

Brain Exercise Secrets A Comprehensive Guide to Graduate Student Development and Academic Research

Gu Liping^{1,2*}

¹National Science Library, Chinese Academy of Sciences, Beijing, 100190, China

²Department of Information Resource Management, School of Economics and Management, University of Chinese Academy of Sciences, Beijing, 100190, China

*Corresponding Author

Gu Liping, National Science Library, Chinese Academy of Sciences, Beijing, 100190, China.

Submitted: 2025, Jan 08; **Accepted:** 2025, Feb 10; **Published:** 2025, Feb 21

Citation: Liping, G. (2025). Brain Exercise Secrets A Comprehensive Guide to Graduate Student Development and Academic Research. *J Electrical Electron Eng*, 4(1), 01-07.

Abstract

This article aims to provide a comprehensive guide to graduate student training and academic research for graduate students and researchers, enhancing their research capabilities, critical thinking, and innovation skills. The article elaborates on various aspects, including the training programs of research institutions, research methods and objectives, the importance of literature reviews, the cultivation of research abilities, and the role of supervising professors. It also introduces the essential elements of academic publications, the research process and timeline, reading skills for journal articles, the essentials of criticism and innovation, and guidelines for writing dissertations. Through case analyses, it demonstrates how to identify opportunities for innovation in academic research and provides suggestions for planning, progress, and risk management in research work. This article is not only applicable to the academic field but can also be widely applied to real-life situations and work, supporting readers solve problems in their careers and personal lives.

Keywords: Graduate Student Training, Academic Research, Research Capability, Critical Thinking, Innovation Ability

1. Introduction

In today's rapidly evolving academic environment, graduate students and researchers face the challenge of continuously enhancing their research capabilities, critical thinking, and innovation abilities. The training programs offered by research institutes play a crucial role in this process, systematically improving researchers' comprehensive qualities through well-designed courses and practical activities. This article delves into various aspects of research institute training, including research methods and objectives, the importance of literature reviews, the cultivation of research abilities, and the role of supervising professors, aiming to provide a comprehensive guide for graduate students and researchers to navigate the various challenges in academic research.

2. Training in Research Institutes

2.1 Research Methods and Objectives

Research methods occupy a central position in the training process of research institutes, with the primary goal of finding correct answers and better solutions. Researchers need to possess solid skills in literature searching, screening, analyzing, and

synthesizing to locate relevant and reliable information from a vast amount of literature and refine scientific conclusions through critical thinking. Furthermore, researchers are expected to engage in innovative thinking and practice based on previous research, seeking more efficient and practical solutions.

2.2 Application of Research Methods

The research methods cultivated in research institutes are not only applicable to the academic field but can also be widely applied to real-life situations and work. For example, in the workplace, researchers can use these methods to analyze investment or stock market trends, assess the accuracy of news reports, and find reliable medical information, thereby making more informed decisions [1,2]. In personal life, researchers can also apply research methods to choose suitable career paths, plan family life, and conduct comprehensive analysis and evaluation when facing important decisions.

2.3 The Importance of Literature Reviews

Literature reviews are an indispensable part of the training process in research institutes and are of great significance in enhancing

researchers' comprehensive qualities. By reviewing and analyzing literature with different viewpoints, researchers can cultivate critical thinking skills and learn to view issues objectively and comprehensively. Additionally, literature reviews help researchers find innovative clues from existing research, avoid duplication of effort, and pave new paths for their own research.

2.4 Cultivation of Research Abilities

Research institutes systematically cultivate researchers' research abilities through a series of courses and practical activities, including literature reviews, critical thinking, and innovation capabilities. Researchers need to learn how to efficiently search, screen, analyze, and synthesize literature, laying a solid foundation for subsequent research. Through continuous training and practice, researchers gradually develop skills in analysis, evaluation, reasoning, interpretation, and self-criticism, which are essential qualities for becoming excellent researchers [3-5]. At the same time, research institutes encourage researchers to seek innovative clues from existing literature and engage in innovative thinking and practice.

2.5 The Role of Supervising Professors

Supervising professors play a vital role in the training process of research institutes. They suggest appropriate research topics, courses, and resources based on researchers' interests and backgrounds, helping them clarify their research directions and goals. Supervising professors also regularly organize discussion activities, encouraging researchers to actively participate and express their views, thereby enhancing their critical thinking and literature review skills. Furthermore, they provide personalized guidance and assistance tailored to each researcher's specific situation and needs, such as teaching methods for literature reviews, developing research ideas, and conducting risk assessments.

3. Essential Elements of Academic Works

3.1 Essential Elements of a Dissertation

As an important form of academic work, a dissertation must embody originality, rigor, and objectivity. Originality requires the researcher to propose new findings, viewpoints, or solutions based on previous research. Rigor demands that the argumentation process be supported by reliable evidence and stringent logic. Objectivity necessitates that the research process and conclusions be free from personal subjective biases and be reproducible.

3.2 Seven Essential Elements of Academic Works

In addition to the essential elements of a dissertation, academic works must also satisfy the following seven requirements: originality, reliable evidence, critical examination, theoretical foundation, systematization, consistency and objectivity, and reproducibility. Academic works must maintain a clear connection with the academic community, and the style should be clear, precise, and standardized.

3.3 Core Competencies in Academic Research

Conducting academic research requires a series of core competencies, including innovation ability, critical thinking skills,

and literature review skills. Innovation ability requires researchers to continuously propose new viewpoints, discoveries, or solutions. Critical thinking skills demand that researchers conduct in-depth analysis and evaluation of previous research [6,7]. Literature review skills require researchers to be proficient in searching, screening, analyzing, and synthesizing literature.

3.4 Common Issues in Low-Quality Papers

Common issues in low-quality papers include lack of originality, insufficient or unreliable evidence, non-rigorous argumentation processes, and lack of critical thinking. These problems may arise due to researchers not conducting in-depth experiments, surveys, or data analysis, or lacking critical thinking skills.

3.5 Suggestions for Cultivating Research Competencies

To improve research quality and efficiency, cultivating research competencies is crucial. Suggestions include choosing a responsible supervisory professor, creating a conducive learning environment, and diligently learning methods for literature review and critical thinking. A supervisory professor can provide professional guidance, a good learning environment can stimulate innovative thinking, and diligently learning literature review and critical thinking methods can enhance foundational research skills.

4. Academic Journey and Timeline

4.1 Academic Journey

The Academic Journey encompasses the entire process from selecting a supervisory professor and research topic to the oral defense of the thesis. It includes learning literature search and screening methods, conducting preliminary and in-depth literature reviews, determining research questions and thesis topics, proposing innovative strategies and research frameworks, developing theories, integrating evidence, testing hypotheses, designing exemplary cases, writing the first draft of the thesis, and preparing for the oral defense.

4.2 Time Planning

Reasonable time planning is key to ensuring the smooth progress of research. A typical time planning example includes stages such as coursework, literature review and critical thinking, innovative strategies and research frameworks, theory development, evidence collection, argumentation, thesis writing, revision, and preparation for the oral defense. Each stage requires a reasonable allocation of time to ensure the research progresses as planned.

4.3 Key Factors for Thesis Quality

Thesis quality is an important indicator for measuring research outcomes. The key lies in the rigor and reliability of the argumentation process, a profound understanding and critical thinking about the research question, and innovation [8-10]. Rigorous argumentation processes, profound understanding, critical thinking, and innovation are the core elements for enhancing thesis quality.

4.4 Role of the Supervisory Professor

The supervisory professor plays a crucial role in the academic

research process, including guiding research progress, organizing discussion activities, and providing personalized guidance. They formulate a reasonable research plan based on the researcher's actual situation and research requirements, providing comprehensive support and assurance.

5. The Role of Supervisory Professors in Cultivating Research Competencies

5.1 Cultivating Critical Thinking Skills

Critical thinking is one of the core competencies in academic research, involving analysis, evaluation, reasoning, interpretation, and self-criticism. Through coursework, literature reviews, and guidance from supervisory professors, researchers can gradually cultivate critical thinking skills, combine them with professional knowledge, and propose insightful viewpoints and suggestions.

5.2 Literature Review and Critical Thinking

Literature review and critical thinking are closely linked, jointly promoting the enhancement of research competencies. Through literature review, researchers can understand the advantages and disadvantages of research methods, and through critical thinking, they can enhance their understanding of research questions, thereby cultivating innovation abilities and discovering new research perspectives and questions.

5.3 Role of the Supervisory Professor

Supervisory professors play a crucial role in the process of cultivating research competencies, including guiding research progress, organizing discussion activities, and providing personalized guidance. Based on the specific situation of the researcher, they provide professional guidance, help researchers clarify research directions and goals, and improve research quality and efficiency.

5.4 Considerations for Choosing a Supervisory Professor

Choosing an appropriate supervisory professor is crucial for cultivating research competencies. Considerations include research direction and interest, research style and guidance approach, as well as academic reputation and experience. The research direction and interest of the supervisory professor should align with those of the researcher, the research style and guidance approach should suit the researcher, and academic reputation and experience are also important references.

6. The Relationship Between Research Topics and Thesis Titles

6.1 Selection of Research Topics

Selecting a research topic is the starting point of academic research, which should possess innovation and potential for contribution, sufficient background knowledge, and personal interest [11,12]. An excellent research topic can challenge the boundaries of existing knowledge, make substantial contributions to academia or practical fields, and require the researcher to possess relevant background knowledge and a strong interest.

6.2 Literature Review of Research Topics

A literature review is a necessary step after determining a

research topic, helping researchers comprehensively understand the current state of the research field and providing a basis for research positioning and innovation. Through a literature review, researchers can grasp the research background, significance, development process, major controversies, and trends, and identify the most promising sub-topics for research.

6.3 Selection of Thesis Titles

The thesis title is a concise expression of research findings and should be clear, specific, operable, and possess innovation and potential for contribution. It should be based on the researcher's background knowledge and align with their personal interests. The title needs to accurately convey the core content and scope of the research, guide research practice, and ensure that research goals and outcomes are operable and verifiable.

6.4 Research Cases of Open Scientific Questions

Taking open scientific questions as an example, we demonstrate the close relationship between research topics and thesis titles. Open science emphasizes the openness, transparency, and reproducibility of research, and studying open scientific questions helps drive progress in scientific research. By exploring the major controversies and representative papers in open science, researchers can discover new research directions and the diversity of topics, thereby expanding the breadth and depth of their research.

6.5 Opportunities for Innovation

In academic research, innovation is a crucial driving force for disciplinary development. Researchers can seek innovation opportunities by borrowing methods from other disciplines, finding innovative clues through literature reviews, and combining different sub-topics to form new research perspectives, thereby proposing new viewpoints and solutions.

7. Reading Skills for Journal Articles

7.1 Differences Between Reading Methods in University and Journal Articles

During university, the focus is mainly on reading textbooks, whereas in academic research, frequent reading of journal articles is required. Textbooks are self-contained and systematic, with simple and easy-to-understand language, aiming to provide students with a basic knowledge framework. Journal articles are highly dense in content, use extensive professional terminology and complex expressions, and are targeted at experts or researchers in the field, reporting the latest research findings.

7.2 Spiral Reading Method

Given the complexity and professionalism of journal articles, adopting a spiral reading method can effectively improve reading efficiency. This includes steps such as skimming to understand the article's topic and background, supplementing with popular science-level background knowledge, reading in-depth to understand research methods and results, reading related literature to improve background knowledge, and re-reading to comprehend difficult points, gradually delving into the core content of the article.

7.3 Understanding the Structure and Characteristics of Journal Articles

Understanding the structure and characteristics of journal articles is key to improving reading efficiency. Articles include sections such as abstracts, introductions, main content, conclusions, and references, each with specific functions and characteristics. The abstract provides a brief overview of the research, the introduction presents the research question and background, the main content details the research methods and results, the conclusion summarizes the research findings, and the references list the cited literature.

7.4 Reading Strategies for Journal Articles

Adopting effective reading strategies can improve the efficiency and depth of understanding when reading journal articles. These include seeking answers centered around questions, reading related literature to enhance background knowledge, and critically reading to evaluate research methods and results. Researchers need to clarify their reading purpose, maintain critical thinking, and conduct an in-depth assessment of the article's content.

8. Comprehensive Literature Review and Fieldwork

8.1 Purpose of Comprehensive Literature Review

The purpose of a comprehensive literature review is to gain a thorough understanding of the current state and development trends of the research topic, providing a solid theoretical foundation for subsequent research [13,15]. By extensively reading relevant literature, researchers can grasp the basic concepts, theoretical frameworks, research methods, and main research findings of the topic, identify under-explored or controversial sub-topics, and form preliminary research ideas.

8.2 Introduction to Review Papers and Monographs

Review papers and monographs are important resources in literature reviews, providing researchers with abundant research materials and theoretical support. Review papers introduce the literature status and development trends of the research topic from a macro perspective, while monographs delve deeper into the theory and methods of the topic, providing detailed theoretical frameworks, research methods, and empirical analyses.

8.3 Search Methods for Review Papers and Monographs

To obtain high-quality review papers and monographs, researchers need to master effective search methods. These include using keyword searches, utilizing academic databases and online resources, etc. By screening and comparing relevant literature, researchers can find review papers and monographs that meet their needs.

8.4 Reading Tips for Review Papers

Reading review papers is a crucial part of literature reviews, and mastering effective reading tips can improve reading efficiency and depth of understanding. These include skimming to understand the paper's content and research methods, critically reading to evaluate the research methods and results, and recording important information for subsequent research. Researchers need to maintain critical thinking and conduct an in-depth assessment of the paper's

content.

8.5 Fieldwork and Experiments

Fieldwork and experiments are indispensable practical components in academic research, complementing literature reviews. Through field investigations or experimental research, researchers can gain a deep understanding of the actual situation of the research topic, discover issues that may have been overlooked in the literature review, and stimulate new research ideas. Fieldwork and experimental research can also verify and develop theoretical frameworks, forming the researcher's own research viewpoints and conclusions.

9. Thesis Titles and Research Scope

9.1 Shaping Academic Questions

Shaping academic questions is the process of transforming practical problems into researchable academic questions. Researchers need to use professional knowledge and insight to extract research questions with academic value from practical problems, simplify and abstract the questions, and use academic terminology and theoretical models to describe and explain them.

9.2 Types of Titles and Problem Forms

Thesis titles and research questions come in various types and forms, including causal relationship questions, descriptive questions, explanatory questions, normative questions, etc. Researchers need to choose appropriate question types and forms based on research purposes and needs, clarifying the research focus and objectives.

9.3 Tailoring and Creativity in Research Scope

Tailoring and creativity in research scope is the process of determining the specific content and boundaries of the research. Researchers can make the research more focused and in-depth through reasonable tailoring and creative design. This includes selecting appropriate time spans, spatial scopes, and adding specific groups, organizations, contexts, and other limiting conditions to precisely position the research questions and objects.

9.4 Systematic Connections of Research Topics and Opportunities for Innovation

The systematic connections of research topics and opportunities for innovation involve exploring the relationships between different sub-topics and seeking new research perspectives and methods. Researchers can find innovation opportunities by exploring the theoretical and systematic connections between different sub-topics, expanding research fields, deepening research content, and promoting innovation in academic research.

10. Essentials of Criticism and Innovation

10.1 Summarizing Principles and Perspectives of Criticism

Criticism requires researchers to examine existing research objectively and comprehensively, identify problems, and raise questions. This includes covering literature from all different standpoints and schools, paying attention to the limitations of research methods, analyzing the scope of application of research conclusions, exploring the theoretical significance of research

conclusions, and assessing ethical issues in research.

10.2 Abandonment and Integration

Based on criticism, researchers need to engage in abandonment and integration to form research proposals with greater potential and value. This includes abandoning research ideas without academic value or low feasibility, integrating promising research ideas, and adjusting the scope and focus of research according to research objectives and methods.

10.3 Critical Thinking and Self-Criticism

Critical thinking and self-criticism are essential qualities and abilities for researchers. This includes regularly reviewing and evaluating one's own research methods and conclusions, continuously learning and improving critical thinking skills, and maintaining an open mindset to accept different viewpoints and suggestions.

10.4 Integration of Method and Problem Characteristics

When selecting and studying methods, it is necessary to comprehensively consider their underlying assumptions, scope of application, ease of application, performance, and interfering factors. This includes understanding the basic assumptions and scope of application of the method, considering the ease and cost of application, evaluating performance under normal working conditions, and understanding the interfering factors and their effects on performance.

10.5 The Least Effortful Innovation Strategy

Innovation can be achieved through improving and optimizing existing methods. This includes identifying shortcomings and improvement spaces in existing methods, combining the advantages of different methods to form new solutions, and selecting the most suitable method or combination based on research objectives and methods.

10.6 Criticism and Innovation in Institutional Research

Institutional research can drive the improvement and development of institutions through criticism and innovation. This includes analyzing institutional differences across different countries or regions, comparing the advantages, disadvantages, and scope of application of different institutions, exploring mechanisms and influencing factors of institutional change, and designing new institutional solutions to address specific issues.

10.7 Case Study: Residential Justice

Taking the issue of residential justice in Suzhou as an example, explore solutions through criticism and innovation. This includes analyzing the current situation and causes of problems in Suzhou, introducing residential systems in Germany and Singapore, and exploring how to transplant the German residential system to Suzhou.

10.8 Case Study: Apprenticeship in the UK

Taking the apprenticeship system in the UK as an example, explore directions for improvement through criticism and innovation. This

includes analyzing the current situation and problems of the UK apprenticeship system, introducing the successful experience of the German apprenticeship system, and exploring how to improve the UK apprenticeship system.

11. Tips for Literature Review

11.1 Keyword and Literature Search Techniques

Literature search is the first step in literature review, with the key lying in accurately and efficiently finding relevant literature. This includes using multiple keywords for search, utilizing academic databases and search engines, and paying attention to citation information of the literature.

11.2 First Stage: Macro Understanding of Main Aspects, Viewpoints, and Schools

After initially collecting relevant literature, researchers need to macroscopically grasp the main aspects, viewpoints, and schools of the issue. This includes skimming the literature to understand the main issues and controversies of the research topic, analyzing the advantages and disadvantages of different viewpoints and schools, and forming an overall understanding of the research topic.

11.3 Second Stage: In-depth Exploration of All Aspects of the Problem and Methodological Characteristics of Various Schools

After forming an overall understanding of the research topic, researchers need to delve into all aspects of the problem and the methodological characteristics of various schools. This includes reading the literature in depth to understand the details and limitations of research methods, analyzing the scope and conditions of application of different methods, and forming a comprehensive understanding of research methods.

11.4 Third Stage: Summarizing Existing Literature, Assessing Its Shortcomings, and Identifying Opportunities and Strategies for Innovation

After completing the first two stages of literature review, researchers need to summarize the existing literature, assess its shortcomings, and explore opportunities and strategies for innovation and breakthroughs. This includes thoroughly reading key literature to understand their research methods and conclusions, analyzing the shortcomings and improvement spaces of existing literature, and formulating strategies for innovation and breakthroughs.

12. Planning, Progress, and Risks of Research Work

12.1 Evaluating Ideas, Integrating Blocks, and Setting Research Directions and Core Objectives

The starting point of research work lies in evaluating ideas and setting directions. This includes assessing the academic value and feasibility of different research ideas, integrating promising research ideas to form a complete research plan, and determining the core objectives and direction of the research.

12.2 Inventorying Existing Evidence and Doubts, and Planning Research Methods and Steps

After determining the research direction and objectives, researchers need to deeply analyze existing evidence and doubts,

and plan research methods and steps accordingly. This includes analyzing the advantages and disadvantages of existing research results, determining research methods and technical routes, and formulating detailed research plans and timetables.

12.3 Assessing Feasibility, Expected Outcomes, Risks, and Contingency Plans

After formulating the research plan and timetable, researchers need to comprehensively assess the feasibility, expected outcomes, risks, and contingency plans of the research. This includes assessing the operability, cost, and time of the research plan, identifying potential risks and challenges, and formulating contingency plans.

13. Revisiting and Strengthening the Argumentation

13.1 Supplementing Literature and Reviewing Content

In the process of in-depth research, it is fundamental to stay informed about the latest developments in academia and supplement relevant literature and research findings to consolidate the foundation of the research content. This includes staying informed about the latest developments in academia, supplementing the latest literature and research findings, and analyzing the shortcomings and improvement spaces of existing research results.

13.2 The Gold Standard of a Thesis - Principles for Measuring Academic Value

The academic value of a thesis is an important indicator for measuring its quality and determines its influence and recognition in academia. This includes the breadth and intensity of impact, and the difficulty of innovation. A thesis should have a wide impact and high innovation difficulty to enhance its academic value.

13.3 Paradigm Shifts and Conflicts

In the process of academic research, paradigm shifts and academic conflicts are inevitable, posing new challenges for the integration and reinforcement of research content. This includes the emphasis on empirical methods and objective evidence in quantitative science, the focus on conceptual criticism and innovation in qualitative research, and the subjectivity of academic evaluation.

13.4 Integration, Reinforcement, and Consolidation of Content (Specific Implementation)

After understanding the latest developments in academia, measuring the academic value of the thesis, and addressing academic conflicts, researchers need to integrate, reinforce, and consolidate the research content to strengthen the research results. This includes deleting repetitive or unimportant research content, supplementing new evidence and arguments to enhance the persuasiveness of conclusions, and optimizing research methods and technical routes to improve research efficiency.

14. Essentials of Writing a Dissertation

14.1 Style, Tone, and Objectives of a Thesis

Writing a dissertation requires adhering to a certain style and tone, and clarifying its objectives. This includes using clear, concise, and objective language with critical writing characteristics, and presenting the research content through a systematic organization-

al structure.

14.2 Abstract, Research Content, and Literature Review

The abstract, research content, and literature review are important components of a dissertation, collectively constituting the framework and foundation of the thesis. This includes providing a concise summary of the research content, methods, and results in the abstract, introducing the research background, questions, methods, and achievements in detail in the introduction, and analyzing existing research results in the literature review.

14.3 Main Theories and Research Achievements

The main theories and research achievements are the core parts of a dissertation, showcasing the academic level and research achievements of the researcher. This includes stating the main theories and methods of the research, analyzing the research results and findings, and explaining the theoretical significance of the research results.

14.4 Exemplary Cases and Discussions

Exemplary cases and discussions are important components of a dissertation, demonstrating the application value and practical significance of research results through specific cases. This includes designing representative exemplary cases, analyzing the results and significance of the exemplary cases, and discussing the application value of the research results.

15. Examination Questions and Expectations of Oral Examination Committee Members

15.1 Favorite Questions Asked by Oral Examination Committee Members

The oral examination is a crucial part of the PhD evaluation process, during which committee members typically delve into a series of core questions to thoroughly assess candidates. These include: research motivation and problem awareness, problem framing and conceptualization, research framework and design, the rationality and limitations of research methods, means of obtaining evidence, sample selection and research scope, derivation and interpretation of main conclusions, generalization and application of research results, academic contributions of the research, evaluation of research findings, and post-research plans.

15.2 The Eight Core Competencies for a PhD

Obtaining a PhD requires candidates to possess a series of core competencies. These include innovative ability, academic rigor, critical thinking skills, mastery of professional knowledge, ability to publish research findings, ability to analyze and evaluate one's own research, thesis quality and adherence to academic norms, and performance in the oral examination.

15.3 The Birth of a PhD

The origin and development of the PhD are closely linked to the progress of science. As the highest degree in the higher education system, the PhD holds a unique status and significance. Originating in medieval European universities, the PhD gradually evolved into an academic qualification certification, marking the

candidate's attainment of a high level in a particular academic field. The core competencies of a PhD lie in critical thinking and independent research abilities, and the PhD training process promotes the inheritance and development of scientific research. In the early days, Germany, France, and Japan produced a large number of PhDs, establishing the status of this "noble profession". Subsequently, the United States and Great Britain produced a large number of PhDs in the 20th century and formed training standards. Nowadays, developing countries, particularly China and India, are mass-producing more "intellectual workers" to serve the global scientific enterprise.

16. Conclusion

This article provides a comprehensive guide to graduate student training and academic research by elaborating on various aspects such as the training program of research institutes, research methods and objectives, the importance of literature reviews, the cultivation of research abilities, and the role of supervising professors. Through case analyses, it demonstrates how to seek innovation opportunities in academic research and offers suggestions for planning, progress, and risk management in research work. This article is not only applicable to the academic field but can also be widely applied to practical life and work, helping readers solve career and life problems. Future research can further deepen the exploration of various aspects of graduate student training and academic research to better adapt to the constantly evolving academic environment and research needs.

References

1. Anderson, K. (2022). *Designing Autonomous AI: A Guide for Machine Teaching*. O'Reilly Media.
2. Brewer, L. M., & Cochran, J. J. (2013). August's child is... favored by fortune. *Significance*, 10(3), 20–24.
3. Chapman, M. E. (2012). *Thesis Writer's Guide: Making an Argument in the Humanities and Social Sciences*. Translated by Kelley Swanberg. Beijing: Peking University Press.
4. Daks, A., Desai, N., & Goldberg, L. R. (2017). Do Steph Curry and Klay Thompson have hot hands? arXiv preprint arXiv:1706.03442.
5. Daks, A., Desai, N., & Goldberg, L. R. (2018). Do the Golden State Warriors have hot hands? *The Mathematical Intelligencer*, 40(4), 1–5.
6. Erotokritou-Mulligan, I., Sonksen, P., & Holt, R. (2011). Beyond reasonable doubt: catching the drug cheats at the London Olympics. *Significance*, 8(1), 5–9.
7. Gelman, A., & Nolan, D. (2017). *Teaching Statistics: A Bag of Tricks* (2nd ed.). Oxford University Press.
8. Gillen, C. (2010). The data suggest: writing in the sciences. In G. Graff & C. Birkenstein (Eds.), *They Say / I Say: The Moves That Matter in Academic Writing* (pp. 156–174). W. W. Norton & Company.
9. Goulson, D. (2013). Neonicotinoids and bees: What's all the buzz? *Significance*, 10(3), 6–11.
10. Graff, G., & Birkenstein, C. (2009). *They Say / I Say: The Moves That Matter in Academic Writing*. W. W. Norton & Company.
11. Mardia, K. V., Bookstein, F., & Kent, J. (2013). Alcohol, babies and the death penalty: Saving lives by analyzing the shape of the brain. *Significance*, 10(3), 12–16.
12. Mills, S. (2023). *AI for Behavioral Science*. Boca Raton, FL: CRC Press.
13. Milner, K., & Rougier, J. (2014). How to weigh a donkey in the Kenyan countryside. *Significance*, 11(4), 40–43.
14. Nolan, D., & Speed, T. (2000). Maternal smoking and infant health II. *Stat Labs: Mathematical Statistics Through Applications*.
15. Nolan, D., & Speed, T. (2000). *Stat Labs: Mathematical Statistics Through Applications*. Springer.

Copyright: ©2025 Gu Liping. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.