Applying Corpus-based Genre Analysis into the Teaching of Academic Chinese Writing

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Received: 30 August 2021/Accepted: 15 March 2022/Published: 8 April 2022

Abstract

With an increasing number of international students coming to China for higher education, the learning needs of academic Chinese increased sharply. However, Chinese for Academic Purposes (CAP) is still in its infancy in both academic research and teaching practice. As a result, students lack the support for their academic Chinese skills and encounter difficulties according to their feedback. Meanwhile, the studies on English for Academic Purposes (EAP) pedagogy are fruitful. Among all the pedagogies, corpus-based instruction with genre analysis were found to be an effective approach in improving students’ EAP writing abilities. This study thus applied corpus-based genre analysis teaching approach to CAP teaching and examined the effectiveness. Through the construction and analysis of a specific corpus, this paper first investigated the move structure and high-frequency words and expressions of Chinese research article (RA) abstracts in the discipline of Economics and Management Science. Afterwards, a mini learning corpus was compiled for students’ exploration. The learning materials and sample tasks were introduced and data were collected from students’ feedback and writing samples before and after the teaching intervention. The results revealed that, firstly, the conventional move structure of Chinese RA abstracts in Economics and Management Science was I-M-R-D, which is similar to English RA abstracts. Method and Results are two conventional moves. Second, corpus-based genre analysis can partially improve students’ performances in academic writing. After the teaching intervention, students’ awareness of text structure and the use of academic Chinese expressions improved noticeably. Though based on a small sample size, the research findings contribute towards the understanding of linguistic conventions of Chinese RA abstracts. Moreover, the materials and pedagogy used in this project shed new light on the instruction of Chinese writing as well as CAP curriculum development.

Keywords

Academic Chinese writing, research article abstracts, corpus-assisted language teaching, genre analysis

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1 Introduction

In recent years, an increasing number of international students are coming to China for higher education. For instance, in 2018, the total number of international degree students was 258,122, accounting for 52.44% of the total number of international students in China (including students studying their degrees in Chinese and English medium both), with a year-on-year increase of 6.86% (Ministry of Education, 2018). The demand for learning Chinese for Academic Purposes (CAP) therefore has increased accordingly (Li, Zhang & Xin, 2020). However, most of the current Chinese teaching only covers general Chinese and there appears a lack of instruction books on CAP. Chinese teachers also lack knowledge and guidance on Chinese academic writing and its pedagogy (Gao & Li, 2018). As a result, CAP especially CAP writing poses a great challenge to international students (Jin, 2002; Qi, 2006; Gao & Liu, 2016).

2 Literature Review

The terminology of CAP was first used by Shan (2008) and then elaborated by Gao and Liu (2016). According to Gao and Liu (2016), CAP refers to teaching Chinese with the aim of facilitating students’ disciplinary study and academic activities, and CAP entails the abilities of using Chinese for discipline learning, literature searching and academic writing. Gao and Liu (2016) also pointed out that it was urgent to develop CAP materials to support students’ academic study. Among different areas of CAP, thesis writing seems to attract most interests from scholars, as it is an integral part for all the bachelor, master, and doctorate students in their academic life. The textbook on academic Chinese writing Thesis Writing Course for International Students (Li & Deng, 2012), is the first textbook on academic Chinese writing. Although this book addressed some of the gaps of CAP instruction, the guidance is very general. Besides, all the examples provided by the textbook are from the discipline of Chinese linguistics only. Ji (2016) conducted a comparative research to analyze the use of classical Chinese characters e.g. 于, 者 in Chinese and Korean students’ thesis. The result revealed that Korean students lack the awareness of the Chinese academic writing style and Ji suggested the high-frequency Chinese written structures should be taught to students to support students’ thesis writing. With the awareness of importance of CAP teaching, CAP writing courses were developed in several universities and the experience in designing the curriculum and teaching materials was reported. For instance, Chen (2012) introduced the experience of offering thesis-writing courses to foreign undergraduates majoring in Chinese in Sun Yat-sen University; Li, Zhang and Xin (2020) reported a survey conducted in Peking University in 2017 on learning needs of CAP among international undergraduate students. The paper also introduced the course development of CAP writing in Peking University, including the syllabus, teaching method, and sample activities of teaching CAP writing. Both of the studies suggested the conventional structures of Chinese thesis and high-frequency academic words/expressions should be taught to facilitate students’ writing. However, due to the diverse backgrounds of target students, it is challenging to design a course to meet the demands of students from different disciplines. According to Li, Zhang and Xin (2020), the requirement and writing style of different disciplines vary a lot, while the CAP writing course in Peking University only covers general CAP writing. As a result, instructors encountered difficulties in providing feedback on students’ writing due to the lack of understanding of CAP writing of other disciplines. Therefore, more attention to discipline specific thesis writing, especially disciplines other than linguistics is necessary.

The research of CAP is rising in the recent 10 years, while the study of English for Academic Purposes (EAP) on the other hand already has more than 40 years history (Hyland & Hamp-Lyons, 2002). According to Hyland and Hamp-Lyons (2002, p.2), EAP refers to “language research and instruction that focuses on the specific communicative needs and practices of particular groups in academic contexts” and EAP instruction should be grounded in the understanding of three demands
of specific academic disciplines—cognitive, social and linguistic. Both EAP and CAP teaching belong to second language teaching, thus the research findings and experiences of EAP are worthwhile to be referred to when developing CAP materials. Among fruitful EAP research results, this paper mainly focuses on thesis writing from “linguistic demands of specific academic disciplines” by referring to two EAP approaches—genre analysis and corpus-based instruction.

The first approach this study learnt from EAP is genre analysis. Genre analysis was firstly used as an effective tool in EAP research and teaching by Swales in 1981. As Swales (1990, p. 45) noted, genre refers to “a class of communicative events”. Afterwards, Bhatia (2004, p. 23) summarized a comprehensive definition of genre as “language use in a conventionalised communicative setting in order to give expression to a specific set of communicative goals of a disciplinary or social institution, which give rise to stable structural forms by imposing constraints on the use of lexico-grammatical as well as discoursal resources”. Genre analysis mainly focuses on analyzing conventional information structures used to construct a genre. Move is an important unit in genre analysis which refers to a section of text which fulfills an individual specific communicative purpose and also contributes to an overall function of the whole text (Swales, 2004). By describing the move structures, genre analysis aims to help learners to master the linguistic conventions. Many scholars applied genre analysis approach to explore the information structure in research articles (RAs) across different disciplines and languages (e.g., Martin, 2003; Lores, 2004; Van Boon & Swales, 2007; Pho, 2008; Kanoksilpatham, 2015). The awareness of conventions of target genres can provide learners with a foundation for writing, and thus genre analysis of academic writing can be an effective way to facilitate learners in thesis writing.

Another approach this study would like to learn from EAP teaching is corpus-based instruction. With the rapid development of technology, corpora have played an increasingly important role in linguistic research, and corpus-based instruction is found to be an effective approach in improving students’ EAP writing abilities (Flowerdew, 2015). In corpus-based instruction, instructors facilitate students to analyze corpus complied by authentic language materials and allow students to discover linguistic features or rules by themselves. There are many benefits of integrating corpus-based genre analysis into language teaching. First, the approach enables students to get access to authentic language. It is widely believed that authentic language input could engage students into the learning process and stimulate students’ motivations (Ellis, 2003). Second, corpus-based genre analysis could promote research-led teaching in which students are active learners instead of passive absorbers and can thus, enhance students’ comprehension (Healey, 2005). There has been much research on the application of corpus into language teaching (e.g. Biber, 2006; Charles, 2007; Bloch, 2009). Several scholars pointed out that language teaching materials should be based on the findings from the analysis of representative samples (Flowerdew, 2005; Hyland, 2002). Moreover, a number of empirical studies linked corpus research and genre analysis together, and corpus-based genre analysis was proved to be pedagogically effective (e.g. Flowerdew, 2005; Lee & Swales, 2006; Chang & Kuo, 2011).

In summary, drawing all the merits from the results of research on CAP and EAP at home and abroad, this study intends to apply corpus-based genre analysis approach into the teaching of Chinese thesis writing and examine its effectiveness.

3 Research Context and Research Questions

This study was conducted in Xi’an Jiaotong-Liverpool University (XJTLU), an English medium, international joint venture university located in the city of Suzhou on China’s east coast. In this particular context, all students use English to write their degree’s dissertations/Final Year Projects (FYP), while in addition to English versions, they are required to write a Chinese abstract. Chinese abstracts of the academic degree’s dissertations/FYP are mandatory for all the international graduates no matter students study their degrees in Chinese or English medium (Ministry of Education, 2017). However, as the
Chinese modules at XJTLU only deliver general Chinese, international students encountered difficulties when writing Chinese abstract. As a result, requests were received from students regarding support in abstract writing each year. Therefore, to focus on the specific needs of XJTLU international students, among all the sections in RAs, abstract was selected as the focus of this study.

Considering the move structures in different disciplines are slightly different (e.g., Swales, 1990; Hyland, 2008; Pho, 2008), to control possible disciplinary variations, Economics and Management Science was chosen as the field of the study in this project. This is because undergraduate students studying International Business with a Language (IBL) at XJTLU is the only cohort that takes Chinese modules across the four years at XJTLU and thus this group of students have relatively high motivations in Chinese learning. The researchers also teach Chinese language module to this group of students which means it is easier to conduct action research among this group.

The participants of this project were 13 Year 4 international undergraduate students studying IBL at XJTLU during 2020-21-6 male students and 7 female students. All the participants took advanced Chinese modules and their Chinese proficiency was around the level of CEFR B2. The participants’ nationalities were quite diverse, including 6 from Indonesia, 4 from Korea, 2 from UK and 1 from Japan. Participants were recruited on a voluntary basis with ethical approval from the university. As writing Chinese abstract is an essential task for this group of students, all the participants were very engaged in the whole project. The necessity of this project was also confirmed by the FYP coordinator of the Suzhou International Business School of the university.

This study aims at enhancing students’ thesis writing skills by answering the following research questions:

1. What are the linguistic conventions of Chinese RA abstracts in Economics and Management Science (e.g. move structures, high-frequency words/expressions)?
2. To what extend can the corpus-based genre analysis approach improve students’ writing skills?

In responding to the research questions, the research design comprised two sections. The first section is to investigate linguistic conventions of Chinese RA abstracts from a corpus by applying genre analysis approach, and the second part is to report on the resulting Chinese abstract writing instruction. The effectiveness of the instruction was examined by subjective data from student feedback and objective data from comparison of students’ work before and after the teaching intervention.

4 Construction and Analysis of Research Corpus

4.1 Construction of Research Corpus

To identify linguistic conventions of Chinese RA abstracts, a random sample of 400 abstracts of approximately 118,000 characters reporting on empirical research from 2018-2021 were selected from the leading Chinese journals in Economics and Management Science indexed in Chinese Social Sciences Citation to construct a “research corpus”. Eight major business journals were selected to construct the corpus: Economic Research Journal, The Journal of Word Economy, China Industrial Economics, China Economic Quarterly, Journal of Management Sciences in China, Nankai Business Review, Chinese Journal of Management, Management World. 50 samples from each journal. The selection of the journals was based on the recommendations of the Director of IBL at XJTLU where the learning materials would be used.

4.2 Analysis of Research Corpus

After the research corpus was compiled, the genre analysis of corpus was conducted to identify conventional move structure of Chinese RA abstracts and high-frequency expressions/words. The
detailed procedures are as follows.

Step 1. Move identification. Referring to Swales’ (2004) description, moves were identified manually based on the function or content of the text as follows.

Introduction (I): Introduce the research background, purposes or problems to be solved to situate the research.

Method (M): State research method, normally including the research perspective or theory, participant subjects, data source, analysis procedure.

Result (R): Describe research findings.

Discussion (D): Draw out the conclusion, e.g. pointing out theoretical significance and practical value of the research results; areas for further research; or policy implications and suggestions

Step 2: Calculate the frequencies of individual moves. The frequencies of individual moves were calculated by Excel.

Step 3: Move Structure Analysis. The move structure here refers to the sequence of different moves that construct an abstract. For instance, move structure I-M-R-D indicates the author first provided some introduction (I), and then explained method (M) and result (R), and finally the author discussed the significance of the research, or pointing out the areas for further study (D). The move structure for each abstract was analyzed manually by researchers and recorded in Excel.

Step 4: Analysis of high-frequency words and expressions. Word frequency and self-mention words (e.g. I, we, the author) were analyzed by NLPIR-ICTCLAS (ictclas.nlpir.org), a Chinese lexical analysis system. High-frequency expressions were analyzed manually, due to the absence of any pre-existing corpus of academic high-frequency expressions. Researchers identified and recorded academic phrases and structures occurred in different moves from research corpus.

To ensure the consistency of manual analysis, a standardization meeting among researchers was held. Ten samples were discussed and analyzed in the meeting to ensure researchers shared the same understanding of the genre analysis. Moreover, all the results were reviewed internally to establish reliability.

4.3 Findings from the Research Corpus

The result of genre analysis revealed clear move features of Chinese RA abstracts in the discipline of Economics and Management Science. First, as shown in Table 1 below, it was found that method and result were two conventional moves, which occurred almost in all the samples. On the other hand, introduction and discussion were sometimes omitted, as found in approximately 60% samples. The statistics are as follows.

| Moves         | No. of Samples | Frequency   |
|---------------|----------------|-------------|
| Introduction (I) | 229            | 57.25%      |
| Method (M)    | 391            | 97.75%      |
| Result (R)    | 397            | 99.25%      |
| Discussion (D) | 241            | 60.25%      |

Second, in terms of the move structures, although the move introduction or discussion were not occurred in around 40% samples, most samples followed the popular I-M-R-D sequence which is similar to English RA abstracts proposed by Swales (1990, 2004):
According to the corpus, the abstracts normally contained 3-8 full sentences with about 250-400 characters. The introduction and discussion were often expressed in 1-2 sentences respectively. Usually there were more sentences to report the research results, as shown in the following abstract as an example:

The example above is a conventional I-M-R-D structured abstract. The first two sentences introduced the problems to be solved, and then the author described the method by introducing the data source and research subject. The results were reported in 4 sentences which was the longest move in the abstract. At the end, the author discussed the implication of the study.

Thirdly, with respect to high-frequency words/expressions, results from the ICTCLAS analysis showed that there were 4,670 words, occurring as 49,499 total tokens in the 400 abstracts. The top 20 frequently used words and their occurrences are: 企业 (1138), 影响 (619), 效应 (399), 实证 (359), 作用 (354), 经济 (348), 研究 (346), 政策 (318), 发现 (299), 模型 (289), 市场 (288), 数据 (287), 理论 (286), 关系 (260), 表明 (255), 结果 (244), 公司 (234), 风险 (230), 进行 (213), 显著 (213). The 20 highest frequency collocations generated by ICTCLAS were as follows:

中国农村家庭低消费、高储蓄的现实问题由来已久。当前，制约消费扩大和消费升级的因素依然突出。本文利用中国家庭追踪调查(CFPS)数据，实证研究了农村劳动力流动对家庭储蓄率的影响。研究结果表明，劳动力流动显著提高了家庭储蓄率。进一步研究发现，劳动力流动显著增加了家庭收入，但收入变动、失业、医疗和健康等不确定性而未能对家庭消费产生显著影响。研究还发现，农村家庭的人力资源投资和保险参与作为风险应对的重要方式，能有效降低劳动力流动对家庭储蓄率的影响。此外，异质性分析显示，劳动力流动缩小了农村家庭的储蓄率差距，对中低收入群体和社会经济较低的家庭储蓄率产生了更大的影响。因此，政府需要采取措施降低农村家庭的不确定性，提高流动人口家庭的消费水平。本文的研究结论为理解中国家庭的储蓄行为提供了新的视角和证据，可为扩大消费的政策制定提供参考。
The high-frequency words and collocations can be divided into two categories based on the discipline-specific vocabulary/phrase, e.g. 企业、经济、上市公司、货币政策, and academic vocabulary/phrase, e.g. 数据、表明、实证结果、理论模型. As shown in Table 2 above, reporting verbs, e.g. 表明、发现 are widely used in the abstracts when authors were claiming their results, e.g. 研究发现、结果表明.

Regarding self-mention words, instead of the plural form 我们, 本文 was much more frequently used in abstracts, which can be illustrated by the following statistics:

**Table 2**

**Frequent Collocations**

| Previous Word | Next Word | Co-occurrence Frequency | Previous Word | Next Word | Co-occurrence Frequency |
|---------------|-----------|--------------------------|---------------|-----------|--------------------------|
| 研究           | 发现       | 129                      | 调节           | 作用       | 48                       |
| 结果           | 表明       | 114                      | 地方           | 政府       | 48                       |
| 上市           | 公司       | 95                       | 本文           | 基于       | 46                       |
| 经济           | 增长       | 68                       | 实证           | 研究       | 41                       |
| 货币           | 政策       | 66                       | 理论           | 模型       | 40                       |
| 研究           | 表明       | 61                       | 企业           | 创新       | 40                       |
| 实证           | 结果       | 58                       | 人力           | 资本       | 39                       |
| 实证           | 检验       | 58                       | 实证           | 检验       | 38                       |
| 国有           | 企业       | 52                       | 经济           | 发展       | 36                       |
| 研究           | 结果       | 51                       | 本文           | 利用       | 35                       |

Based on the results analyzed by ICTCLAS, and manual analysis of the corpus, a suggested high-frequency expressions of each move was generalized as shown in Table 3 below.

All the findings from the corpus analysis were incorporated in the design of the teaching materials. Samples representing conventional move structures and linguistic features were selected as teaching materials for students to learn from.
Table 3

*High-frequency Words and Expressions*

| Move       | Suggested Expressions |
|------------|------------------------|
| Introduction | 强调研究内容的重要性： |
|            | ……引起了政府和学术界的广泛关注 / 一直备受争议 / 有颇多争议 / 引发了广泛讨论 / 始终受到学术界的高度关注。 |
|            | ……是当前经济发展的迫切需要 / 亟待解决的重大问题 / 核心问题 / 重要议题 / 理论和实践中的热点问题。 |
|            | ……对……至关重要。 |
|            | 引入研究内容： |
|            | 本文 / 文章 + 研究 / 考察 / 探究 / 探讨 / 反思 / 阐明 / 揭示 / 聚焦 / 提出 / 旨在 / 关注…… |
|            | 指出研究空白： |
|            | 现有……的关注相对较少。 / 现有文献对……缺少关注 / 较为匮乏。 |
|            | ……，这些问题尚未获得充分研究。 |
|            | 以往关于……的文献 / 研究只关注……，忽略 / 忽视了……。 |
|            | 文献中不乏……，而本文…… |
|            | 以往的文献对……进行了探讨，然而……。 |
| Method     | 基于 / 使用 / 运用 / 利用 / 采用……理论 / 机制 / 模型 / 样本 / 方法 / 数据 / 框架 |
|            | 以……为样本；手工搜集……信息 / 数据 |
|            | 建立 / 构建 / 运用 / 利用……模型 / 框架 |
|            | 在……模型基础上，实证分析 / 实证检验 / 实证研究 / 检验…… |
|            | 通过对……的调研问卷的实证分析 |
| Result     | 研究发现 / 表明 / 显示…… |
|            | 结果表明 / 研究结果表明 / 实证研究结果显示…… |
|            | 进一步的研究发现…… |
|            | 研究还揭示…… |
| Discussion | 为……提供了理论参考 / 依据 / 启示 / 政策建议 / 决策参考 / 方法 / 思路 / 视角 / 证据 |
|            | 提出了……的设想 / 建议 |
|            | 这一研究有助于…… |
|            | 本文结论对……具有借鉴意义 / 重要意义 / 参考价值 |
|            | 本文的政策含义在于…… |
|            | 本文弥补了现有研究的不足，并为……提供了有益指导。 |

5  RA Abstract Writing Instructional Design

The abstract writing instruction and follow up activities were organized from 26th April to 7th May, 2021, when students had completed the first draft of their degree dissertation/final year project (FYP), but prior to the final submission. By applying corpus-based genre analysis approach, the instructional design comprised the following three stages.
5.1 Stage 1: Before 26th April

First, students were required to complete a draft abstract for their FYP. The writing samples were collected for comparison with students’ second draft after the instruction. Meanwhile, referring to the findings from the research corpus, the researchers constructed a learning corpus as teaching material. As the target learners were Year 4 undergraduate students with Chinese proficiencies at CEFR B2 level, reading 400 abstracts with more than 118,000 characters in a research corpus would be overwhelming due to limited academic knowledge and Chinese proficiency. Additionally, the timeline for students to complete their FYP was very tight. Normally students complete their draft of FYP first, and then start to write an abstract. As a result, there were only about 3 weeks for them to complete their abstracts. Considering the students’ actual Chinese proficiency and time availability, a mini “learning corpus” including 10 samples were selected from the research corpus to reduce students’ workload and facilitate their learning. The 10 samples were selected based on the following principles in order to provide a high quality for students’ reading and studying:

1. Followed the conventional Chinese RA abstract move structures, including 5 abstracts in I-M-R-D structure, 2 M-R-D, 2 M-R and 1 I-M-R structures. The number of samples in different move structures was determined by the distribution of move structures from the research corpus.
2. Demonstrated most frequent words and expressions of RA abstracts;
3. Length between 250-600 characters;
4. Included a variety of topics in the discipline of Economics and Management Science;
5. The content of the abstracts should be relatively easy to be understood and close to daily life, since the students were Y4 undergraduates, not expert researchers in this field.

After the 10 samples were selected to construct a learning corpus, a series of tasks were designed with the aim to facilitate students to explore linguistic conventions of Chinese RA abstracts. The detailed course design and sample tasks will be introduced in the next section.

5.2 Stage 2: 26th April – 30th April

Students were required to attend two 1-hour workshops on abstract writing. The learning corpus was applied in both workshops as teaching material. Firstly, students took the first workshop aiming at identifying conventional move structures of Chinese RA abstracts; afterwards, students attended the second workshop to figure out common expressions/words used in abstracts. In the two workshops, students conducted research by themselves to identify linguistic conventions in Chinese RA abstracts by analyzing the learning corpus. The workshops were recorded for data collection. This was made easier, to some extent, due to the pandemic, since all learning activities were moved online in the period of this research study.

As move analysis was quite new to students, explanations of the concept of move and demonstrating move analysis were necessary. Therefore, in the first workshop, the concept move and move analysis were introduced with examples. Selected samples were displayed via a shared screen; teachers introduced the method of move analysis first and asked students to use different colors to identify different moves in the abstracts via the annotation function of the online meeting platform, as illustrated in Figure 4 below. Afterwards, 2-3 students formed into small breakout groups to identify the move and analyze the move structures of the 10 abstracts in the learning corpus. Students then were able to notice that most abstracts followed I-M-R-D structure and could reflect on their own ability to do this in their own writing.
Figure 4
Screenshot of move analysis via Zhumu

The second workshop focused on the analysis of high-frequency words and expressions. Students formed small groups again and were tasked to generalize a list of common expressions collaboratively, as well as find out the self-mention words used in the abstracts. After working in small groups, the whole class reviewed and modified the language list together under the guidance of the teacher. The learning corpus approach helped students raise their genre awareness by exposing them to authentic language as well as enabling students to conduct research by themselves.

5.3 Stage 3: 1st - 7th May

After the workshops, students reflected on their first writing drafts and then applied their learning to their own writing. After modification, students submitted their second drafts for feedback. After students completed their final version, a questionnaire including both scalar and open-ended questions was circulated via survey@XJTLU to collect students’ feedback on the project. The pedagogical effectiveness was then evaluated by 1) subjective data—students’ feedback from questionnaire after the instruction and 2) objective data-comparison between students’ first drafts and final submissions of their FYP abstracts.

6 Evaluation of the Corpus-based Genre Analysis Instruction

6.1 Results from subjective data—post-instruction questionnaire

A questionnaire with 7 scalar questions and 2 open questions was circulated after the teaching intervention to test students’ attitudes to their training in Chinese academic writing and abstract writing in particular. The questionnaire was based on questions from the XJTLU end of semester module questionnaire (2020). The results from the questionnaire revealed that corpus-based genre analysis received positive feedback from students. The following form summarizes the results of the questionnaire on the 13 students’ perceptions of their learning experiences.

100% (13) students agreed that the corpus-based writing instruction was a worthwhile learning experience and they felt more confident in writing Chinese abstracts than before, which indicates the success of the teaching intervention on RA abstract writing. Almost all the students agreed that the authentic samples, move analysis and high-frequency words and expressions list were helpful. In addition, most students agreed that the instruction helped stimulate their interests in academic Chinese (67%, 8) and confidence to write Chinese RA abstracts (83%, 7).
Table 4

Statistics from the Post-instruction Questionnaire

| Items                                                                 | Strongly Agree | Agree | Neutral | Disagree | Strongly Disagree |
|----------------------------------------------------------------------|----------------|-------|---------|----------|-------------------|
| The authentic samples of Chinese abstracts in learning corpus are useful. | 7              | 5     | 1       |          |                   |
| The analysis on move structures of the abstracts are useful.          | 8              | 5     |         |          |                   |
| The high-frequency words and expressions list is useful.             | 10             | 3     |         |          |                   |
| I feel more confident in writing Chinese abstracts than I did before. | 6              | 7     |         |          |                   |
| The instructions stimulate my interest to learn more about academic Chinese. | 2              | 6     | 4       | 1        |                   |
| My academic Chinese writing skills improved after the instruction.   | 4              | 7     | 2       |          |                   |
| Overall, I found this is a very worthwhile learning experience.       | 7              | 6     |         |          |                   |

In addition to the 7 scalar questions, the following two open ended questions were included in the questionnaire.

1. *What do you think is most helpful in this project?*
2. *What are your suggestions for further improvement of the project?*

For the first open question, students highlighted again that academic words, sample sentences were very useful in helping them write their abstracts which proves the effectiveness of the course design. One student mentioned that s/he found that the subject knowledge had increased as well in addition to the improvement of Chinese language.

“It was really great that the teacher taught us the words can be used in order to make your essay more coherent, and useful sentences.”

“The examples on a variety of topics are helpful.”

“The most helpful guide for me is listing the words that need to be used. Beside of helping us to knowing what formal words that need to be pay attention to, I also can figure out the big picture or outline of the abstract that I need to write.”

“The flow and structure are very useful. Thanks again. I can now submit my FYP with confidence!”

“I really appreciate Laoshi’s effort. Now I have a basic idea on how to write Chinese abstract, and I can use Chinese formal words to express my ideas and discovery.”

“I enjoyed the learning process because I felt that not only my Chinese writing abilities have been improved, but I’ve also learned the knowledge of business by reading all the abstracts.”

In terms of future improvements, raised in the second question, 3 students indicated that they would like more examples of the high-frequency expressions identified and 4 students mentioned that they still needed more support in written language and grammar, as the sentences in abstracts are often sophisticated. The suggestions collected from students will be taken into consideration as a next step of this project, in which we intend to explore more linguistic features in RA abstracts and enlarge the examples of identified high-frequency words and expressions.
6.2 Results from objective data- comparison in writing samples

In addition to students’ feedback, students’ writing samples before and after the instruction were compared to evaluate the effectiveness of teaching as objective data. Students’ writing samples were coded from A to M. As the instruction focused on 1) developing students’ awareness of move structure Chinese RA abstracts and 2) enabling students to acquire some basic academic Chinese words and expressions, the comparison was made from the two perspectives: move structure and language use.

First, reviewing the pre-instruction samples, it was found that most of the students already covered both of the necessary moves- method and result in students’ pre-instruction writing samples. Only 1 student didn’t write result in the abstract. 4 out of 13 students used complete I-M-R-D move structure in their first draft, and 8 students included introduction or discussion moves, although 4 of them had problems in the sequence of the moves, e.g. the move structures in some abstracts were I-M-R-M-D, and I-M-R-I-D. This indicates that although students lacked explicit knowledge of the move structure of Chinese RA abstract, as EAP is compulsory for all the students in the university, most students were still able to organize satisfactory content of abstracts. This can be justified in the pre-project interview, in which all the student replied that they wrote abstract in English first and then translated it into Chinese. If students follow the typical EAP I-M-R-D structure when writing Chinese abstracts, the organization of the content should be fine.

By comparing between the pre- and post-instruction writing samples, it was noted that the overall performances in the organization of the abstract were improved, more complete and reasonable sequence of move structures were adopted in students’ second drafts. The statistical comparisons are as follows.

Figure 5
Comparison on move structures of students’ pre-and post-instruction writing samples

Take the following two instances taken from student C and student J. After instruction, student C adjusted the move structure from I-M-R-M-D to a standard I-M-R-D structure of RA abstract by moving the underlined sentences indicating “methodology” together, shown in Figure 6. The fact that students like this individual were able to identify and correct problems in the organization of the abstracts suggests that they have started to develop the awareness of the move structure.
Second, in terms of language use, it was found that students started to apply suggested words and structures to polish their abstracts. For example, student C, as illustrated in Figure 6, replaced some words used in oral Chinese by more formal written Chinese, e.g. changed “希望” to “旨在”, and the question mark “吗” to “是否”. While some students, like student C, replaced a few words with more academic vocabulary, several students rewrote their abstracts after the instruction (see the example from student J in Figure 7 below).

Figure 7

Student J pre- and post-instruction writing samples

学生J在改变后对新的结构和语言的调整，第二稿的摘要（399字）比第一稿（465字）更简洁。第二稿的结构和语言的调整，使得摘要更加精炼。

Student J made substantial changes after the instruction. First, with the adjustments in the content and language, the 2nd abstract (399 words) was more concise than the first one (465 words). The 2nd draft...
was featured with a wide range of suggested words and sentence patterns, e.g. 学术界已经开始关注⋯⋯；本文基于⋯⋯理论和实践，引入⋯⋯因素，探讨⋯⋯。 “本文” was more widely used instead of “这项研究” in the 2nd draft. The student added a formal word “均” in the 2nd draft, and replaced a vague word “多种” by a specific number 11:

1st draft: 千禧一代和 z 代继承者的影响受到多种因素的影响。
2nd draft: 千禧世代和 Z 世代的继承意图均受 11 个因素的影响。

As can be seen from the comparison, there was a significant improvement in students’ writing samples, in both content structure and language use, which indicates corpus- based genre analysis has positive influences on students’ academic writing achievement. It is worthwhile highlighting that all the modifications students made were by themselves, ahead of the feedback session. Although there were still some mistakes in students’ 2nd drafts, the achievement students made after the instruction was obvious, suggesting that corpus-based genre analysis is an effective approach in enhancing students’ rhetorical awareness, competence in writing Chinese RA abstracts and learning autonomy.

7 Discussion

With the aim of enhancing students’ Chinese abstract writing skills, the study first explored the linguistic conventions of Chinese RA abstracts, followed by a student-centred teaching intervention based on using corpora. Student writing samples and feedback were then analyzed to examine the effectiveness of the approach. Although acknowledging the limitation of the small sample size, the study provides clear indications of the value of using genre-based corpus training.

In response to the first research question “What are the linguistic conventions of Chinese RA abstracts in Economics and Management Science”, the analysis of research corpus reveals several features of disciplinary abstracts. First, about 60% out of 400 samples included a complete set of moves which are introduction, method, result and discussion. Method and result are two conventional moves in Chinese RA abstract, with more than 90% occurrence; introduction or discussion were omitted in about 40% samples. The conventional move structure of Chinese RA abstracts in the discipline of Economics and Management Science is thus fairly similar to English RA abstracts, which is I-M-R-D. Second, a high-frequency words and expressions list was generalized. Discipline- specific words e.g. 经济、货币，and CAP words e.g. 本文、数据、表明 are two main categories in high-frequency words. The use of discipline-specific words can be changed with the research topics, while CAP words can provide foundation for students to write their thesis, e.g., how to make a claim, ways to point out a research gap, and thus a CAP vocabulary list should be included in thesis writing courses. The analysis of the research corpus increased the knowledge of linguistic conventions of Chinese research abstracts, at least in the specified discipline, and suggest ways to contribute to the development of CAP teaching materials.

The second research question is “to what extent can the corpus-based genre analysis approach improve students’ writing skills”. According to the subjective data from students’ feedback and objective data from comparison of writing samples, the answer is that such an approach can make a difference, at least partially. The positive feedback from students suggests that the course design catered to students’ needs, and students were satisfied with the instruction in general. Results from the comparison between writing samples pre- and post- instruction also indicate that students’ performance in academic writing improved suggesting students were able to apply what they have learned to modify their own drafts.

There are a number of reasons why the approach is effective. First, this approach is a learner-centred and inductive learning process in which students identified the language patterns by themselves and then applied them to their own writing. The whole process acted as a mini research project for students and therefore can foster students’ learning autonomy. Thus this project, albeit in a small sample, was able to show the benefit of fostering awareness of the linguistic conventions of RA abstracts, with
improved student autonomy over their writing development, raising students’ CAP reading and writing proficiency.

Second, scaffolding the whole learning process by the instructor was necessary to ensure the success of this approach. Scaffolding refers to teaching strategies that an instructor adopts to support students’ success in the learning process (Oliver & Herrington, 2001). The core scaffolding strategy in this study is the compiling of a mini learning corpus. All the samples in the learning corpus were carefully selected from a research corpus to demonstrate conventional RA abstract moves. The samples should be appropriate for students’ language level and academic knowledge background. Students can acquire much of genre knowledge implicitly by reading samples from corpus, which may be expected to lead them to write abstracts in an appropriate way. However, if exposed to the authentic vast research corpus, students may feel overwhelmed, particularly considering their actual Chinese proficiency. Aston (2001) raised similar concerns over corpus-based instruction and emphasized that a guided and controlled corpus is essential for effective learning. Thus, the instructor must tailor the corpus for students as learning materials, to ensure students can explore new knowledge in a supportive and comfortable environment. Moreover, the instructor needs to facilitate the whole learning process, and provide timely feedback when students generalize the language patterns by themselves in their own writing. All the learning activities should scaffold students’ learning to make CAP writing more manageable to second language learners. Therefore, the construction of a tailored “learning corpus” is essential to the success of this teaching approach.

Nevertheless, the instruction cannot solve all the issues of RA abstract writing. Writing abstracts requires sophisticated use of the language (Pho, 2008; Ruan, 2018). When reviewing students’ samples, it was clear that errors were various and complex. A number of mistakes from students’ writing samples were general language mistakes, e.g. wrong word order, over use of 了, repetition of words. We would suggest that 1-1 consultation is still necessary in CAP to provide individualized support. Therefore, to answer the second research questions, the corpus-based genre analysis approach can partially improve students’ writing proficiencies, as part of a broader set of scaffolding and individual sources of teaching support.

However, we also argue that CAP does need further extending. In recent years, more and more inquiries were received in this institution for support in Chinese abstract writing from different departments, which we believe is occurring in other institutions too, as the number of students taking degrees in Chinese in China continues to grow. Therefore, the research and teaching of academic Chinese need to be developed urgently. Exploring more linguistic conventions in Chinese RA abstracts, and extending the discipline from Economics and Management Science to other areas, are some of the future aspects of CAP which we aim to investigate in future. Moreover, we suggest corpora or lists of common academic words need to be developed in order to facilitate students’ writing. We also acknowledge that the number of the participants in this study is limited; however, with the continuing delivery of CAP abstract writing workshops, more student feedback and writing samples will be collected to enlarge the data of the study, and support the generalizability of our findings. In addition, corpus-based genre analysis can be applied not merely to academic Chinese writing, but all structured practical writing tasks, e.g. writing invitations and notices. Thus this approach can be implemented to Chinese writing instruction in a wider context.

**8 Conclusion**

To conclude, this research found positive outcomes for building student writing skills for Chinese Academic Purposes, investigating move structures and linguistic features of Chinese RA abstracts in the discipline of Economics and Management Science. The research design used an effective research-based and learner-centred approach, through the construction and analysis of a reference research corpus, and
an exemplar teaching corpus, providing scaffolded materials for a short teaching intervention designed
to teach Chinese research abstract writing techniques. Data on student’ performances and feedback
demonstrated its effectiveness.

Academic Chinese writing is an integral part of international students’ academic studies. The
findings illustrate how corpus-based genre analysis can be an effective teaching approach in improving
students’ academic Chinese writing competency. The research findings can also contribute towards our
understanding of Chinese academic abstracts by explicit descriptions of their explicit move structures.
The results of the study can be valuable to both Chinese teachers and learners who perceive challenges
in reading and writing Chinese abstracts. Moreover, the materials and pedagogic approach used in this
study could be incorporated into Chinese modules for writing in other domains. We call for further
research into similar studies on CAP curriculum and skills development, not only to support the
successful completion of international students’ dissertations but also build competence in other genres
of writing. This study is thus the first step in further research into appropriate pedagogic approaches,
broadening curriculum and materials development to shed more light on successful teaching of Chinese
for Academic Purposes.

Funding

This work was supported by Teaching Development Fund of Xi’an Jiaotong- Liverpool University.

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基于语料库的体裁分析教学法在学术汉语写作课程中的应用

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摘要
随着越来越多的国际学生来华接受高等教育，学术汉语的学习需求急剧增加。然而，学术汉语的本体研究和教学实践都尚处于起步阶段。学生在论文写作中缺乏足够的指导和支持，由此遇到了诸多困难。另一方面，学术英语的教学和研究成果丰硕。在所有教学法中，基于语料库的体裁分析教学法在近年来受到了颇多关注并在实践中被证明能够有效提高学生的学术英语写作能力。本文拟将该方法应用于学术汉语的写作教学并检验其有效性。

以经济与管理学学科的中文论文摘要为研究对象，本文首先构建研究语料库，分析摘要的语步结构和高频词汇及句式。基于研究语料库的发现，筛选语料，构建学习语料库，指导学生对学习语料库中的样本进行语步分析和高频词汇及结构整理。最后，通过调查问卷和学生课程前后写作样本的比较来验证基于语料库的体裁教学法对于提升留学生写作能力的有效性。研究发现：首先，经管类论文摘要的主要语步结构和英文摘要类似，为 I-M-R-D 结构，方法和结论为摘要中的常规语步；其次，基于语料库的体裁分析教学法能够在一定程度上提高学生学术汉语写作能力。在课程后，学生的语步意识和学术汉语词汇的使用均有较大进步。本研究有助于增进对摘要这一文体的结构和语言特征的了解，为学术汉语写作教学和学术汉语课程的建设提供新的思路。

关键词
学术汉语写作，论文摘要，语料库辅助语言教学，体裁教学法

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