

科技论文英文摘要的语言特点及写作模式

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摘要 通过对大量科技期刊论文中英文摘要的分析, 得出英文摘要的主要语言特点为常用被动语态和第 3 人称, 多用半技术词, 一般现在时和一般过去时等。最后文章从 4 个方面就摘要写作常用句型及其模式进行了探讨。

关键词 科技期刊; 英文摘要; 语言特点; 写作模式

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“全世界公开发表的科技论文不管用何种文字写成都必须附有一篇简练的英文摘要。”^[1]我国大学办的学报和社会办的重要科技期刊都要求论文有英文摘要。其目的是便于国际间学术交流, 使国外读者从中获得论文的主要信息, 从而使读者读后决定是否要读全文。英文摘要在国际学术交流中起着越来越重要的作用。这类用英文写的摘要不但要求内容有一定创见, 文字也应当准确流畅, 语法与修辞应当正确无误。然而, 在一般的大学外语教学中, 目前学生写作训练得极少。现在许多从事科研工作的大学毕业生, 甚至有些研究生, 对英文摘要写作常不能得心应手。不少科技工作者根据自己原先写好的中文摘要把它翻译成英文。这当然是一种写摘要的方法。但是, 由于中文和英文文字语法不同, 表达方式也不同, 逐句翻译摘要很难合乎摘要的习惯, 会出现各种各样的错误^[2]。笔者认为应根据全篇论文的中心内容, 直接用英文书写, 便于做到流畅、精练、鲜明、准确。本文就科技论文英文摘要的语言特点和写作模式作一探讨, 旨在对那些要用英语写论文摘要但又对此感到困难的科技人员有所启迪。

1 科技论文英文摘要的语言特点分析

科技论文摘要主要有以下 2 类——指示性摘要 (the indicative abstracts) 和报道性摘要 (the informative abstracts)^[3]。指示性摘要只定性地指出文献所探讨的对象、目的、方法和主要结论, 并不定量地报道其具体内容, 仅仅引导关心的读者通读全文。报道性摘要概括地叙述一次文献中所有重要的信息, 包括研究对象、研究目的、方法和结果, 向读者提供尽可能定量和定性的信息。由于报道性摘要内容比较完整, 所以它可部分地代表原文独立使用, 已

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被科技期刊广泛采用。

1.1 多用半技术词

科技论文英文摘要的词汇组成与科技英语一样,一般可分为3类:技术词(technical words),半技术词(semi-technical words)和非技术词(或称普通词)。请看下面摘要

Abstract The ash content and lignin content for 76 species of bamboo wood from Guangxi and Zhejiang were determined. The results showed that the ash content ranged from 0.88% to 7.23%, averaged 2.63%, and the lignin content ranged from 2.36% to 30.04%, averaged 24.93%^[4].

在以上的摘要中属于林业学科的术语只有 ash content, lignin content, bamboo wood 等几个,而各学科通用的半技术词有 determine, result, show, range, average 等,在非技术词中的功能词如冠词、介词、连词、助动词等占有突出的地位。根据科技论文英文摘要的抽样统计,3类词汇中出现最多的是半技术词,占52%,语法功能词约占40%,出现最少的是专业词汇,约占8%,这说明英文摘要主要靠半技术词和普通词来构成。

1.2 主要使用陈述句,多用非谓语动词短语和复合句

从句子结构上来看,摘要主要用以陈述事实,描写过程,因而主要使用陈述句,多用非谓语动词短语和复合句。这样使摘要显得结构紧凑,信息相对集中,篇幅减少。发表在学术期刊上的论文英文摘要一般为原文长度的3%左右。国际标准ISO5966要求一般勿超过250词。因此摘要一般自成一段,如分几段来写,难免会给人造成版面不美观和冗长不连贯的感觉。句子结构特点可从下例中略看出一二。

Abstract The paper describes the characteristics of micrometeorological parameters in the plastic green house tea plantation and their effect on plucking date, yield and output value of high quality Longjing tea. The results indicated that compared with those in the control tea plantation, in the plastic green house tea plantation, mean air temperature, maximum air temperature, minimum air temperature, mean air relative humidity and minimum relative humidity were increased in the plastic green house tea plantation. The relationship between mean air temperature, relative humidity in the plastic green house tea plantation and mean air temperature, relative humidity in the control tea plantation were calculated by a set of regression equations. Compared with that of control tea plantation, the plucking date of plastic green house tea plantation was advanced 10-15 days. The yield and output value of high quality Longjing tea in the plastic green house tea plantation increased 17% -33% and 103% -160% respectively compared with the control^[5].

1.3 常用无人称被动语态和第3人称

摘要中为避免过多地提到作者本人,突出研究结果,常用无人称被动语态。这样摘要也写得简练些。频繁使用被动语态是科技论文英文摘要的一大特点。如下面一篇摘要全文都用了被动语态的句子。

Abstract Based on the investigations, a mathematical model between the moisture content of litter and the meteorological factors was established; and the forest fire danger was divided into five ratings according to the relationships between the moisture content of litter and the

ignition point. Thus, the prediction of forest fire occurring in Jinhua County could be carried out by the model^[6].

另外,摘要中在不用人称代词(I, we, he, they, it等)的情况下,能用主动语态则更理想,因为主动语态的语气强而有力,使摘要显得自然。可采用如下形式: The paper deals with..., The paper reports..., The table shows that..., The results show that..., 必要时也可以用 The Authors think (consider) ...来直接说明意图,但越少越好。现在,科技论文的中文摘要常采用无主语主动语态,使摘要显得简练,比如“分析了(研究了,探讨了,讨论了)……,结果表明……。”这样的句子在英文中常常用被动语态来表示,偶尔也可用无人称主动态。

Abstract Analyzes the effects of soil drainage in the no-watering season on growth of stand, development of aerial root, distribution of root systems, and form-factors of *Taxodium ascendens* planted in seasonal accumulated water plots of the Qingshan Lake in Lin'an. The results showed that the effects of soil drainage on above all were great^[7].

笔者分析了我国公开发行的科技期刊所载论文的部分英文摘要,得出其中用主动语态与被动语态的比例为 5: 3

1.4 多用一般现在时和一般过去时

一般来说摘要提到本文研究的结论内容可以是现在时,也可以是过去时,但含意有所不同。如作者暗示这一结论是带有普遍性的,类似普遍真理,就用现在时^[8]。比如:

... The number of cluster and the division points out are easily obtained by diversity sequence method. This method can be used for some disordered samples. Three examples show that this method is both simple and effective. (聚类数与分割点可以容易地由差异序列获得。对某些无序样品可以应用差异序列法。3个例子说明差异序列法是简单有效的^[9]。)

如果摘要介绍本研究的实验经过及推导过程等,则要用过去时,因为作者整理成文时实验或推导必然已经完成,此处不过是事后的补述。请看 1.3 节中的第 1 个例子。

2 英文摘要的常用句型及其模式

美国从事科技应用文写作研究的 Peter A Master 先生曾在他的著作中用一个公式来描述报道性摘要的内容:

- I . Objective
- II . Method
- III. Results or Conclusions^[10].

根据摘要 3 个层次的结构特点以及上述摘要语言特点的分析,再结合部分期刊英文摘要的综合归纳,得出摘要的常用句型

2.1 摘要第 1 部分说明研究目的的常用句型

The major (overall, primary) objectives (purpose, goal) of this study (research, investigation, experiment) were (was) ...

为说明研究背景,常用句型为:

Based on..., ... is (are) presented (suggested, proposed) in this paper.

Based on..., this paper discusses (deals with) ...

From the analysis of··, ··· is (are) obtained (in the paper)

Based on··, ··· was (were) discussed (analyzed).

有些摘要一开头, 简要地介绍研究的内容, 常用的句型为:

The paper describes (discusses, provides, reports, gives, etc.) ···

The authors analyze (consider, investigate, etc.) ···

据 1.3节分析, 在实际使用中有时出现无主语主动语态, 但用被动语态以强调研究内容的情况更为常见 如: In this paper, ··· are (is) described (presented, studied, obtained, described, etc.) 再请看下面例子。

Abstract In the present paper, the dominant groups, microenvironment distribution, perpendicular distribution, community diversity and resembling of the insect fauna in Baishanzu Nature Reserve are analyzed and discussed, according to the results of the expedition carried out by the Insect Scientific Expedition to Baishanzu in 1993-1995^[11].

2.2 摘要第 2部分用于说明研究的方法 手段及其过程等的常用句型

(1) By means of·· analysis, this paper presents··

(2) By using··, the results·· were obtained (found).

By using··, the data (model) was obtained.

(3) The investigation (method) was made (used) to··

(4) ··· were (was) observed and described by the use of··

··· were carried out by using the method of··

2.3 摘要最后说明研究的结果或给出结论的句套

(1) The results show (indicate, demonstrate, suggest, etc) that··

(2) The results showed (indicated, suggested) that··

(3) It' s concluded (shown, found, suggested) that··

(4) The results are (were) as follows:

The conclusions are (were) as follows

2.4 英文摘要写作常用模式

通过以上语言特点及常用句型的分析, 笔者认为大多科技论文的报道性英文摘要可以采用下面的模式来管理:

(1) From an analysis of____, ____ was (were) obtained. The results showed that____.

(2) Based on____, ____ is (are) discussed and analyzed in the paper. By using____, ____ is (are) obtained. The results show that____.

综上所述, 我们再来看下面一个实例。

Abstract Based on the investigation of Chinese fir seed orchard of Hengfan Forest Farm in Lin' an County, Zhejiang Province, the cost, the profit, the microeconomic effect and macroeconomic effect of managing the seed orchard are analyzed by means of the systematic methods of economic analysis. The results show that the orchard has great macroeconomic effect (The IRR reaches to 22.56%), and doesn' t cause any loss in microeconomic effect (The IRR is 13.1%). However, the microeconomic effect is not so high as the effect of planting Chinese

fir forest. Some suggestions about managing Chinese fir seed orchard are put forward^[12].

上面的例子基本上能反映出本文前面所分析的英文摘要的特点及常用模式。

3 结束语

通过对科技论文英文摘要语言特点和写作模式的探析,笔者认为可采用上述填空式来写摘要,以简要介绍自己科技论文的研究目的、主要内容和结果。当然,这种模式并非是“包医百病的良方”,因为语言本身是千变万化的,各论文作者应根据自身的语言水平书写英文摘要,以达到传递文章主要内容的目的。本文所探讨的模式仅供有关科技论文作者参考。

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Abstract From an analysis of a large number of English abstracts from the published scientific and technological periodicals, obtained are their main language characteristics, which are as follows: passive voice and the third person are often used, and semi-technical words, simple present and simple past tense are usually used and so on. Meanwhile, the writing models of English abstract are discussed in this paper.

Key words scientific and technological periodicals; English abstracts; language characteristics; writing model