

# Writing Academic Papers for International Publication: Strategy and Skills

陈欣等 编著; [加] Paul Nicholls 审校

## 英语学术论文 写作与发表







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## Writing Academic Papers for International Publication: Strategy and Skills

陈 欣 张 彬 毛艳枫 高 薇 袁琼华 徐剑平 路 静 编著 [加] Paul Nicholls 审校

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In the current academic climate of "publish or perish", student researchers find themselves under great pressure to gain acceptance of their research via publication, especially in international journals. Apparently, they face enormous challenges on the road to publication.

It is with a view to addressing these challenges that the present book has been prepared.

In response to the recent reform of the graduate English curriculum in China, this book was developed with particular considerations in the needs of postgraduate students who were relatively new to the task of writing research papers for submission to an international journal, and those who wanted to develop their skills for more successful academic writing in English. This book was intended to meet these ends.

The book has the following main characteristics:

- 1. The book provides advanced materials for an EAP writing course tailored to students' needs at graduate level. The guiding philosophy of the book is to reflect the latest domestic and international research outcomes in English academic writing.
- 2. The book is developed with three aims based on the Needs Analysis of EAP education at graduate level: to equip students with the knowledge of general research methodology and structure arrangement of a paper; to improve the writing techniques at both sentence and discourse level; and to sensitize students to genre-specific conventions in international publication.
- 3. As a design feature, a practical placement of sections is utilized in this book even though students are encouraged to adopt a flexible order of writing when drafting their paper. This book presents the sections in the order: Results, Discussion, Conclusions, Methods, Introduction, followed by Abstract and Title, which "tells the true story" about the logical procedure in writing a consistent manuscript in sciences.
- 4. Simple explanations, authentic examples and useful sentence patterns emphasize the practical value of this book.
- 5. Each chapter presents relevant writing strategy either on SCI paper writing or on graduation thesis preparation. A "Reflections and Practice" section is also included at the end of each chapter with the goal of expanding students' knowledge on the topic of each relevant section.

Specifically, Chapter one provides an overview of academic research writing to facilitate a



basic understanding of standard conventions and language features of academic genre, and to help readers streamline the process of producing an effective academic research paper. The follow-up chapters focus in much greater detail, on topics ranging from prewriting strategies to writing methods for each section. The last chapter links paper writing with its ultimate purpose of international publication by addressing such relevant issues as selecting target journals, identifying publication requirements, and corresponding with editors and referees.

The book is intended not only for graduate students at advanced English levels, but also for researchers in various research fields, and for language teachers engaged with EAP course design. It is also applicable for international students in China with a wide range of cultural backgrounds who produce scientific research in English as their first language. We hope the book will be of use to all professionals involved with the practice of research article writing. It is designed for use either by class groups working with a teacher, or by individuals as a self-study guide.

This book is compiled by an author team of EAP teachers in Jiangsu University who combine perspectives, efforts and years of experience in English teaching at graduate level. The compiling task has been divided as follows:

Content system design and review: Chen Xin; Chapter one: Chen Xin; Chapter two: Mao Yanfeng; Chapter three and five: Zhang Bin & Mao Yanfeng; Chapter four: Zhang Bin; Chapter six: Yuan Qionghua; Chapter seven: Lu Jing; Chapter eight: Xu Jianping; Chapter nine: Gao Wei.

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Chen Xin September 2018

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### Chapter 1

#### Introduction to Academic Research Writing

#### **Chapter Objectives**

#### After completing this chapter, you should be able to:

- Gain perspectives on the classification of research
- · Recognize different types of academic papers
- Identify the style of academic writing
- Understand the structure of an academic paper
- Structure a research proposal

Submitting a manuscript to an international journal is a way of joining a global dialogue in the academic community. Scholars strive to maintain their high academic standing through publication in high-impact academic journals. As postgraduate students, you also should approach research paper writing and publication to meet the essential requirements for degree application. The process of literature search, topic selection, manuscript writing and paper submission provides valuable experience to novice researchers. This chapter, as a general introduction, is intended to shape students' understanding of academic research writing with essential knowledge and effective strategies which are highly relevant to the following chapters in this book.

#### 1.1 The Nature of Academic Research

In the broadest sense, research signifies almost any sort of information collection, check or probe. For academic purposes, research is meant to establish facts or reach new conclusions which expand the frontiers of professional knowledge. It is defined as an "inquiry or examination, especially investigation or experimentation aimed at the discovery and interpretation of facts, revision of accepted theories or laws, or practical application ..." "

① Research. http://www.merriam-webstercollegiate.com/. 2018-03-10.



To qualify as an academic research, it must adhere to the following standards of scientific procedures regardless of research type, methodology or application.

- Scientific: Unbiased and objective conclusion
- Rigorous: Relevance, accuracy and completeness
- Systematic: Organization of procedure following a certain logical sequence
- Valid and reliable: Essential scientific proof for justifiability
- Replicable: Same results yielded if repeating exactly the same procedure
- Original: Contributing to the existing stock of knowledge
- Responsible: Acknowledging sources
- Critical: Openness to critical scrutiny

#### 1.2 Classification of Academic Research

Academic research can be classified into different types in terms of **research application**, **research aim** and **enquiry mode**. Even though the types of research set from different perspectives are to some extent overlapping, each type has some unique characteristics that come under different categories.

#### 1.2.1 By Research Application

In terms of application, research can be classified into **theoretical research** and **applied research**.

Theoretical research is primarily concerned with establishing theories or testing existing theories rather than resolving practical issues. ① It usually aims to explore theories, generate new ideas and develop principles which lay the foundations of scientific progress even though the research may not be immediately utilized. Thus, such work often involves the testing of hypotheses containing very abstract and specialized concepts.

**Applied research** is mostly application-oriented which seeks to solve practical problems. They emphasize the usefulness of its results in the society. Since the central aim of applied research is to discover a solution for some pressing practical problems, the findings from such research can be directly tried out by practitioners.

It should be noted that the distinction between theoretical and applied research is sometimes blurred. That is, it is common for theoretical research to have practical value while applied research has theoretical implications.

#### 1.2.2 By Research Aim

In terms of aims, three types research can be identified: exploratory research, conclusive

① Wen Qiufang. Applied linguistics; Research Methods and Thesis Writing. Foreign Language Teaching and Research Press, 2001;3.





research and descriptive research.

**Exploratory research**, given its nature, is "the initial research which forms the basis of more conclusive research". "It tends to tackle problems on which little or no previous research has been done." Description Exploratory Research is usually conducted in an attempt to gain insight into a problem that has not been clearly defined. For example, when a study is carried out to determine its feasibility, a pilot study is usually performed with the objective to investigate the possibilities of undertaking a particular research study in the future.

The goals of exploratory research are generally as follows:

- To gain insight into a theory or a given situation
- To determine about the feasibility of a potential study
- To signal direction for future research

Conclusive research is often applied to verify and quantify findings of exploratory studies. It tends to achieve research objectives via hypothesis-testing approach due to its deductive nature. Compared with exploratory studies, "Conclusive research is more likely to use statistical tests, advanced analytical techniques, and larger sample sizes. It is also more likely to use quantitative, rather than qualitative techniques". <sup>2</sup>

Conclusive research can be differentiated from exploratory research with the specific characteristics below:

- Testing hypothesis and relationships vs. gaining understanding and insights
- Applying a formal and structured research process vs. an unstructured and flexible process
  - Using quantitative data analysis vs. qualitative analysis
  - Seeking conclusive vs. tentative results

**Descriptive research** attempts to describe a situation, phenomenon, program, or attitudes towards an issue. Descriptive research may be characterized as the attempt to determine, describe or identify what it is, while analytical research attempts to establish why it is that way or how it came to be.

There are mainly two ways to carry out a descriptive research project:

- Survey: defined as a brief interview or questionnaire on a specific topic
- Observation: defined as a method of viewing and recording the behaviors of participants or events in natural or laboratory setting



① Brown R B. Doing Your Dissertation in Business and Management: The Reality of Research and Writing, Sage Publications, 2006;43.

② Nargundkar R. Marketing Research; Text and Cases. McGraw-Hill Educational, 2008:39.



#### 1.2.3 By Enquiry Mode<sup>①</sup>

In terms of enquiry mode, research may broadly be categorized under two groups: qualitative and quantitative approach.

Qualitative research primarily applies exploratory approach that collects non-numerical data and seeks to interpret meaning from these data. It is used to probe into underlying reasons, opinions, or motivation through the study of targeted populations or situation. Methods of qualitative research mainly include direct observation, interviews, open-ended surveys and case study.

- *Direct observation*: With direct observation researchers study people or situation without participating or interfering.
  - Interview: Researchers conduct interviews with respondents in a face-to-face setting.
- Open-ended survey: Research designed with open-ended questions allows for the generation and analysis of new hypotheses.
- Case study: The term case study has been defined as "a detailed investigation, often with data collected over a period of time, of one or more organizations, or groups within organizations, with a view to providing an analysis of the context and processes involved in the phenomena under study". ②

**Quantitative Research** uses numerical data to present facts and explore underlying patterns in research. It is typically used to quantify variables and generalize results from a larger sample population. Basically, the quantitative approach takes three different forms:

- *Inferential Approach*: In this approach, researchers carry out survey or observations on a research sample to determine its characteristics and then the result is used to infer about the population behavior on the same characteristics and their relationships.
- Experimental-based Approach: In engineering and the physical sciences, experimental approach is usually applied to support, disprove, or validate a hypothesis. It is characterized by the control over a research environment to test about how physical processes work under particular conditions. Therefore, experiments are intended to replicate identical procedures in hopes of producing identical results.
- Simulation-based Approach: A simulation-based approach involves research activities in a hypothetical situation based on a simplified operating model of the "real world". Computer experiments are conducted to study simulation models so as to gain insights into its general dynamics. It is often used to replace field research to achieve standardization of data collection and manipulation of variables of interest.

② Hartley J. Case Studies in Organizational Research. Qualitative Methods in Organizational Research. Cassell C and Symon G. Sage Publication: 1994:208-229.



① Qualitative and Quantitative Research. https://www.snapsurveys.com/qualitative-vs-quantitative-research/, 2018-03-10.



#### 1.3 Types of Academic Paper

Academic papers vary greatly and apply different formats to communicate research. Depending upon their nature, objectives, and other factors, academic papers can be defined or categorized under various types. Thus, students must know the different categories and the selection of types of writing under certain circumstances. This will enable the students to choose the type most appropriate for a specific research task. The following are some major types of academic papers: research paper, academic report, review article, brief communications articles, course paper, thesis and dissertation.

#### 1.3.1 Research Paper

A research paper is usually published in an academic journal, informing and reporting on original research. It describes a study that was performed by the author(s). A research paper must give a perspective or make a hypothesis rather than just present the collected information. It should explain the methodology of the study, clarify what the results mean, and aim to draw new conclusions; or to present the material in light of a new interest.

#### 1.3.2 Academic Report

A report paper is often written to recount and summarize an event and the findings on a particular subject in sequence. It is usually used to display the result of an experiment, investigation, or inquiry. What differentiates an academic report from a research paper is that an academic report focuses on presenting information obtained from research rather than exploring a research problem to generate new conclusions. Essentially, academic reports are more empirical.

#### 1.3.3 Review Article

Review articles do not report original research of the author(s). Instead, they survey and summarize previous studies, identify their strengths and weaknesses, point out any possible research flaws, and suggest future work. Writing Review articles usually demands critical evaluation through in-depth analysis and a well-structured presentation of arguments. Students often read them for background information before consulting research articles.

#### 1.3.4 Brief / Rapid Communications Paper

Brief, or rapid communications papers are short reports of original research focusing on outstanding findings which often deserve to be communicated rapidly to the scientific community. This paper type provides an option for writers who want to publish their high impact results in short form and rapidly, as the name "rapid communications" suggests.





Therefore, brief communications have three typical features:

- *High impact*: With highly influential research findings, the article will be of substantial interest to a wider specialist community.
- Brief: Often only the most interesting or salient points are mentioned, with full details of the work to follow in a later paper.
- Rapid: The peer-review process is usually sped up or replaced by editorial review for rapid dissemination of the new result.

Some popular types of brief communications article accepted in top journals are listed below:  $\odot$ 

- Nature: Brief Communications Arising.
- Lancet: Correspondence.
- Science: Letters.
- The American Mathematical Monthly: Notes.

#### 1.3.5 Course Paper

For some courses in postgraduate programs, a course paper is one of the assessment components required to fulfill the course requirements. It is often assigned by the instructor for tracking and accessing students' knowledge about the course. At graduate level, a course paper should be well-researched, analytical and organized. Most of the time, a course paper will follow the format which typically contains cover page, abstract, introduction, synthesis of research and a conclusion.

#### 1.3.6 Thesis and Dissertation

A graduate thesis or dissertation is "a piece of original scholarship written under the direction of a faculty advisor". ② It is usually submitted to the academic committee as a compulsory document to apply for an academic degree, indicating the author's scholastic achievement. Relatively speaking, a thesis values critical and in-depth discussion of more narrowly focused topic, while a doctoral dissertation is expected to come up with original and creative findings which substantially contribute to the existing knowledge in the field.

#### 1.4 The Style of Academic Writing

Academic texts should conform to a unique set of stylistic rules, which vary only slightly across different disciplines. Understanding the rules of academic style and the corresponding writing skills will enable students to produce more effective academic papers.

<sup>2</sup> Thesis. https://www.uh.edu/class/political-science/\_docs/MA/MA%20Thesis%20Guidelines.pdf, 2018-09-12.



① Short Communication Paper. https://thinkscience.co.jp/en/articles/brief-communications, 2018-03-22.