



英文研究论文写作与文献检索

**English research paper writing and Literature
Retrieval**

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英文研究论文写作

English research paper writing

English research paper

- ❖ Title(标题)
- ❖ Abstract(摘要)
- ❖ Keywords(关键词)
- ❖ Table of contents(目录)
- ❖ Nomenclature(术语表)
- ❖ Introduction(引言)
- ❖ Method(方法)
- ❖ Results(结果)
- ❖ Discussion(讨论)
- ❖ Conclusion(结论)
- ❖ Acknowledgement(致谢)
- ❖ Reference(参考文献)
- ❖ Appendix(附录)

标题Title

The title is a necessary part of academic paper. It requires the most concise, appropriate phrases reflect the specific contents of the article, and tells the reader unmistakably.

The title should be short, use the most concise, appropriate phrases reflect the specific contents of the article.

For the journals of science and technology in China, the thesis title words should not be more than 20 Chinese characters, foreign language titles of not more than 10 notional words.

摘要 Abstract

Abstract should be the main information, contains the same information of papers, for the readers to determine whether it is necessary to read the full article.

The four elements of abstract:

purpose: the importance , objective, scope of research;

method: the means and methods used ;

results: data and results;

conclusion: the important conclusion and main points.

关键词Keywords

Keywords include two parts of subject headings and free words

- ❖ Subject headings are words or phrases being specified
- ❖ Free words are words or phrases being not standardized

正文

The body of the paper: the body is the main part of the thesis, the text should include the argument, the process of argumentation and conclusion. The body part includes the following contents:

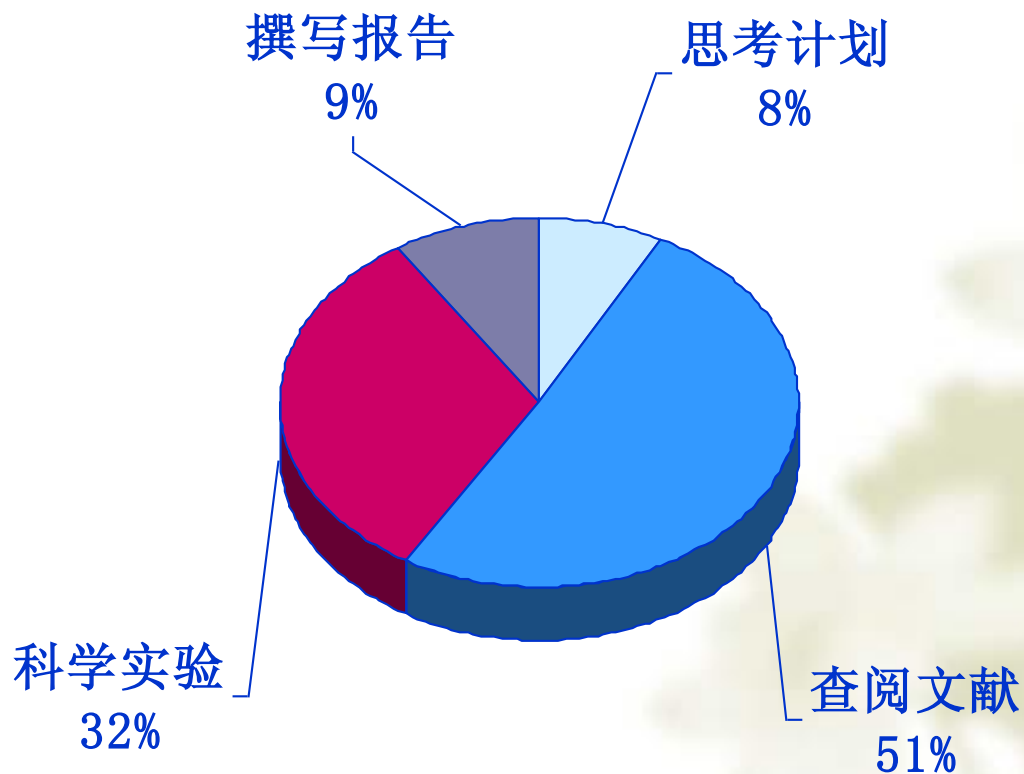
- a. 提出论点;
- b. 分析问题-论据和论证;
- c. 解决问题-论证与步骤;
- d. 结论

结论 Conclusion

Conclusion is more in-depth understanding of results, is new view from the whole text contents after judgment, induction.

文献检索 Literature Retrieval

文献检索在研究中所占比例



一、文献（literature）

1、Literature: the carrier of recording all knowledge and the information.

2、The basic elements of literature:

- ❖ content -the core of literature.
- ❖ Information symbols - Symbols and expression of markers revealed knowledge and information.

Example: [J] (journal) , [C] (collected papers) , [DK] (disk)

- ❖ Bearing literature- material of loading information.
- ❖ Recording mode - method of the information symbols stored in the material.

3、文献的类型 literature type

- ❖ Zero Literature: the literature without publication or communication. Such as the experimental records, draft, personal diary, notes, letters, sketches, etc.
- ❖ First Literature: article of the author created by own research or research results , is need to find in the scientific research. Such as Journal, Conference Papers, etc.
- ❖ The second Literature: such as abstracts, index, bibliography, etc.
- ❖ The third Literature: such as review, special year summary, data sheets, reference books.

4、信息资源 Information resources

- ❖ Definition:

a collection of useful information through artificial selection, organization and order.

- ❖ Characteristics: limited, artificial, accumulation, orderly

- ❖ Ten information resources:

Continuous publication: books, periodicals and newspapers,

Special literature: technical reports, conference papers, patent documents, standards documents, government publication, dissertations, product information, technical archives.

(1) 图书 Books: Monograph Series , Series of Monograph, Textbook, etc.

- ❖ Reference book: Dictionary, Handbook and Encyclopedia etc.
- ❖ Books: more than 48 pages, ISBN (International Standard Book Number).
- ❖ Characteristics: The cycle is long, can not be timely and quickly reflect the latest scientific research .

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(2) 期刊 Journals

- ❖ Retrieval Periodicals: the main tool of scientific literature publications provide clues.
- ❖ Features: articles published of multiple authors , fast speed, short cycle, the new content, large quantity, variety. Research utilization is 65%.

(3) 学位论文 Thesis

- ❖ Thesis: refers to the scientific research institutions like universities, graduates and postgraduates, as submitted to obtain the degree of academic papers. Such as bachelor, master, doctor.
- ❖ Features: originality , detail and system of content , important research data in the field of innovation.

(4) 会议文献 **Conference Papers**

- ❖ Conference Papers: papers, materials, discussion records, meeting minutes to be read or communicated at conferences and professional academic conference.
- ❖ Features: the latest research progress and achievements reflect some subject or field, with high research value, especially by participating in the conference with a certain international influence related, not only can meet peers, grasp the research dynamic, and have very important role of looking for partners, disseminate and exchange information.

(5) 专利文献 The patent document

- ❖ The patent literature: refers to all the literature concerned with the patent system generalized, such as the specification of a patent, Gazette, classification, indexing, legal documents of patent, etc. The patent literature refers to a patent specification narrowly.
- ❖ Categories: invention, utility model and design.
- ❖ Features: Is the source of technical and economic information, the important resources of scientific research personnel looking for.

(6) 标准文献 Standard document

- ❖ Standard : technical regulations of construction quality, specifications, the basic unit and test method by authoritative departments approved in agriculture and engineering.
- ❖ Features: legally binding of certain standard document, which has important reference value to understand national economy, technology policy, production level and promote modern management.

(7) 科技报告 Technical report

- ❖ system summary of Research
- ❖ Features: continuous publishing, with special and specific content, integrity data, it is the latest achievement, and is published earlier than Journal papers.
- ❖ The most famous technical report:

PB (Publishing Board)

AD (ASTIA Documents: Armed Services Technical Information Agency)

NASA (National Aeronautics and Space Administration)

DOE (Department of Energy)

(8) 政府出版物Government publications

- ❖ Government publications: governments and its specialized institutions published literature. Such as Government Gazette, conference papers, laws and regulations, policies, statistics, survey report.
- ❖ Features: formal and authoritative, has the unique reference function to the understanding of national politics, economy, science and technology.

(9) 档案 File (a most faithful document)

- ❖ File: is a formed in social activities, production and construction and technical work , it had a laudatory name of "first hand materials", "historical document" .
- ❖ Features: because of the social and historical phenomenon may not repeat itself, therefore, to research, analysis and synthesis has become an important means of social science research.

(10) 产品资料 Product information

- ❖ Product information: various commodity propaganda published by manufacturers, aim to sell products..
Such as company introduction, product catalogs, samples, brochures, etc.

二、文献（信息）检索的定义和作用

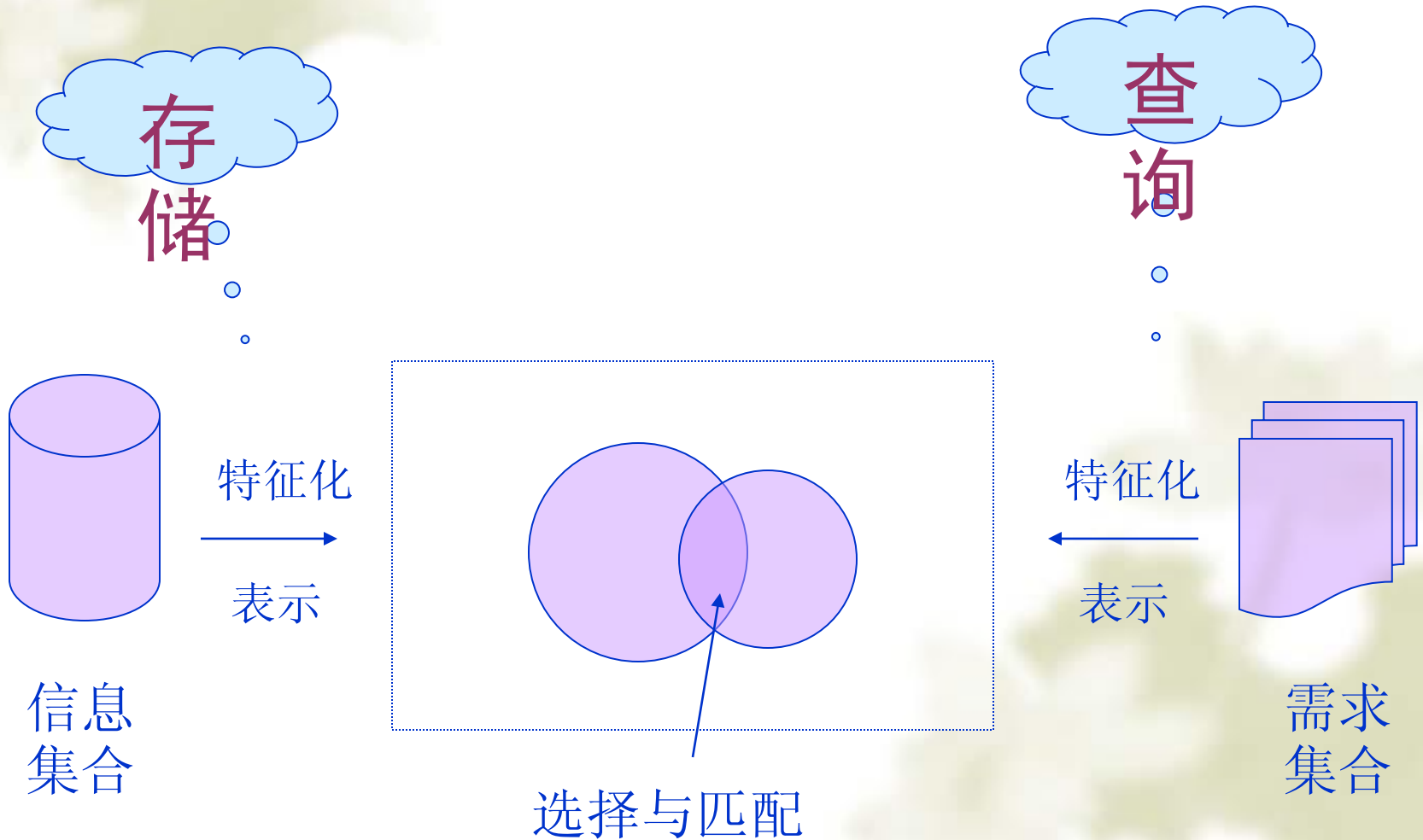
1、文献检索的概念： The process from the collection of information to find the needed information(Literature) , which is the information query. It can reduce the repeated research of subject, improve the successful rate of scientific research, save time and improve the efficiency of scientific research, and avoid to piece together the article.

2、文献（信息）检索的作用

To continue to hold the new information, new knowledge and learn new things, study new research problems, keep up with the times, and adapt to the new form of the increasing requirements.

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信息检索的原理（示意图）



3、文献检索方法

- ☺ 检索工具法The method of retrieval tools
- ☺ 追溯法Tracing method
- ☺ 分段法Subsection method
- ☺ 浏览法Browsing method

检索工具法 The method of retrieval tools

- (1) reverse order check method: using starting time of the research as the starting point, the method of finding from far and near in time sequence year by year.
- (2) order check method: the method of finding from near and far year by year.
- (3) sampling method: method of selecting a certain time period , according to the discipline development peak,

追溯法 Tracing method

To track the original one by one by references of known literature, then attached references of the original one by one, until take a satisfactory result.

分段法 Subsection method

Also known as circulation method, alternate method and synthetic method. It is the method of retrieval tools and tracing method used interchangeably.

浏览法Browsing method

It is also known as direct search method. It can find papers directly from the required documents, has blindness, can supply the various retrieval method, mainly be used for the newly published literature search.

4、文献检索的步骤和方法

(一)分析研究课题，明确检索要求、时间、范围

- 1、 analyze the substantive content , scope and mutual relations of the subject, extract topic concept, determine logical combination.
- 2、 clear literature, language, age and the volume of literature.
- 3、 clear focus of retrieval: indicators of searching the new, searching precision, searching whole .

举例

例：查找关于“SBR和MBR”研究进展及专利审批情况。

1、涉及的“SBR和MBR”知识去哪里查找？**图书**

2、研究进展去哪里查找？**期刊、综述、科技报告...**

3、专利审批情况怎么查找？**专利数据库**

4、使用那些检索工具？**网络数据库、参考工具书...**

(二)查找文献线索、确定检索策略

- 1、 the choice of search tools: content, professional, technical means, update, information price ratio etc.
- 2、 determine retrieval way: (classification, subject, author, other)
- 3、 the preferred search method
(retrieval tools, traceability, segmented, browse)
- 4、 record well
- 5、 establish and adjust the retrieval strategy

(三)索取原始文献信息

- 1、 grasp the reduction method: conversion of abbreviations and full
- 2、 claim to original literature from the authors
- 3、 access to the original literature by the library catalogue, a public inquiry system, Directory
- 4、 access to the original literature by online full-text database
- 5、 retrieve the original literature by online full text delivery service
- 6、 online publishers, magazine
- 7、 the original service of database .

5、检索结果评价 The retrieval results evaluation

提高查全率和查准率

Improve the recall and precision

降低漏检率和误检率

Reduce the missing rate and false detection rate

检索效果的评价指标:

➤ 查全率 (检全率) ↔ 漏检率

$$\text{查全率}R = \frac{\text{检索出的相关文献量}}{\text{数据库中的全部相关文献}} * 100\%$$

➤ 查准率 (检准率) ↔ 误检率

$$\text{查准率}P = \frac{\text{检索出的相关文献量}}{\text{检出的文献总量}} * 100\%$$



Thank you !