21世纪实用研究生英语系列教程

ENGLISH ACADEMIC WRITING

英语学术论文写作

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English Academic
Writing

英语学术论文写作

前　言

编写目的

写作之道，存乎一心。纵观中国历史，能文之人众多，例如导致洛阳纸贵的左思、七步能文的曹植，即是其中之翘楚。单就英语学术论文而论，其种类繁多，有专题论文、课程论文、毕业论文、期刊论文等等，凡此种种，不一而足。其范式、结构、体裁大都遵循英美学术界通行准则，自成一格，与中文论文格式大相径庭。这种状况无形之中给中国学人传播学术设置了障碍，形格势禁，难有突破；最终往往陷入学术不昌、故步自封之境地！

但是，天下大势，浩浩荡荡，顺之者昌，逆之者亡。值此大同之际，允功允能，立功立言立德，互通有无，无疑应该是题中应有之义！可喜的是，我们已经有部分先行者经过不懈努力，不但已经开始在国际学术刊物上发出自己的声音，而且有日趋频密之势。即便如此，仍然还有许多学人或迫于形势，或限于条件，对英语学术论文写作及其规范不知虚实，虽有在国际学术刊物上发表论文的心愿，但是不得其门而入，无从措手！本书意在雪中送炭，助其一偿宏愿，争胜于天下。

内容简介

本书共分六章，每章三单元。每章主要围绕三条主线展开。第一条主线是论文写作的主要步骤，第二条主线是论文写作相关事项，第三条主线是论述方法。

论文写作的主要步骤包括选题、材料的收集与评估、列出提纲、论文写作、编写参考文献以及摘要写作。论文写作相关事项包括学术论文的特征、流程、文章的衔接与连贯、文体特点、图表的使用、写作规范、参考文献的标注以及致谢等。至于论述方法，则主要介绍定义法、因果法、比较与对照法、议论法以及记叙法等。

附录包括三篇范文以及一个常用格式指南。参考答案则与各章练习相匹配，供读者参考。

本书特点

概括而论，本书具有以下四个特点：

第一，内容齐全，涵盖面广。包括论文写作的主要方面，如选题、材料收集及评估、提纲、遣词造句、衔接与连贯、文献引用及其标注、论文写作、修改、定稿以及摘要写作等。

第二，切合实际，针对性强。主要针对如何在国外英文期刊上发表论文的问题，充分考虑在校研究生及广大在职专业人士的现实需要。

第三，练习量大，实践性强。在糅合现代写作理论的基础上，通过大量的写作练习

引领读者写出符合学术规范、达到发表水准的高质量论文。

第四，注重规范，倡导标准。专辟一章论述论文写作规范，帮助读者了解学术写作的要求，避免抄袭或剽窃的陷阱。

第五，行文简洁，例证丰富。本书言简意赅，提供了大量的写作指南和写作策略，例证大都选自《自然》等知名刊物，立意较高，权威性强。

使用说明

无论是自学，还是修读论文写作课程，读者应该注意以下四点：一是循序渐进，遵循写作客观规律，宏观把握整个写作流程。二是注重文章的篇章结构、写作原则、技巧和方法的掌握。三是精讲多练，熟能生巧。教师讲授应该做到深入浅出，重点应该放在学生的写作练习上。四是修改和讲评。学生的写作练习以及论文习作应该得到教师的修改、个别指导或者集中讲评，这有利于提高学生的写作水平。

致谢

首先特别感谢刘润清教授。他在本书的策划阶段，就其内容选择、结构体例安排以及市场预测等方面提供了宝贵意见，在此表示衷心的感谢。此外，还应感谢 David Tool 博士，他在百忙之中审读了全部书稿，并提供了许多修改意见。

最后，也要感谢国内外同行的前期研究成果。正是他们的不懈努力，帮助本书达至目前的水平。在本书的写作过程中，我们参考了大量的文献资料。除了参考文献部分列出的参考书目之外，我们还就少数几个练习和答案参考了其他文献，在此一并表示感谢。因成书时间有限，不周之处在所难免，敬请方家不吝赐教。

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刘振聪　修月祯

2009 年 5 月　于北京三间房

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Chapter One

Introduction

Introduction to Academic Writing

1. Reasons to Engage in Scientific Research

Generally speaking, people go into scientific research for the following reasons:

- Career development
- Being forced to
- Personal interest to explore the world
- Solving practical problems
- Technological development
- Academic exchanges
- Academic evaluation

In fact, people may do research for one or a combination of these and other reasons.

Task One   Research Reason Evaluation

In groups of two, discuss with your partner your reason(s) to do scientific research. Then evaluate the reasons against value, practicality, personal interests, resources, outcomes, etc.

2. Basic Types of Academic Papers

Papers can be classified according to different criteria. In terms of disciplines, they can be divided into three large categories: philosophy, natural science and social science. Then, under these categories are professional papers in smaller disciplines such as economics, physics, etc. In accordance with the nature of disciplines, they can be divided into basic subject papers and applied technical papers. In the same academic subjects, they can be divided into basic theory or application papers.

In accordance with the reasoning, academic papers can be divided into research papers and reports. Research papers can be divided into argument, refutation, review, verification, and explanatory papers. Reports can be divided into investigation,

inspection, research and experimental reports. According to the content, they can be divided into thematic and comprehensive papers. In accordance with research purposes, they can be divided into academic journal articles, academic conference papers, term papers, theses and dissertations and so on. In accordance with the research content and research methods, there are theoretical, experimental, and descriptive papers.

However, the classification above is too one dimensional, and does not reflect the essence of academic papers. At this point, by integrating the content, research areas, targets, methods and writing practices and other factors of research papers, the authors divide academic papers into four types: ① Argumentative, ② Descriptive, ③ Academic Meeting/Research Reviews and ④ Book Reviews.

(1) Argumentative Papers

Based on a certain point, argumentative papers illustrate the author's views or opinions on an issue by discussions or descriptions, etc. They emphasize reasoning and strict logic; this necessitates the use of concepts, analysis, synthesis, judgment, logic to analyze the problem, to reason and argue in order to clarify the point of view or reach a conclusion.

According to the manner of argumentation, argumentative papers can be divided into two categories: argument and refutation papers. As the name suggests, the argument papers directly put forward and certify their own views. This framework is suitable for writing self-contained papers. Refutation papers prove the correctness of their own arguments by rejecting those of others. There are two types of refutation: using one's own viewpoints to refute the opposite point of view, i.e. distinguishing between right and wrong by comparison, or refuting and analyzing the opposite point of view in order to clarify one's own views.

Generally speaking, argumentative papers are mainly found in the humanities and social sciences because they are more subjective, theoretical, argumentative, and emphasize logic.

(2) Descriptive Papers

Descriptive papers are also known as expository papers, which are mainly used to describe a natural phenomenon or social phenomenon. For example, the formation mechanism of lightning, the causes and effects of certain ideas, and so on, can be the object of analysis, description and explanation.

Descriptive papers are widely used in the social and natural sciences, but they have differing characteristics in different fields. Descriptive papers in social sciences focus

on data collection, sorting, identification, description and explanation. Descriptive papers in natural sciences mainly describe the experimental process and results, such as experiment and materials preparation, the relevant apparatus, methodology and results of the study.

Although descriptive papers are used both in the arts and sciences, they are highly valued by natural scientists and used widely in technical writing because they are more objective and more focused on practical issues and the facts. Experimental reports and investigation reports are the major types of descriptive papers.

(3) Academic Meeting/Research Reviews

Review papers include academic conference, seminar and research reviews; the academic conference and seminar reviews are based on records of conference exchanges and academic symposium while research reviews are based on published literature. The review papers explored in this book refer to the research reviews of published literature.

Review papers mainly summarize the results of research on a certain topic, in which the authors can add their own presentations and comments and express their personal views. The fundamental purpose is to introduce the latest developments in disciplines and provide the latest academic information and systemic academic materials, thus having their own academic value.

Authors of review papers are usually experts in their areas. Because they are familiar with the international developments and information about their subjects, they can summarize the academic achievements, experience and problems of their subjects in a certain stage, suggest directions for further development and point out existing problems and solutions and so on. Therefore, review papers play a strong directory role and are frequently cited. However, it should be pointed out that review articles require a comprehensive and systematic accumulation of academic knowledge, broad experience, possession of a large number of documents and materials, strong analytic and synthesizing abilities, and excellent language skills. That is to say, they are usually difficult to write because the demands are high.

In terms of time span, review papers can be divided into two types: synchronic and diachronic. Synchronic review papers sum up the related research on certain topics at the same time period, such as "Study on the Status of the Conceptual Metaphor", while diachronic review papers summarize the related research over a period of time, such as "Conceptual Metaphor Research Over the Past Fifty Years". In accordance with the scope, review papers can be divided into thematic and discipline reviews. The former covers a particular topic and the scope is relatively small; the

scope of the latter is broader.

(4) Book Reviews

The comments that we are usually familiar with include reviews, comments and analysis, etc., involving books, articles, art, perspectives, characters, events, results of scientific research and so on. However, in academic journals book reviews are also common. Book reviews introduce the main content and evaluate the books strengths and weaknesses. They usually analyze, interpret and evaluate the main points, viewpoints and methods of the book, making use of certain methods and perspective, the fundamental purpose of which is to promote new books and provide objective assessment for reference.

In accordance with the manner of writing, book reviews can be divided into those mainly introducing the content of the book, those keeping a balance between narrative and comment and those mainly focusing on the review. Although these approaches do not vary in quality, it is undeniable that book reviews focusing on comments are more academic and more difficult to write. For the reader who only wants to learn the current situation of the book market, it is advisable to read the introductory book reviews. If he also wants guidance from an expert, then the narrative-and-comment-balanced book review is a good choice. For readers familiar with the book market, the comment-focused book reviews are the best choice.

Of the four types of academic papers discussed above, descriptive papers are most widely used in natural sciences but also used in social sciences, that is to say, they are the most typical academic paper type. Therefore, the authors choose them as the focus of discussion in this book.

✍ Task Two   Paper Evaluation

Pick up two academic journals, one about social sciences, and the other about natural sciences. In groups, discuss the types of papers in the journals. How many types of papers are there in the journals? Are there other types than those discussed above? If so, what are they?

3. Structure of an Academic Paper

To explore the composition of a paper, one must first understand the type of paper. Broadly speaking, papers can be divided into library research, experimental research, or case study papers.

In accordance with the Modern Language Association (MLA) format, library research papers consist of title page, outline, abstract, main body, notes (optional),

appendix, and references.

Experimental research papers are made up of title, abstract, introduction, methods and materials, analysis of results, discussion, conclusions and references.

The components of case study paper are title, abstract, introduction, reports, discussions, conclusions and references.

However, the structure of papers published in China is somewhat different from those published abroad. For example, they include:

Chinese and English titles,

Chinese and English abstract,

Chinese and English keywords,

The body,

References,

Appendix,

Information about the author.

The papers contributed for publication outside China include:

Title,

Abstract,

Introduction,

The body,

Conclusions and recommendations,

Acknowledgement,

References,

Appendix.

Comparing the two, there are no great differences between the papers published inside and outside China, but the minor differences are: for Chinese papers, there are two versions of the title, abstract and key words, one in Chinese, the other in English. For English papers, there is only the English version. The introduction, body, conclusions and recommendations of the English papers are equivalent to the body of the Chinese papers. In addition, the Chinese pay more attention to the qualifications of the author and it is also convenient for the journals to assess the level of the authors or establish a databank, the Chinese publications tend to demand the authors to provide their CV, including their name, year of birth, research interests, affiliation, address, telephone number, E-mail address, etc.

✿ Task Three Paper Structure Identification

Study the structure of the papers in Appendixes 1, 2 and 3. Pay special attention to the following parts:

Title,

Abstract,

Introduction,

The body,

Conclusions and recommendations,

Acknowledgement,

References,

Appendix.

4. Characteristics of Academic Writing

English for science and technology (EST) refers to the style used in scientific or technological activities; their features are:

- Objectivity
- Clarity
- Coherence
- Accuracy

The language's plainness and precision distinguish it from other discourse types and is reflected in the following two respects:

(1) Features on the lexical level

① Terminology

Technical terms abound in EST, for example, "fungus" and "atom". (I think you should find more esoteric examples, these are too common.)

② Nominalization

Abstract nouns are frequently used for clarity, for example, "ammonia" is substituted with "refrigeration".

③ Abbreviation

Short forms and abbreviations are often found in EST for economy and brevity, e.g. "radar" and "AIDS".

④ Use of single verbs

Single verbs are used instead of verbal phrases for formality and precision, e.g. "investigate" for "look into", "eliminate" for "get rid of".

(2) Features on the syntactical level

① Long complex sentence

Long complex sentences are used for accuracy to explain complicated ideas clearly and precisely.

② Simple-present tense

Simple-present tense describes natural phenomena, processes and rules and makes explanation vivid and "timeless".

③ Passive voice

Passive voice is frequently used to convince the reader of the objectivity of the description, e.g.: "Using a simplified input-output (I-O) framework, the aggregate economic output of the non-energy sector (Y_t) can be formulated as the sum of value-added in the non-energy sector ($VA_{ne,t}$) and inter-industry payments for energy and transport services."(Turton, 2008: 1756)

④ Non-finite verbs

Participles, infinitives and gerunds are frequently used in EST, e.g.: "*Traveling* at the speed of light, it takes two million years to reach the nearest galaxy."

5. The Differences Between English Academic Papers and Chinese Academic Papers

- Strict adherence to a particular style guide vs. loose adherence to style
- More empirical vs. subjective
- More formal: introduction, method, findings and conclusion
- Top-down reasoning vs. spiral reasoning

6. The Distinction Between English Papers on the Arts and Science

The characteristics of English papers on the arts and science are widely discussed (e.g. 辜嘉铭 2006:1~7, 李旭 2005:1). In short, they share the following **similar characteristics**:

① Large-scale use of the passive voice

The passive voice can fulfill the following functions: the paper's theme is highlighted with the facts; the sentences are more concise with actors omitted; the tone is more euphemistic; more objective and accurate with more academic flavor. The passive voice is widely used in the research methods as well as the abstract. It is also widely used in other parts of the paper such as the introduction.

② Extensive use of long, complex sentences

Too many short sentences seem monotonous and fragmented and tend to weaken the intellectual style of academic papers. Long and complex sentences indicate greater erudition and are more precise while increasing diversity to the paper.

Though English arts and scientific papers share some similar characteristics, there

are some **differences** between them:

① Low originality vs. high originality

Compared with scientific papers, English papers of arts enjoy less originality than their counterparts. They usually interpret others' works, summarize what others say about something or just express personal views. On the contrary, originality is the basic characteristics of scientific papers. It requires that the paper describe new discoveries, inventions and creations on the basis of research. These papers reveal either the law of nature, theoretical breakthroughs, or new technical inventions. In short, the essence of scientific papers lies in their increasing human knowledge, rather than simply interpretational summaries or imitation of human knowledge.

② Primary vs. secondary sources

Generally speaking, papers on the arts rely more on secondary sources while scientific papers employ more primary sources. Papers on the arts usually review and comment on others' works, thus the library is often used. On the other hand, scientific papers aim to find the principles of the nature; so, field work and scientific experiments are usually performed. In terms of methodology, scientific papers are more "scientific" not only in the choice of research subjects but also in research content and methodology. The topics of scientific papers center on certain scientific or technical fields. Research methodology, such as data collection and interpretation, must adhere to scientific principles and be replicable, that is, others must be able to verify or replicate the research results. In addition, scientific writing must uphold the spirit of science. Conclusions must be based on solid argumentation. No subjective interpretations, random selection of materials and data, data tampering, or data forgery are acceptable.
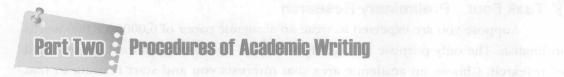
③ Argumentation vs. description

English papers on the arts are largely argumentations which include a thesis statement, supporting details and a conclusion. In contrast, scientific papers are mainly descriptions which usually include the title, abstract, introduction, research methods, findings and discussion, conclusions, recommendations and references. This framework is in line with logic, that is, the questions are asked first and followed by assumptions and experiments. Lastly, the findings, discussion and conclusions are presented.

④ Subjectivity vs. objectivity

By comparison, papers on the arts are more subjective while scientific papers are more objective. That is because papers on the arts employ many modifiers and emotive words to express personal ideas or interpretation of objects or facts. On the contrary,

the essence of scientific writing lies in the accurate reporting of research findings, which cannot be semantically ambiguous, let alone fraudulent. This is the most basic quality of professional ethics and integrity. In addition, "Brevity is the soul of wit." Fewer modifiers and no unnecessary words, vague or subjective phrases are used in order to be objective and without rhetorical pretense.

Part Two Procedures of Academic Writing

In academic writing, the following steps are often employed:

Step 1: Choice of Topic
> Choose a general topic
> Write a rough proposal
> Limit the topic to a plausible one

Step 2: Collection and Evaluation of Data
> Collect books, journals and research articles
> Evaluate data collected
> Photocopy data
> Prepare note and bibliography cards

Step 3: Development of Outline
> Decide on organization of paper
> Arrange notes by subheadings
> Develop paper outline

Step 4: Writing
> Study and follow outline for first draft
> Make adjustments as needed

Step 5: Revision, Editing and References
> Revise content and organization
> Adjust style and tone
> Correct diction, spelling, grammar, punctuation as necessary
> Document all the sources quoted

Step 6: Preparation of Abstract
> Observe abstract word limit
> Ensure accuracy, brevity and clarity
> Highly signaled

Step 7: Preparation of Final Details
  Assemble all parts
  Make final revision
  Prepare References section
  Write acknowledgements

✋ Task Four   Preliminary Research

Suppose you are expected to write an academic paper of 6,000 to 8,000 words in English. The only purpose is to get it published in a famous journal in your field of research. Choose an academic area that interests you and start reading in that direction. Discuss your ideas with your classmates and teacher. Then write a research proposal for further discussion.

Part Three Definition Writing

1. Introduction

A **definition** is the meaning of a word or phrase. For example, "art" is a visual object or experience consciously created as an expression of skill or imagination.

2. Structure of a Definition

Usually, a definition consists of three elements: the term itself, the category the term belongs to and the features of the term.

According to Wikipedia, a definition is defined as:

> Traditionally, a definition consists of the *genus* (the family) of thing to which the defined thing belongs, and the *differentia* (the distinguishing feature which marks it off from other members of the same family). Thus "triangle" is defined as "a plane figure (genus) bounded by three straight sides (differentia)" (Definition, 2009).

Other examples:

Adventurism refers to the "actions or tactics, esp. in politics or international relations, that are regarded as recklessly daring and involving the risk of serious consequences" (Agnes, 2001: 20).

Date is "an appointment for a set time, esp. one for a social engagement with a person of the opposite sex" (Agnes, 2001: 368).

Inn refers to "an establishment or building providing lodging and, usually, food and drink for travelers; hotel or motel, esp. one in the country or along a highway" (Agnes, 2001: 736).

3. Criteria of a Good Definition

The following are the common criteria of a good definition:

- Follow rules that have traditionally been given for definition.
- State the essential attributes of that which is defined.
- Give examples of usage.
- Avoid circularity; e.g. as in defining a horse as "a member of the horse species" which conveys no real information.
- Must be neither too broad or too narrow nor leave out any appropriate information, nor include that which does not truly apply.
- Must not be obscure; i.e., terms more familiar than the one being defined must be used.
- Should not be stated in the negative when it can be stated positively, e.g., "wisdom" should not be defined as "absence of folly", "healthy" as "that which is not sick".

✋ Task Five Definition Evaluation

Evaluate the following definitions and decide whether they are good ones. If not, how can they be improved?

A game is a sport.

A sport is football.

Football is a game.

A horse is a member of the species *equus*.

Wisdom is the absence of folly.

The king of France is bald.

Human beings are two-legged animals without hair.

Blindness is the absence of sight in a creature that is normally sighted.

Murder is an intended, unlawful and criminal act of one human killing another human without provocation or justification.

✋ Task Six Definition

First discuss in groups of three or four and provide your own definitions for the following terms. Then consult a dictionary to find their definitions.

market, coin, culture, language, heart