

中国科学院大学研究生教材系列



研究生学术英语

读写教程

总主编：高原 主编：于华 姜文东



外语教学与研究出版社
FOREIGN LANGUAGE TEACHING AND RESEARCH PRESS

中国科学院

研究生学术英语

读写教程

总主编：高原 主编：于华 姜文东
编者：于华 田禾 向俊 刘云龙
李利军 张旭 杨阳 范嘉舜
胡江波 胡骏 钱玉彬 彭宇

外语教学与研究出版社
FOREIGN LANGUAGE TEACHING AND RESEARCH PRESS
北京 BEIJING

图书在版编目(CIP)数据

研究生学术英语读写教程 / 于华, 姜文东主编; 于华等编. -- 北京: 外语教学与研究出版社, 2018.12 (2019.9 重印)

中国科学院大学研究生教材系列 / 高原总主编

ISBN 978-7-5213-0651-4

I. ①研… II. ①于… ②姜… III. ①英语-阅读教学-研究生-教材②英语-写作-研究生-教材 IV. ①H319.39

中国版本图书馆 CIP 数据核字 (2019) 第 020100 号

出版人 徐建忠
责任编辑 袁敬娜
责任校对 陈丽丽
装帧设计 涂俐
出版发行 外语教学与研究出版社
社 址 北京市西三环北路 19 号 (100089)
网 址 <http://www.fltrp.com>
印 刷 北京虎彩文化传播有限公司
开 本 787×1092 1/16
印 张 14
版 次 2019 年 1 月第 1 版 2019 年 9 月第 4 次印刷
书 号 ISBN 978-7-5213-0651-4
定 价 49.90 元

购书咨询: (010) 88819926 电子邮箱: club@fltrp.com
外研书店: <https://waiyants.tmall.com>
凡印刷、装订质量问题, 请联系我社印制部
联系电话: (010) 61207896 电子邮箱: zhijian@fltrp.com
凡侵权、盗版书籍线索, 请联系我社法律事务部
举报电话: (010) 88817519 电子邮箱: banquan@fltrp.com
物料号: 306510001



记载人类文明
沟通世界文化
www.fltrp.com

习近平总书记在十九大报告中指出：“创新是引领发展的第一动力，是建设现代化经济体系的战略支撑。”因此，要“加强国家创新体系建设，强化战略科技力量”。在人才培养上，“培养造就一大批具有国际水平的战略科技人才、科技领军人才、青年科技人才和高水平创新团队”。

学术英语改革服务于国家宏观的人才培养战略，正在成为最近几年高校英语教学改革热点之一。学术英语课程的设置、开发、构建、实施和推广已成为高校外语课程改革的重要选择。

作为“中国科学院大学研究生教材系列”之一的“果壳学术英语系列教程”着力于学术英语课程的体系化建设，明确学术英语课程之间的层次感，区分基础学术英语能力和更高层次学术英语能力的培养，细化不同类型的学术英语能力，并注重不同类型学术英语能力之间的相互促进。学术英语能力本身是一个十分复杂的体系：从语言使用的角度看，包括学术英语的听、说、读、写等能力；从语言情景的角度看，包括参与学术讨论的能力、撰写学术申请的能力等；从学术思维的角度看，包括批判性思维能力、提出并解决问题的能力、创新思考能力等。学术英语教学应该是系统的、持续的、战略性的工程，唯有系统性地开展学术英语教学，才能更为有效地培养学生的学术英语能力。

“果壳学术英语系列教程”着力于培养有情怀的科学家。学术英语教学不应仅仅止于各项语言技能的传授，还应在提高学术素养、激发学术兴趣、明晰科学伦理意识、注重人文关怀、引发哲学思辨等方面培养具有一定知识广度和思想深度的科技人才。知识广度有助于激发创新性思维，思想深度有助于产生创新性成果。语言教育在充分展示工具性特征的同时，还需兼具开拓崭新视域、融合多维思考、审视固有模式的作用，从而鼓励创造性地提出问题和创造性地解决问题。新时代的新使命呼唤高水平科技人才和科技领军人才，科技人才需要具有国际视野，通晓人类共同关心的普遍问题，展现出不拘于专业领域的知识广度和思想深度，从而具备带领中国科技引领未来世界的能力。

我们认为，学术英语教学应确立人才培养的长期目标，在最初阶段为学生播下学术英语的种子，在接下来的培养过程中持续灌溉，最终助力学生成长成根基扎实的大树，即为国家新时代的新使命做出自己贡献的创新型科技领军人才。

前言

在建设世界科技强国的背景下，研究生英语教学迎来了新的机遇与挑战。这也赋予了研究生英语教学新的使命：培养学生的学术意识与素养，加强学生的思辨能力，提高学生用英语进行学术研究和学术交流的能力，从而提升我国科研人才的核心竞争力。《研究生学术英语读写教程》在这样一个时代背景下应运而生。

本教程为“果壳学术英语系列教程”中的一册，遵循“以读促写、读写并重”的教学理念，旨在培养学术英语阅读和学术英语写作能力，以期提高学生学术表达的规范性，强化学术素养和学术意识，为研究生阶段的专业学习和学术研究打好语言基础。作为研究生的学术英语读写教材，本教程具有独特的整体性、系统性、严谨性和创新性，适合硕士、博士研究生以及高年级的本科生进行较为系统的学术阅读技能和学术写作技能的学习。

本教程以学科为基础，共包括十个单元，每个单元主题围绕一个学科或专业内容，包括心理学、地学、物理、数学、计算机科学、生物、材料学、化学、管理学和医学十大与理工科研究生专业密切相关的学科内容。每单元课文选材和练习设计既体现了本单元的学科内容，又直接与本单元的学术阅读技能或学术写作技能相关。这两项技能的讲解与练习贯穿每个单元，并且在十个单元的整体编排上循序渐进、环环相扣、前后呼应。

本教程单元结构如下：

一、学术阅读板块 (Academic Reading)

1.1 导入问题 (Lead-in Questions)

1.2 精选文章 (Text A)

1.3 词汇表达 (New Words and Expressions)

1.4 文后练习 (Building Your Vocabulary & Understanding the Text)

1.5 学术阅读技能讲解与练习 (Academic Reading Skills)

二、学术写作板块 (Academic Writing)

2.1 学术论文 (Text B)

2.2 学术写作技能讲解与练习 (Academic Writing Skills)

在学术阅读板块，文前的导入问题 (Lead-in Questions) 有助于学生熟悉单元话题和背景知识。精选文章 (Text A) 为一篇通用学术文章，其中包含的理性思考、人文色彩和社会影响跨越时空，历久弥新，重在培养学生的语言理解能力、文本赏析能力、思

辨能力和作为未来科学家的人文情怀。文中的注释采用脚注的形式，简要介绍文章中提到的人物、概念、术语等。文后的练习部分包括两大类：一是词汇练习（Building Your Vocabulary），帮助学生积累并掌握常用的学术词汇；二是阅读理解练习（Understanding the Text），帮助学生巩固并检验对课文的理解。学术阅读技能（Academic Reading Skills）由讲解和练习两个部分构成：讲解部分语言简明扼要，重点突出；练习部分针对技能讲解设题，循序渐进。在学术阅读板块中，学术阅读技能与本单元 Text A 的课文呼应，在教学中可以鼓励学生运用所学的阅读技能更好地理解 Text A。

在学术写作板块，学术论文（Text B）节选自近期发表的、影响力较大的学科期刊论文，在学术内容和学术语言上体现了本单元的学术写作技能。课文注释亦采用脚注的形式，简要介绍文章中提到的概念、术语等。学术写作技能（Academic Writing Skills）由讲解和练习两个部分构成：讲解部分梳理写作思路，剖析写作步骤，总结写作技巧，与前一板块中的学术阅读技能相衔接，遵循以读促写的教学理念；练习由易及难，紧扣学术写作技能的核心知识点，以便在讲解后可以有针对性地进行练习。

根据每单元的学术能力培养目标，本教程可分成四个模块。1-2 单元为“探究问题”模块，重点培养学生在阅读文献的过程中按照学术规范的要求高效记笔记的能力；3-5 单元为“提出问题”模块，旨在培养学生的批判性思维能力，提高判断信息、分析信息和综述信息的能力，从而使学生能够创造性地发现问题、提出问题。提出有意义的研究问题之后，接下来的研究任务是如何解决问题，即在科学研究中如何进行研究设计和数据收集。由 6-7 单元组成的第三模块便为“解决问题”模块，重点培养学生描述研究过程和研究成果的能力。8-10 单元为最后一个模块——“呈现报告”，这三个单元从学术论文的文体风格出发培养学生恰当地使用学术语言撰写学术论文的能力。从“探究问题”到“提出问题”“解决问题”和“呈现报告”，四个模块贯穿起来，构建起本教程的整体框架。在循序渐进的学术技能推进下，十个不同学科内容的单元呈现出独到的整体性和系统性。这一构架本身既体现了“研究是一个过程”的理念，又展示出“项目研究教学法”的优势。

本教程希望培养学生学习的自主性、积极性和团队合作精神，建议教师在使用本教程的过程中结合“微课”“翻转课堂”“项目研究教学法”等多种教学模式，鼓励学生多思考，多交流，多合作。

本教程由中国科学院大学教材出版中心资助，提供学习和教学资源，为英语教学提供支持。

鉴于编者水平有限，教程中的不足之处在所难免，敬请广大读者批评指正。

编者

2018年11月

iii

Contents

PBI

Project-Based Learning	Content-Based Learning
Literature Review	Unit 1 Psychology P1
	Unit 2 Geoscience P25
Critical Thinking	Unit 3 Physics P47
	Unit 4 Mathematics P71
	Unit 5 Computer Science P95
Writing Descriptively	Unit 6 Biology P113
	Unit 7 Materials Science P133
Writing Correctly, Properly, and Logically	Unit 8 Chemistry P157
	Unit 9 Management P181
	Unit 10 Medicine P199

Academic Reading Skills	Academic Writing Skills
Predicting Theme and Identifying Patterns and Structures	Paraphrasing
Making Inferences	Summarising
Determining Differences Between Facts and Opinions	Reporting and Synthesising
Evaluating Facts or Evidence	Choosing Effective Evidence to Support a Thesis
Evaluating Arguments	Identifying Limitations and Indicating Research Gaps
Creating and Using Mental Images	Describing Processes and Procedures
Understanding and Analysing Data	Describing Tables and Figures
Analysing Unknown Words Through Context	Expressing with Nominalisation
Understanding Collocation	Using Hedging Expressions Properly
Understanding Ellipsis and Substitution	Creating Cohesion

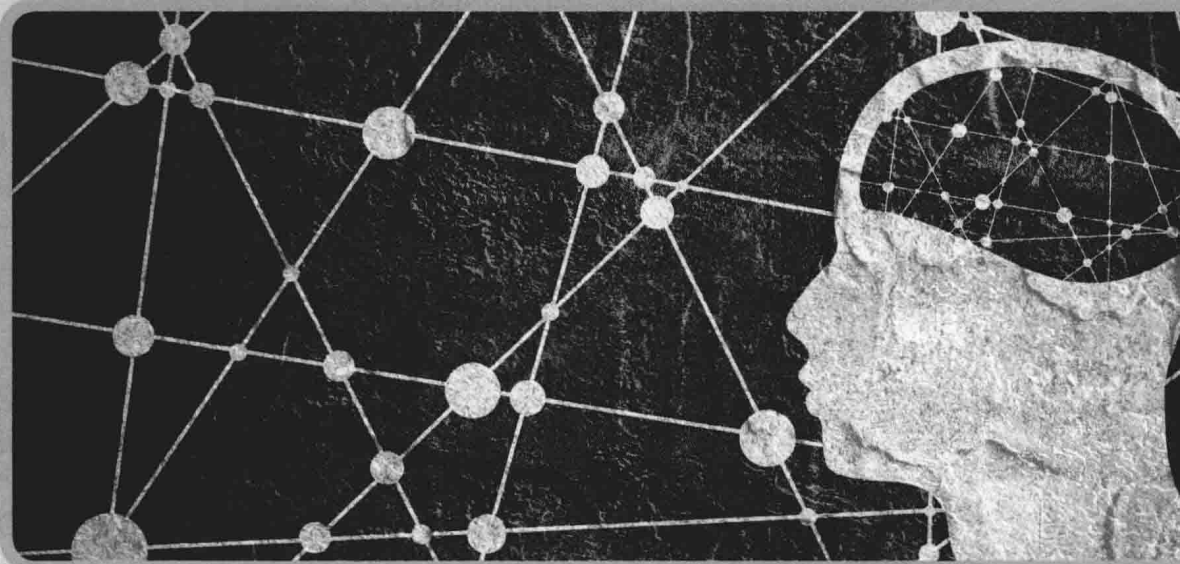
→ CBI

Unit 1

Psychology

I doubt, therefore I think; I think, therefore I am.

— René Descartes



1 Academic Reading

Text A: Descartes Was Wrong: “A Person Is a Person Through Other Persons”

Academic Reading Skills: Predicting Theme and Identifying Patterns and Structures

2 Academic Writing

Text B: The Impacts and Opportunities of Face Recognition Variability Outside the Lab

Academic Writing Skills: Paraphrasing

1

Academic Reading

Lead-in Questions

1. What is your opinion of the quotation “I think, therefore I am”?
2. How do other people affect your self-perception?

Text A

Descartes Was Wrong: “A Person Is a Person Through Other Persons”

Abeba Birhane

- 1 According to Ubuntu¹ philosophy, which has its origins in ancient Africa, a newborn baby is not a person. People are born without “ena”, or selfhood, and instead must acquire it through interactions and experiences over time. So the “self”/“other” distinction that’s axiomatic in Western philosophy is much blurrier in Ubuntu thought. As the Kenyan-born philosopher John Mbiti put it in *African Religions and Philosophy* (1975): “I am because we are, and since we are, therefore I am.”
- 2 We know from everyday experience that a person is partly forged in the crucible of community. Relationships inform self-understanding. Who I am depends on many “others”: my family, my friends, my culture, my colleagues. The self I take grocery shopping, say, differs in her actions and behaviours from the self that talks to my PhD supervisor. Even my most private and personal reflections are entangled with the perspectives and voices of different people, be it those who agree with me, those who criticise, or those who praise me.
- 3 Yet the notion of a fluctuating and ambiguous self can be disconcerting. We can chalk up this discomfort, in large part, to René Descartes². The 17th-century French

1 Ubuntu: 乌班图，起源于非洲南部的一种伦理概念。

2 René Descartes: 勒内·笛卡尔，法国哲学家、数学家和科学家。

- philosopher believed that a human being was essentially self-contained and self-sufficient; an inherently rational, mind-bound subject, who ought to encounter the world outside her head with skepticism. While Descartes didn't single-handedly create the modern mind, he went a long way towards defining its contours.
- 4 Descartes had set himself a very particular puzzle to solve. He wanted to find a stable point of view from which to look on the world without relying on God-decreed wisdoms; a place from which he could discern the permanent structures beneath the changeable phenomena of nature. But Descartes believed that there was a trade-off between certainty and a kind of social, worldly richness. The only thing you can be certain of is your own *cogito*³ – the fact that you are thinking. Other people and other things are inherently fickle and erratic. So they must have nothing to do with the basic constitution of the knowing self, which is a necessarily detached, coherent and contemplative whole.
 - 5 Few respected philosophers and psychologists would be identified as strict Cartesian dualists⁴, in the sense of believing that mind and matter are completely separate. But the Cartesian *cogito* is still everywhere you look. The experimental design of memory testing, for example, tends to proceed from the assumption that it's possible to draw a sharp distinction between the self and the world. If memory simply lives inside the skull, then it's perfectly acceptable to remove a person from her everyday environment and relationships, and to test her recall using flashcards or screens in the artificial confines of a lab. A person is considered a standalone entity, irrespective of her surroundings, inscribed in the brain as a series of cognitive processes. Memory must be simply something you *have*, not something you *do* within a certain context.
 - 6 Social psychology purports to examine the relationship between cognition and society. But even then, the investigation often presumes that a collective of Cartesian subjects are the real focus of the enquiry, not selves that co-evolve with others over time. In the 1960s, the American psychologists John Darley and Bibb Latané became interested in the murder of Kitty Genovese, a young white woman who had been stabbed and assaulted on her way home one night in New York. Multiple people had witnessed the crime but none stepped in to prevent it. Darley and Latané designed a series of experiments in which they simulated a crisis, such as an epileptic⁵ fit, or

3 *cogito*: 笛卡尔的哲学思想 “我思故我在”

4 dualists: 二元论者

5 epileptic: 癫痫的

smoke billowing in from the next room, to observe what people did. They were the first to identify the so-called “bystander effect”, in which people seem to respond more slowly to someone in distress if others are around.

7 Darley and Latané suggested that this might come from a “diffusion of responsibility”, in which the obligation to react is diluted across a bigger group of people. But as the American psychologist Frances Cherry argued in *The Stubborn Particulars of Social Psychology: Essays on the Research Process* (1995), this numerical approach wipes away vital contextual information that might help to understand people’s real motives. Genovese’s murder had to be seen against a backdrop in which violence against women was not taken seriously, Cherry said, and in which people were reluctant to step into what might have been a domestic dispute. Moreover, the murder of a poor black woman would have attracted far less subsequent media interest. But Darley and Latané’s focus makes structural factors much harder to see.

8 Is there a way of reconciling these two accounts of the self – the relational, world-embracing version, and the autonomous, inward one? The 20th-century Russian philosopher Mikhail Bakhtin believed that the answer lay in dialogue. We need others in order to evaluate our own existence and construct a coherent self-image. Think of that luminous moment when a poet captures something you’d felt but had never articulated; or when you’d struggled to summarise your thoughts, but they crystallised in conversation with a friend. Bakhtin believed that it was only through an encounter with another person that you could come to appreciate your own unique perspective and see yourself as a whole entity. By “looking through the screen of the other’s soul”, he wrote, “I vivify my exterior.” Selfhood and knowledge are evolving and dynamic; the self is never finished – it is an open book.

9 So reality is not simply *out there*, waiting to be uncovered. “Truth is not born nor is it to be found inside the head of an individual person, it is born *between people* collectively searching for truth, in the process of their dialogic interaction,” Bakhtin wrote in *Problems of Dostoevsky’s Poetics* (1929). Nothing simply is itself, outside the matrix of relationships in which it appears. Instead, *being* is an act or event that must happen in the space between the self and the world.

10 Accepting that others are vital to our self-perception is a corrective to the limitations of the Cartesian view. Consider two different models of child psychology. Jean Piaget’s theory of cognitive development conceives of individual growth in a Cartesian fashion, as the reorganisation of mental processes. The

developing child is depicted as a lone learner – an inventive scientist, struggling independently to make sense of the world. By contrast, “dialogical” theories, brought to life in experiments such as Lisa Freund’s “doll house study” from 1990, emphasise interactions between the child and the adult who can provide “scaffolding” for how she understands the world.

- 11 A grimmer example might be solitary confinement in prisons. The punishment was originally designed to encourage introspection: to turn the prisoner’s thoughts inward, to prompt her to reflect on her crimes, and to eventually help her return to society as a morally cleansed citizen. A perfect policy for the reform of Cartesian individuals. But, in fact, studies of such prisoners suggest that their sense of self dissolves if they are punished this way for long enough. Prisoners tend to suffer profound physical and psychological difficulties, such as confusion, anxiety, insomnia, feelings of inadequacy, and a distorted sense of time. Deprived of contact and interaction – the external perspective needed to consummate and sustain a coherent self-image – a person risks disappearing into non-existence.
- 12 The emerging fields of embodied and enactive cognition⁶ have started to take dialogic models of the self more seriously. But for the most part, scientific psychology is only too willing to adopt individualistic Cartesian assumptions that cut away the webbing that ties the self to others. There is a Zulu⁷ phrase, “*Umuntu ngumuntu ngabantu*”, which means “A person is a person through other persons”. This is a richer and better account, I think, than “I think, therefore I am”.

New Words and Expressions

axiomatic /ˌæksɪəˈmæɪtɪk/ *adj.* something that is axiomatic does not need to be proved because you can easily see that it is true 不需证明的, 不言自明的

blurry /ˈblɜːri/ *adj.* indistinct or hazy in outline 模糊的

forge /fɔːdʒ/ *vt.* to develop something new, especially a strong relationship with other people, groups, or countries 形成, 缔造

crucible /ˈkruːsɪbəl/ *n.* a container in which substances are heated to very high temperatures 坩埚, 熔炉

6 enactive cognition (or enactivism): 生成认知

7 Zulu: 南非祖鲁族人 (的)

inform /m'fɔ:m/ *vt.* to influence someone's attitude or opinion 影响 (某人的态度或观点)

entangle /m'tæŋgəl/ *vt.* to involve someone in an argument, a relationship, or a situation that is difficult to escape from 使卷入, 使陷入

disconcerting /,dɪskən'sɜ:tɪŋ/ *adj.* making you feel slightly confused, embarrassed, or worried 令人困惑的, 令人尴尬的, 令人不安的

contour /'kɒntʊə/ *n.* the shape of the outer edges of something such as an area of land or someone's body 轮廓; 外形

discern /dɪ'sɜ:n/ *vt.* to notice or understand something by thinking about it carefully (仔细想过之后) 觉察出, 弄清楚, 辨明

fickle /'fɪkəl/ *adj.* someone who is fickle is always changing their mind about people or things that they like, so that you cannot depend on them 三心二意的, 靠不住的, 变化无常的
something such as weather that is fickle often changes suddenly (天气等) 变幻莫测的

erratic /ɪ'rætk/ *adj.* something that is erratic does not follow any pattern or plan but happens in a way that is not regular 不规则的, 不确定的, 不稳定的

contemplative /kən'templətɪv, 'kɒntemplətɪv/ *adj.* spending a lot of time thinking seriously and quietly 沉思的, 冥想的, 默想的

confines /'kɒnfənz/ *n.* limits or borders 范围, 界限

inscribe /m'skraɪb/ *vt.* to carefully cut, print, or write words on something, especially on the surface of a stone or coin (尤指在石头或硬币表面) 雕刻, 印制, 题写

purport /pɜ:'pɔ:t/ *vt.* to claim to be or do something, even if this is not true 声称

bystander /'baɪ,stændə/ *n.* someone who watches what is happening without taking part 旁观者, 局外人, 看热闹的人

dilute /daɪ'lut/ *vt.* to make a quality, belief etc. weaker or less effective 降低(质量); 削弱(信念)

reconcile /'rekənsaɪl/ *vt.* if you reconcile two ideas, situations, or facts, you find a way in which they can both be true or acceptable 使和谐一致; 调和; 协调

luminous /'lu:mɪnəs/ *adj.* shining in the dark 发光的; 夜明的

crystallise /'krɪstəlaɪz/ *v.* if an idea, plan etc. crystallises or is crystallised, it becomes very clear in your mind (使想法、计划等) 变得明朗而具体

vivify /'vɪvəfaɪ/ *vt.* to give new life or energy to something 使生动, 使活跃

solitary /'sɒlətəri/ *adj.* doing something without anyone else with you 单独的, 无伴的

introspection /,ɪntrə'spekʃən/ *n.* the process of thinking deeply about your own thoughts, feelings, or behaviour 内省, 反省

insomnia /ɪn'sɒmniə/ *n.* if you suffer from insomnia, you are not able to sleep 失眠

consummate /'kɒnsəmeɪt/ *vt.* to make something complete, especially an agreement 实现, 完成

embody /ɪm'bɒdi/ *vt.* to be a very good example of an idea or quality 代表, 体现(思想或品质)

Building Your Vocabulary

Task 1

Complete the following sentences using the expressions in the box below. Change the form where necessary.

solitary	scaffold	inscribe	contour
purport	wipe away	axiomatic	contextual

1. Nowadays, there are hundreds of insurance policies that _____ to provide cyber insurance coverage.
2. Even modest price competition can easily _____ a third or more of operating income if grocers use lower prices to win customers.
3. Oracle Mobile Cloud aims to provide a more _____ user experience, which enables chatbots to switch seamlessly between unstructured conversation and personalised, structured data exchange.
4. In a beautiful mid-19th century painting by Rosa Bonheur, it's possible to see asymmetrical "mountains" in the _____ of her sheep's hindquarters.
5. He looked pleased: a(n) _____ man, by the look of him, one who cherished his privacy.
6. Each step you take provides _____ which will enable you to build the essay a little further.
7. It is _____ that all the sites that are infected should be treated if there is to be any hope of cure.
8. The memoirs of these survivors are rarely _____ in the chroniclers' sentimental journeys.

Understanding the Text

Task 2

Choose the statement that best summarises the theme of Text A.

- A The "self"/ "other" distinction has a long-term influence in academia.
- B Self-perception develops through impacts from others.
- C Descartes was wrong, due to the "self"/ "other" distinction on selfhood.

Task 3 Read Paragraphs 3–4 and analyse the pattern the writer has used to explain Descartes' opinion on selfhood.

A large rectangular area with a wavy top and bottom edge, containing ten horizontal dotted lines for writing.

Understanding the text

1. The writer explains Descartes' opinion on selfhood by using the following structure:

2. The writer explains Descartes' opinion on selfhood by using the following structure:

3. The writer explains Descartes' opinion on selfhood by using the following structure:

4. The writer explains Descartes' opinion on selfhood by using the following structure:

5. The writer explains Descartes' opinion on selfhood by using the following structure:

6. The writer explains Descartes' opinion on selfhood by using the following structure:

7. The writer explains Descartes' opinion on selfhood by using the following structure:

8. The writer explains Descartes' opinion on selfhood by using the following structure:

9. The writer explains Descartes' opinion on selfhood by using the following structure:

10. The writer explains Descartes' opinion on selfhood by using the following structure:

Academic Reading Skills

Predicting Theme and Identifying Patterns and Structures

A piece of writing for general purposes is composed of a title (in some cases, a title and subtitles), an introduction, a body and a conclusion, and each of these should echo the theme. For research that involves reading a huge number of academic papers, researchers should optimise their reading strategy, thereby saving time and increasing efficiency. To this end, a quick scan of the paper's title (and the subtitles), the abstract, the introduction (particularly the final part of the introduction) and the conclusion, while skipping the body, would present a general idea of the paper. And to identify the theme or the main ideas of a paper sometimes would even shed light upon important details, such as research methodology, major problem(s) encountered and the conclusion reached. By this time, researchers should decide whether the paper benefits their research and whether it is necessary to go on reading the rest or not.

Authors choose from a variety of patterns and structures to organise the information for readers.

Chronological sequence

Authors can proceed with their writing in the order of time. Look for time markers, such as “in 1989” and “last winter”, at the start of a sentence while perusing the text. Longer time markers, usually in the form of adverbial clauses, tend to be placed toward the end to avoid a top-heavy sentence structure. For instance, “The Chinese economy has soared since the introduction of the epoch-making policy of reform and opening-up in 1978”. With those time markers, readers can understand the chronological order of the article better. For example:

Research spanning many decades has shown nutrients in the gastrointestinal tract can shape animals' flavour preferences. One of the earliest findings of this effect dates back to the 1960s, when Garvin Holman of the University of Washington reported hungry rats preferred consuming a liquid paired with food injected into the stomach rather than a solution coupled with a gastric infusion of water. More recently Ivan de Araujo, a neuroscientist at the Icahn School of Medicine at Mount Sinai, and his colleagues have shown calories can trump palatability: Their work has demonstrated mice prefer consuming bitter solutions paired with a sugar infusion injected in the gut rather than