写作元认知理论框架确定的意义

我们通过大量实证研究推导、验证并修改的“二语写作元认知理论框架”,主要在以下四个方面取得了新的突破。

第一,更全面地反映了二语写作元认知的构成要素。本研究建立的二语写作元认知理论框架表明,写作元认知由3大要素、8个因子构成;8个因子由82项观测变量构成。

第二,更加准确地反映了元认知要素之间的相互作用关系及其因果关系。本研究的主要调查结论是:写作元认知策略和写作元认知主体评估对作文成绩有直接的影响;而写作元认知任务评估只通过元认知主体评估对作文成绩产生间接影响。

第三,更好地体现了元认知对认知行为的动态调控作用。“元认知策略”、“元认知主体评估”与“元认知任务评估”三大要素在二语写作元认知理论框架中,无疑都具有明显的“动态”和“行为”特征。

第四,具有更强的可操作性。本研究虽然以Flavell(1979)的元认知理论框架为指导,但我们的理论框架中元认知要素、元认知因子以及观测变量的确定,主要来自于实证调查。所以,该研究便于在实际研究中重复进行(replicable),以检验其结论的效度。

最后,本书对今后在二语学习与元认知现象研究中值得注意的问题,也有所展望。在今后的研究中,我们应该更充分地吸收并整合有关元认知、二语学习以及二语写作理论的研究成果,进一步丰富和发展元认知理论研究。

Abstract

The present study attempts to construct a theoretical framework of metacognition in EFL writing and explore the effects of metacognition on EFL writing by both qualitative and quantitative studies. The research subjects involve nearly 2000 non-English majors at over 150 Chinese universities across the country.

Five research questions are addressed in the study:

- 1) What are the most important components in metacognition and what components constitute the metacognitive ability in EFL writing?
- 2) To what extent and how do these components effect the writing performance of the language learner?
- 3) To what extent do successful English learners (SEL) differ from unsuccessful English learners (USEL) in terms of metacognitive behavior?
- 4) To what extent can formal classroom instruction help learners to raise metacognitive awareness in EFL writing?
- 5) What can we do to refine our measurements in collecting metacognitive data?

This dissertation consists of three parts: previous research, four empirical studies, and discussion on the theoretical and pedagogical significance of the main findings.

1. Previous research

Two types of previous research are reviewed: research on metacognition by psychologists and research on metacognitive strategies by applied linguists.

Psychologists have begun to share similar views with regard to definition and function of metacognition. Their definitions, though

often expressed differently, invariably cover two essential aspects: the static nature of metacognition and the dynamic tendency of metacognition in affecting the course and outcome of cognitive enterprises (Flavell 1979; Kluwe 1982, see Son & Schwartz 2002:16; Brown 1987; Sternberg 1998; Weinert 1987). Statically, metacognition refers to the accumulated autobiographical information about one's cognition, whilst dynamically, metacognition stresses the ongoing monitoring and controlling of one's own cognition (see Nelson 1992:1). However, there is still much controversy over such issues as what are the main components of metacognition and how they are hierarchically structured. For example, the two influential theoretical frameworks put forward by Flavell (1979:4) and Nelson & Narens (1990, 1994) have been generally recognized as epoch-making. However, the main components such as metacognitive knowledge and metacognitive experiences in Flavell's framework and object-level and meta-level in Nelson & Narens' framework (1990;1994) are vastly different. Meanwhile, in real-life research, neither of the two frameworks is easy to apply. They prove to be too abstract to be measurable.

In a similar vein, applied linguists (Brown et al 1983; O'Malley & Chamot 1990; Wenden 1991,1999; Ellis 1994) have also agreed upon both definitions and functions of metacognitive strategies. They all emphasize that the essential nature and general function of metacognitive strategies is planning, organizing, and evaluating one's own learning. But meanwhile, the categories of metacognitive strategies they have identified are still tentative, different and even contradictory. For example, the strategies of "translating into L1" and "guessing from context" are listed as cognitive strategies by O'Malley (1985) and Oxford (1990), but are grouped under metacognitive strategies by Li & Munby (1996) and Zhang (2001). For another example, two strategies of the same nature, i.e. "predicting or guessing text meaning" and "guessing meaning of unknown words" are separately classified as a metacognitive strategy and a cognitive strategy by the same researchers (Sheorey & Mokhtari 2001).

2. Four empirical studies

Altogether, four relatively independent but also interrelated empirical studies are conducted: 1) the exploratory longitudinal study; 2) the in-depth horizontal study of SEL subjects and USEL subjects; 3) the factor analysis study for a theoretical metacognitive framework; 4) the structural equation modeling study into the causal relationship between the metacognitive ability and writing performance. Both qualitative and quantitative methods are employed in processing the data.

The subjects of the longitudinal study were 118 students from Renmin University of China: two natural classes as the experimental group, and two as the comparison group. The study lasted approximately 10 months, i.e. two semesters, and could be accordingly considered as two stages. The first-stage research was more exploratory by trying out four open-ended questionnaires, group interviews, timed and untimed writings, etc., whereas the second-stage was more focused by employing the “weekly journal” as the chief research tool. The results showed that the formal classroom instruction on writing metacognition could enhance learners’ awareness of metacognition in writing and produced obvious improvement in their writing performance. With regard to untimed writing assignments, the writing scores of the experimental group were significantly higher than those of the comparison group. Besides, the research instruments in investigating learners’ writing metacognition were refined in the process of the study. The questionnaire of 110 items on metacognition in EFL writing was designed.

The subjects of the in-depth horizontal study were 5 SEL subjects and 6 USEL subjects. The metacognitive ability of the two groups was compared by drawing on the data from a series of sources, such as an open-ended questionnaire, a semi-structured interview, timed and untimed writing, a think-aloud experiment, etc.. The results clearly demonstrated that the metacognitive abilities of SEL subjects and USEL subjects differed significantly in terms of metacognitive strategies, metacognitive assessment and metacognitive experiences. The metacognitive ability is, therefore, a key variable in predicting the

learners' writing proficiency.

The third empirical study was based on responses to a questionnaire by 1422 college students at 61 universities in 6 cities across China. The factor analysis of the data showed up 8 factors hierarchically laid out. Metacognition for EFL writing consists of 2 major components: strategy and assessment. Strategy mainly governs the writer's writing and revising efforts while assessment commands the assessing of writing tasks and problems.

The last empirical study used structural equation modeling (SEM) to examine the relationship between metacognitive ability and writing performance. 308 college students were given a writing test and were requested to fill up a questionnaire. The resulting data confirmed and rectified the metacognitive framework we established earlier by a factor analysis, with some fine modifications. The results indicated: 1) metacognition for EFL writing consisted of 3 major components, i.e. metacognitive strategy, metacognitive assessment of writing problems, and metacognitive assessment of tasks; 2) "metacognitive strategy" and "metacognitive assessment of writing problems" produced direct and significant effects on writing scores while "metacognitive assessment of tasks" produced indirect effects on writing scores through the "metacognitive assessment of writing problems"; 3) metacognition is a significant variant in predicting the achievement of EFL writing, a better predictor than language proficiency; 4) among 8 metacognitive factors, "assessment of writing problems" produced the greatest effects on writing performance.

3. Discussion on the significance of the main findings

The theoretical contributions of the chief findings are summarized as follows:

First, a more comprehensive picture of metacognitive components is presented. In the theoretical framework of metacognition in EFL writing, altogether, 3 major components (strategy, assessment of writing problems and assessment of tasks), 8 factors and 82 observable variables are hierarchically laid out. Metacognition in EFL writ-

ing is, therefore, more finely categorized.

Secondly, the monitoring and controlling function of metacognition on the course and outcome of cognition is more clearly revealed. The three major metacognitive components tend to be “dynamic” in nature.

Thirdly, the causal relationship between metacognitive ability and writing performance is more accurately revealed.

Finally, since our theoretical framework of metacognition in EFL writing was derived from empirical data, it can be either falsified or verified by further studies.

Pedagogically, findings of the longitudinal study suggest that the teaching of reading and the teaching of writing may be complementary to each other. Besides, the designing of untimed writing assignments is recommended. Also, the effects of teacher’s comments on students’ writing should not be underestimated. Above all, the students’ metacognitive ability in EFL writing, if properly trained, can be significantly enhanced.

So far as the methodology is concerned, we worked hard to refine and sharpen such common research tools as questionnaires, weekly journals, interviews, in order that they could provide more relevant and more valid data. Meanwhile, we employed some advanced and powerful statistics softwares to process our data to a degree of satisfaction otherwise impossible.

Finally, the study has its inherent weaknesses. Consciousness is still an unoperationable definition. Yet consciousness plays a significant role in the process of metacognition. So far as our understanding of consciousness is incomplete, the validity of research on metacognition is challenged. Besides, due to practical difficulties, the subjects for the study were not randomly selected, which may make our findings less generalizable. It is also suggested that future research in this area make better use of the relevant previous research on foreign language study and EFL writing.

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