研究生英语精品教材

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# 学术英语写作

# Academic English Writing

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# 学术英语写作

## Academic English Writing

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## 内 容 提 要

本书依据对中国高校本科生和研究生英语写作的分析和研究，围绕学术英语写作技能，从样篇、例文、练习和篇章阅读等方面组织学习内容，以满足本科生和研究生中高级写作技能学习的需要，同时培养学生研究型和发现型学习的学术思维能力。

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**学术英语写作**

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# 前　言

《学术英语写作》编写组依据对中国高校本科生和研究生英语写作的多年分析和研究，认为中国学生作为外语学习者，尽管经过十多年的英语学习，有丰富的词汇和基本的语法知识，但英语写作技能仍比较薄弱，普遍存在双语“互译”现象。为此，本书围绕学术英语写作技能，从样篇、写作技能、例文、练习和篇章阅读等方面组织学习内容，以满足本科生和研究生中高级英语写作技能学习的需要。

本书的主要适用对象为已具备基础英语写作知识的本科生和研究生。因此，在整合基础写作技能知识的同时，本书主要以学术英语写作知识和技能案例教学及实训为主，旨在以英语学术语篇的实证性和逻辑性特征培养学生研究型和发现型学习的学术思维能力。从学术篇章的结构、词句规律、连贯和衔接手段等方面培养学生的学术英语意识，训练其学术交流和创造性语言应用的能力。

本书由十章组成，每章涉及学术英语说明文和论说文写作的结构和技能。由写作基础知识、样篇和例文、学术英语论文结构与解析、练习和篇章阅读等部分组成。第一章包括主题的一致和连贯、衔接、语篇的主要特征以及段落的结构和写作。其他章分述英语篇章的时间、空间、例证、对比、因果、定义、分类和论证的谋篇技巧、特征和训练，同时也涵盖过渡、连贯和衔接、句式和用词等具体的写作技能训练。此外，第五章到第十章还编排了与学术研究和交流相关的应用写作部分，以培养学生撰写学术论文摘要、引论、方法、结果与讨论、结论、参考文献以及读书报告、文献综述、前言等方面的应用写作技能。

每章内容依据样篇和例文对写作知识和技能进行实证性分析和描述。样篇和例证来自编写组对历年大学英语四六级、历年全国研究生入学考试英

语真题阅读理解语篇、写作要求、学术英语论文、媒体英语语篇的认真采集和分析，并以学术论文为案例教学和阅读材料，促进学生学术英语技能的培养和提高。

为巩固和训练英语写作技能，本书从连贯和衔接、句式变化、篇章写作和学术英语分析等方面编排练习内容，以期从基本技能训练发展综合学术英语写作能力。为巩固和丰富学生学术写作的语言知识，每章安排了不同学科的专业学术论文阅读训练。

本书是编写组对宁波大学十多届研究生的英语写作技能连续跟踪调查研究的结果。教材内容的选取和编排充分考虑了中国学生的知识表征和外语学习规律，依照心理语言学和认知语言学的外语学习观，优化了教材内容，重点强调了中高级学术英语写作技能的学习和训练。

本书由杨新亮策划和负责总体内容的编排、审校；熊艳编写第一、二章；邓金莲编写第三、四章；柳旦编写第五、六章；白玉凤编写第七、八章；蒋宜轩编写第九、十章，并负责各单元练习及阅读材料的编写和审校。在编写过程中，我们得到了宁波大学外语学院大学外语部诸多同事的指导和帮助，在此向他们表示由衷的感谢。同时也向为本书的基础理论和可行性研究提供帮助以及丰富语料的宁波大学历届研究生表示谢意。

由于本书内容丰富，信息量大，语料涉及的领域广泛，编著过程中难免出现不妥之处，敬请读者指正。

《学术英语写作》编写组

# Contents

# Chapter One

# English Paragraphs

## I. Model Composition

Changes in a person's knowledge are among the most powerful mechanisms underlying and facilitating development (Case, 1992; Karmiloff-Smith, 1992; Piaget, 1978; Siegler, 1996; Spelke, 2000). Thus, the question of how a person's changing knowledge can be measured and modeled lies at the heart of developmental psychology. Many developmental psychologists have found it useful to treat knowledge not as a unitary construct but as differentiation into at least two kinds of knowledge: (a) conceptual knowledge, facilitating understanding of abstract principles; (b) procedural knowledge, assisting in solving concrete problems. For example, some persons might understand the principle of commutativity (i.e., a + b = b + a) without applying it correctly to solve a problem. Other persons might apply the principle correctly without understanding why it is correct.

For many decades now, researchers have tried to examine how conceptual and procedural knowledge influence each other during development (cf. Byrnes & Wasik, 1991; Canobi, Reeve, & Pattison, 1998; Dixon & Moore, 1996; Gelman & Gallistel, 1978; Gelman & Meck, 1983; Greeno, Riley, & Gelman, 1984; Hiebert, 1986; Resnick & Ford, 1981; Rittle-Johnson, Siegler, & Alibali, 2001; Sophian, 1997). Key questions concern the naturally occurring order of acquisition of these two kinds of knowledge, their optimal order of acquisition, whether conceptual knowledge causally influences procedural knowledge, or procedural knowledge causally influences conceptual knowledge.

Despite this long history of research on the relations between conceptual and procedural knowledge, the conflicting theoretical viewpoints have not converged on a universally agreed upon position but rather have been subject to ongoing debates (Gilmore & Papadatou-Pastou, 2009; LeFevre et al., 2006; Mabbott & Bisanz, 2008; Rittle-Johnson & Star, 2007). The empirical results differ strongly across content domains, studies, and persons (Rittle-Johnson & Siegler, 1998). In the current article, we examine a possible explanation for these difficulties: Different

kinds of knowledge only show up intertwined with each other and with other competencies in overt behavior. It is, therefore, not clear that to what extent they can be measured validly and partly independently of each other. Tasks used to assess conceptual or procedural knowledge differ between content domains, age groups, and even studies. There are neither established standards for measuring the kinds of knowledge nor set standards for testing the validities of hypothetical measures. We discuss how these validities can be investigated by means of a multimethod approach. In two empirical studies, we demonstrate this approach and show that eight measures commonly used to assess conceptual or procedural knowledge in published studies have insufficient validities.

Questions about the structure of the above passage:

1. What role does the first paragraph play?
2. How do the following paragraphs develop around the first one?
3. What is the topic sentence in each paragraph?
4. How does the passage realize cohesion and coherence?

## II. The Topic Sentence

A topic sentence expresses a paragraph's central purpose. It contains two parts: the subject and the controlling idea of a paragraph, or even a passage. The controlling idea is placed in a word or group of words to show which aspect of a basic sentence or subject will be discussed in a paragraph. A well-written topic sentence will help focus on the subject. But if a topic sentence is expressed in terms that are too general, it will be less likely to help you to limit the idea and eliminate unrelated ideas.

A topic sentence is often placed at the beginning of a paragraph. It may also appear in other places: sometimes it is found at the end; sometimes it appears in the middle; sometimes it does not appear at all but is understood. Yet no matter where it is placed, the topic sentence governs the paragraph development. By stating the controlling idea in each paragraph, a writer makes clear the purpose in writing.

So, an English passage, even a paragraph is vividly embodied in a bunch of grapes or a tree, both with the stem as the subject, branches linking the stem as main divisions, then further branches as secondary subsections, next, attaches as tertiary subsections.

In an academic research essay, the section of introduction plays the role of a topic sentence in directing its writer and readers to the ensuing sections. It introduces the background of the research subject, what will be discussed and the aspects to be

considered.

**e. g.**

## Introduction

***In recent years there has been a growing interest*** *among philosophers of mathematics about the practice of mathematicians, and especially practice related to argumentation. Corfield (2003), **for example**, complained that "By far the larger part of the activity which goes by the name of philosophy of mathematics is dead to what mathematicians think or have thought". Instead, he argued that philosophers **should** pay much closer attention to the actual practice of mathematicians. Although this suggestion to focus upon mathematical practice **has been** taken up by subsections of the philosophical community (e. g., Mancosuetal, 2005; Van Kerkhove & Van Bendegem, 2006), to date there **have been relatively few empirical studies of mathematical practice.***

***This lack of empirical studies*** *is somewhat surprising **as** in recent years there has been **growing interest in applying empirical research methods to philosophical questions.** In particular, **experimental methods** have been widely used to systematically explore "folk intuitions" of ethical dilemmas (e. g., Appiah, 2008; Nadelhoffer & Nahmias, 2007). Understanding mathematical practice would seem to be an area even more suited to **the application of empirical methods**: after all, mathematical practice essentially refers to the behavior of mathematicians in mathematical **situations**; and behavior is essentially **an empirical matter.***

***Our primary goal in this paper*** *is **to argue** that empirical studies of mathematical behavior can give insights into mathematical practice which are not easily glimpsed using other methods. In short, we will **attempt to demonstrate** that empirical studies can make a useful contribution, alongside more traditional philosophical analyzes, to our understanding of mathematical practice. **To achieve this aim** we **first** review **earlier empirical work** which has studied the argumentation behavior of undergraduate mathematics students. We **then** report **the results of a study** which interrogated one particular factor that influences **how persuaded research-active mathematicians and undergraduate mathematics students are** by visual mathematical arguments: the presence or absence of descriptive text.*

Read the following passage carefully and find the major devices of cohesion and coherence based on the topic sentence:

1. Is it cohesive?
2. Is it coherent or unified?
3. Does each paragraph have a topic sentence expressing a controlling idea?

The study of spatial cognition is a prominent topic within the field of neuroscience. Consideration is most commonly given to the role of spatial information during investigations of cognitive tasks or processes, such as autobiographical memory (especially the storage and retrieval of the spatial context of an event; e.g., O'Keefe & Nadel, 1978, Squire & Zola-Morgan, 1991), visual guidance of actions (e.g., Goodale & Milner, 1992; Jackson & Husain, 2006), and directing and sustaining visuospatial attention (e.g., Corbetta & Shulman, 2002 & Malhotra et al., 2009). Interest has also been taken in the interactions between spatial cognition and language, in terms of the spatial contributions to terms which describe spatial relations (e.g., up/down, near/far; Chatterjee, 2008) and the more fundamental grounding of high level linguistic concepts in more basic spatial co-ordinates (e.g., rise, fall; Meteyard, Zokaei, Bahrami, & Vigliocco, 2008). However, relatively little attention has been drawn toward spatial contributions to our conceptual knowledge about geographical entities, such as countries, cities, regions, rivers and mountains.

Our knowledge of geographical entities such as countries is multi-faceted, and is influenced by information about spatial properties (e.g., location, size), featural information (e.g., capital cities, famous buildings) and associative information (e.g., relating to wars, leaders, events, etc.). Knowledge about geographical entities develops slowly over many years and is acquired through various means including rote learning of maps, exposure to spoken, written and visual media, and personal travel (Friedman & Winstanley, 2006). For example, in a recent standardization of a category naming test, country map naming was found to be unexpectedly weak, with a substantial proportion of participants failing to recognise outline drawings of nearby countries and sometimes even their own country (e.g., 12% of the British participants failed to identify the four countries which make up the British Isles; Crutch, Randlesome, & Warrington, 2007).

The current investigation of geographical knowledge is conducted not in healthy individuals but in patients with comprehension deficits associated with large left hemisphere strokes. Neuropsychological studies of patients with semantic deficits have drawn an important distinction between those attributable to damage to representations in a central semantic store (storage disorders) and those attributable to impaired access to activation of otherwise intact central representations (access disorders). The focus in this paper is upon patients with a particular variety of access disorder referred to as a refractory access deficit. Semantic refractory access disorders have several characteristic features, including: (i) sensitivity to temporal factors — increasing the response-stimulus interval (RSI) between consecutive semantic decisions can significantly facilitate performance, hence leading to the description of refractoriness (a form of neural interference) as a "reduction in the ability to utilize

the system for a period of time following activation" (Warrington & McCarthy, 1983: 874); (ii) response inconsistency — an inevitable result of refractoriness because an incorrect response to a stimulus is likely if the system has not recovered a resting state following a successful prior response; (iii) insensitivity to item frequency — semantic refractory access patients often demonstrate an absence or even a reverse of this frequency effect; (iv) sensitivity to semantic relatedness — response accuracy is significantly lower when identifying targets which are semantically related (e.g., furniture, chair, table, stool, desk, sofa, television) than semantically unrelated (e.g., chair, pencil, door, hat, foot, telephone). Storage patients by contrast are insensitive to temporal factors, show consistent patterns of responding, and are strongly influenced by item frequency.

Neuropsychological studies of patients with semantic refractory access disorders can provide important insights into the organization of conceptual knowledge in the healthy human brain. In particular, such patients offer a window upon the fine-grain organization of conceptual knowledge (Warrington & Crutch, 2007). This is because measurements of semantic relatedness effect sizes in these refractory patients can be taken as a marker of the similarity of a set of items, and hence can be used to assess the validity of hypothetical semantic distinctions. This line of investigation is predicated upon the observation that on matching-to-sample tasks, the semantic relatedness of competing responses has a significant impact upon response accuracy. The most widely held explanation for this semantic distance effect describes a build up of refractoriness or interference in semantic representations activated by the presentation of a target stimulus. This refractoriness is considered to affect not only subsequent activation of the same representations but also neighboring semantic representations (Crutch & Warrington, 2005a; Crutch & Warrington, 2005b; Gotts & Plaut, 2002; Warrington & McCarthy, 1987). Alternative accounts of refractory access syndromes suggest that the phenomenon reflects an impairment of top-down control processes which act to regulate semantic activation particularly under conditions of high competition (e.g., semantically related competitors; Jefferies & Lambon Ralph, 2007). However, both these accounts predict that items whose semantic representations are most similar will be less accessible than items which are less similar during the refractory phase.

A major motivation for examining geographical knowledge in semantic refractory access patients is their ability to reveal very fine-grain principles of semantic organization. For example, significant semantic relatedness effects (more errors with semantically related items) have been identified not only between established categories which have been shown to be subject to category-specific storage impairments (e.g., living/non-living, animal/plant) but also between

finer semantic groupings within such categories ( e. g. , fruit/vegetable/flower; Crutch & Warrington, 2005; Crutch & Warrington, 2005b) . Similar fine-grain relatedness effects have also been shown within the proper noun domains of people ( e. g. , writers/artists/politicians; Crutch & Warrington, 2004; Crutch & Warrington, 2005a, 2005b) . By comparing the magnitude of relatedness effects elicited, it is also possible to use refractory access patient performance to directly compare alternative principles of semantic organization ( e. g. is the organization of famous person's knowledge more influenced by occupation or nationality? Crutch & Warrington, 2004) . A further motivation for the study design was that all the patients assessed showed significantly impaired phonological-orthographic transcoding skills ( e. g. , impaired nonword reading and matching) . This permitted the use of spoken word to written word matching ( i. e. , entirely verbally mediated) procedures, as it was assumed that the patients could not solve spoken to written matching tasks via this impaired phonological-orthographic route and hence that this test format would probe semantic processing. This verbally mediated procedure permitted the inclusion of geographical entities which would be difficult to present distinctively in visual form for a more conventional spoken word to picture matching tasks owing to high levels of visual similarity ( e. g. many rivers look very similar) .

Building upon the evidence of fine-grain organization of person knowledge, related questions can be asked of the organization of geographical knowledge in the normal healthy human brain. Is the organization of geographical knowledge most influenced by taxonomic category ( e. g. , cities, rivers, mountains) , continent membership ( e. g. , African/European cities) , country membership ( e. g. , French/German cities) , or semantic association ( e. g. , holiday destination; industrial town) ? Another potentially important organizing principle for geographical entities is their spatial location ( coded in a variety of spatial frames of reference, e. g. , allocentric [north/south ], proximity-based [near/far ]) . Geographical entities may be particularly influenced by their real-world location and distance from one another because: ( i) unlike almost all other categories of common and proper nouns, their real-world position is fixed; ( ii) their definition and existence are sometimes inextricably linked to their position relative to one another ( e. g. , cities which were founded on the basis of river or sea access; political and state boundaries defined by geographical features such as mountain ranges) . Alternatively, as some researchers have argued, perhaps the principles which govern the organization of common nouns ( e. g. , taxonomic categories) are not transferable to theoretical accounts of proper noun semantics, and that "unlike common names, which denote categories, proper names are thought to just label unique sets of casually clustered

attributes" (Semenza, Zettin, & Borgo, 1998:45).

On the basis of a detailed investigation of a patient with a semantic refractory access disorder, it has recently been claimed that semantic information about some geographical terms is spatially coded, and that knowledge about many country and city names depends heavily upon their geographical location and proximity (Crutch & Warrington, 2003). In a series of spoken word-written word matching tasks, the patient AZ found it more difficult to comprehend the names of countries and international cities when selecting a response from an array of geographically close rather than geographically distant places. This influence of geographical location and proximity persisted even when identifying geographically close and geographically distant English cities, where the results could not be attributed to shared dependence upon regional superordinates (e.g., continent, country or county membership). However, geographical relatedness effects were not observed among U.S. state names which were less familiar to AZ, indicating the role of personal knowledge and experience in the development of more detailed spatial frameworks in some geographical regions than others. These results suggest that together with verbal and visual information, spatially encoded information constitutes an important component of semantic memory.

The purpose of the current study was to strengthen and develop the hypothesis of a spatial component to conceptual knowledge. The key findings from the investigation of AZ were replicated in two further aphasic stroke patients. Given that more closely related semantic items cause interference with task performance in semantic refractory access dysphasia, it was reasoned that if there was a decline in task performance for geographically proximal compared to distant places then this would offer evidence that real world proximity of places is a contributor to semantic relatedness in neural processing of these places. We then tested and rejected the hypothesis that previous evidence of geographical relatedness effects reflect associative (e.g., seaside towns, industrial towns) rather than spatial (e.g., north, south, east, west) principles of semantic organization. Subsequently, we directly compared spatial and taxonomic principles of organization for geographical entities. Finally, we also tested the generalizability of the "spatially coded semantics" hypothesis by examining whether geographical relatedness effects could be observed between and not only within different types of geographical entities (e.g., cities, counties, rivers). It was demonstrated that the principle of spatial coding extends beyond semantic representations of countries and cities to encompass a range of other geographical terms.

## III. Cohesion

Halliday and Hasan take hold that the primary dominant of whether a set of sentences do or do not constitute a text depends on cohesive relationships within and between the sentences, which create texture. "A text has texture and this is what distinguishes it from something that is not a text ... The texture is provided by the cohesive relation." Cohesive relationships within a text are set up "where the interpretation of some element in the discourse is dependent on that of another".

Halliday and Hasan outline taxonomy of types of cohesive relationships which can be formally established within a text, providing cohesive "ties" which bind a text together. The taxonomy of types of explicit markers of conjunctive relations is exemplified as follows:

- Additive: *and*, *or*, *furthermore*, *similarly*, *in addition*, *additionally*, *besides*;
- Adversative: *but*, *however*, *on the other hand*, *nevertheless*;
- Causal: *so*, *consequently*, *for this reason*, *it follows from this*, *thus*, *therefore*, *as a result*;
- Temporal: *then*, *after that*, *an hour later*, *finally*, *at last*, *eventually*.

The cohesive relationship which particularly interests them is that which they discuss under the headings reference, substitution, ellipsis, tense and aspects (referred to as grammatical relationships), and lexical relationships. Where the hearer's/reader's interpretation lies outside the text, in the context of situation, the relationship is said to be an exphoric relationship which plays no part in textual cohesion. Where their interpretation lies within a text, they are called endophoric relations and do form cohesive ties within the text. Endophoric relations are of two kinds: those which look back in the text for their interpretation are called anaphoric relations, and those which look forward in the text for their interpretation, cataphoric relations.

Cohesion may also be derived from lexical relationships of reiteration(复现) and collocation(同现) like hyponymy, synonymy, antonymy, near-synonymy and lexical items in the same semantic field, as well as derivatives, and repetition of the same lexical item.

Read the following passage and find the cohesive devices:

When multilingual speakers experience difficulty producing a word, they know during a conversation in one of their languages, they are often able to retrieve that target word in the "wrong" language. More often than not, the interfering language is not their first, most dominant, language. Rather, cross-language lexical interference is

most often reported between two non-native languages. The unique status of one's native language, L1, has been identified in numerous studies and the distinction between the first-acquired language and later-learned languages has been emphasized (e.g., Birdsong, 1999; Gass & Selinker, 1992; Vaid, 1986). Indeed, research studies concerning the bilingual lexicon have explored the connections formed between L1 and L2 words and have addressed the hypothesis that L2 words are learned via the corresponding L1 words, rather than via direct links to the conceptual system. However, researchers have only recently begun to address analogous issues concerning the multilingual lexicon (e.g., de Bot, 2004; Goral & Obler, in press), and the lexical relations between two (or more) non-native languages have not been sufficiently examined. In this paper we report on a case study that provided us with the unique opportunity to investigate factors that determine cross-language lexical connections among words in the multilingual lexicon. We briefly review current models of lexical representation in bilingualism and outline the limitations of the data available thus far in answering questions about how lexical connections are formed in the mental lexicon of speakers of more than two languages. We then present two experiments we conducted with a multilingual speaker who had suffered aphasia and discuss how our data contribute to the understanding of multilingual language processing.

Extensive data from experiments conducted with bilingual speakers in the last few decades have led to the development of two competing models of how the bilingual lexicon is organized. The Revised Hierarchical Model (RHM), developed by Kroll and her colleagues, assumes separate but interconnected lexical representation of the first (L1) and the second (L2) languages (e.g., Kroll & Stewart, 1994). Crucially, the RHM captures the bidirectional and asymmetric relations between the two lexicons. That is, word forms in L1 are connected to their respective meanings from the time these words are first acquired. By contrast, word forms in L2 are first learned via their translation equivalents in L1; only with increased proficiency are stronger connections between L2 words and conceptual representations formed. In this model, the connections in the direction from L1 words to L2 words are not as strong as those from L2 words to L1 words; such connections may develop over time. The RHM allows for dynamic, changing connections among the words of the first and second languages. The model does not specify a priori whether words from additional non-native languages, learned after L2, are connected in the lexicon via the L1 words or L2 Words.

An alternative model of the bilingual lexicon, developed by Dijkstra and his colleagues, is based on a connectionist model of lexical representation (e.g., Dijkstra & van Heuven, 1998). In the Bilingual Interactive Activation (BIA)