

Study on the Current Situation of English Academic Writing Competence of Non English Majors Postgraduate Students

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Abstract: With the accelerating process of globalization, international academic exchanges are also constantly developing. Having a certain level of foreign language academic writing competence has become a necessary condition for students to participate in international academic exchanges. Therefore, foreign language academic writing has become a focus of attention for domestic and foreign experts. This article focuses on the English academic writing competence of non-English major graduate students, using a questionnaire survey to discover the current situation of English academic writing competence of non-English major graduate students and the factors affecting their English academic writing competence. Perform descriptive analysis and factor analysis on the collected data using SPSS 27.0. The research results indicate that: 1) Overall, the English academic writing competence of non-English major graduate students needs to be improved. Although they recognize the importance of English academic writing, their understanding is not deep enough. 2) The main problems with English academic writing for non-English major graduate students are: the purpose of English academic writing for non-English major graduate students is relatively single; Understanding the importance of academic writing in English, but not delving deeply enough and lacking basic knowledge of academic writing; Lack of corresponding writing practice. 3) The factors that affect the academic writing ability of non-English major graduate students include writing knowledge, writing motivation, and writing teaching environment. Based on this, the author provides suggestions at the end of the article to improve academic writing skills.

Keywords: English Academic Writing; Current Situation; Non-English Major Graduate Students.

1. Introduction

With the process of globalization, English, as the world's largest language and also a medium of communication with the world, mastering the language of English is particularly important. Academic English, as a medium of international academic exchange, has become an indispensable part of international talent cultivation and general education. In recent years, major universities have actively responded to the national policy of expanding graduate enrollment, and the number of graduate students in China has been continuously increasing. (Li, 2016) As a new force in the academic circle of universities, the cultivation of graduate students' English academic writing competence plays a positive role in improving the quality of graduate education in China, enhancing the level of scientific research construction in universities, and cultivating high-quality talents that are in line with international standards. Therefore, writing academic papers in English has become a focus of attention.

However, among the graduate students in China, on the one hand, there is an urgent need to use English as a tool to complete graduation or academic papers to meet academic exchange needs; On the other hand, the English academic writing competence of most graduate students still cannot meet the current needs, and there are still many language barriers in academic paper writing and academic communication activities.

Research on the writing competence of second language learners in English academic papers abroad often examines language quality, article structure, coherence and cohesion, and overall scores (Green & Weir, 2002). Classify language development indicators into four categories: fluency, accuracy, syntactic complexity, and lexical complexity

(Wolfe Quintero et al., 1998). Using these indicators as a reference, there are differences in research results, which tend to believe that the academic improvement of language is more significant. For example, Shaw & Liu (1998) examined the changes in English writing competence of international students who took a three-month course in the UK and found that accuracy and complexity did not significantly develop, but written language features were strengthened. The changes in complexity may be closely related to learning time. Ortega (2003) conducted a diachronic study on the academic writing of L2 and FL students and found that 2-3 months of English academic paper course learning had little effect on syntactic complexity, and the changes were significant after 9-12 months. These studies typically manifest as historical studies, and the research process is relatively lengthy. In 2014, the authoritative international second language writing journal, *Second Language Writing Journal*, published 5 papers, unifying the research subjects and jointly analyzing the one semester English academic paper writing course offered by Michigan State University for international students. From various aspects such as accuracy, complexity, and academic relevance, manual analysis and computer automatic analysis were used to study the development and changes of writing in language.

At present, domestic research on English academic paper writing focuses on the characteristics of writing texts, such as the use of academic language chunks (Xu Fang, 2012); Curriculum design (such as Liu Bing, 2010); Teaching methods, such as project-based learning mode (Yang Liping and Han Guang, 2012); Teaching activities, such as academic English writing ability assessment (Qi Xi, 2017); Student needs analysis (such as Chen Xiujuan and Zhan Ju, 2014); Influencing factors (Huang Xiaojun, 2023), etc. There are

also studies focusing on the impact of teacher guidance on students' academic English proficiency, thinking, and learning attitudes (Yang Luxin, 2015). However, the research subjects are mostly focused on a specific field, such as military, medicine, etc.

Therefore, the author takes non-English major master's students as the survey objects, conducts a survey and research on their current situation of English academic paper writing competence through questionnaire survey, analyzes the factors that affect the English academic writing competence of graduate students, and proposes corresponding improvement measures.

2. Methodology

2.1. Research Question

Firstly, what is the current level of English academic paper writing competence among non-English major graduate students?

Secondly, what are the factors that affect the writing competence of non-English major graduate students in English academic papers

2.2. Research Tool

In order to understand the academic writing competence of graduate students in English, the author conducted a survey using a questionnaire. The author directly used Hu Panpan's (2017) questionnaire, which has good reliability and validity. The questionnaire consists of five parts: the first part is a multiple-choice question about personal information; The second to fourth parts are the Likert Level 5 scale, which includes the participants' understanding of English academic writing, their motivation for English academic writing, and their environment of teaching academic English writing. The fifth part is recommendations for teaching English academic writing.

2.3. Analysis Tool

Use SPSS 27.0 to process, encode, and analyze the collected data.

2.4. Participants

This study takes non-English major graduate students as an example, whose majors include science majors such as physics and chemistry, as well as humanities majors such as literature and law. The participants are distributed from the first year to the third year of graduate school. 154 participants participated in this questionnaire survey.

3. Results and Discussion

3.1. Current Level of English Academic Writing Competence

3.1.1. Attitudes towards English Academic Writing of Non-English Majoring Graduate Students

In the survey on attitudes towards English academic writing, 77.2% (53.9%+23.3%) of the participants believed that English academic writing was aimed at achieving graduation goals. Completing a graduation thesis is one of the requirements for graduate education in China. So, most students will associate English academic writing with obtaining a graduation certificate. 56.02% of the participants believe that they engage in academic writing in English to meet the needs of future work. More than half of the participants believe that academic English writing serves the purpose of publishing articles, and in recent years, more and more students are publishing their own papers in English journals. Meanwhile, 81.1% of the participants believed that learning English academic writing was to assist their professional learning. From this, it can be seen that although English academic paper writing is an inevitable topic in graduate studies, it can also be observed that more and more students are starting to focus on English academic paper writing for their future work and research learning.

Table 1. Attitudes towards English Academic Writing

Item	Content	Totally disagree	Basically disagree	Sometimes agree	Basically agree	Totally agree
1	Writing for graduation	1.3%	5.19%	16.23%	53.9%	23.3%
2	Writing for further work	2.6%	20.13%	31.17%	29.22%	16.8%
3	Writing for studying aboard	13.64%	32.47%	21.43%	22.73%	9.74%
4	Writing for publishing papers	8.44%	14.94%	22.08%	42.21%	12.3%
5	Writing for international communication	11.69%	25.32%	26.62%	30.52%	5.84%
6	Writing for academic learning	2.6%	3.25%	12.99%	53.9%	27.2%

3.1.2. Cognition of English Academic Writing for Non-English Major Graduate Students

In terms of cognitive aspects of English academic writing, 75.98% of participants believe that English academic paper writing is very important, but only 4.55% of participants believe that they have a good understanding of English academic paper writing, and only 3.25% of participants believe that they are good at English academic paper writing. Although students believe that the importance of writing academic papers in English is self-evident, due to a lack of relevant experience and practice, the number of academic papers produced by students is very small, with less than 10%

of students having published academic papers in English.

3.1.3. English Academic Writing Competence of Non-English Major Graduate Students

In order to explore the writing ability of non-English major graduate students in English academic papers, the author set seven questions in the questionnaire, which respectively involve the process, structure, style, and writing methods of different types of academic papers in English academic writing. The survey results show that 25.71% of the participants believe they understand the process of writing English academic papers; 42.2% of the participants believe that they understand the structure of English academic paper

writing; 40.91% of the participants believe that they know how to express themselves in formal language. Unfortunately, participants have limited knowledge about the writing of

different types of English academic papers. Less than 30% of the participants are familiar with the writing of English project proposals and academic lecture drafts in English.

Table 2. Cognition of English Academic Writing

Item	Content	Totally disagree	Basically disagree	Sometimes agree	Basically agree	Totally agree
7	I know academic writing clearly	3.9%	29.87%	35.06%	26.62%	4.55%
8	I think academic writing is very important	0%	5.84%	18.18%	44.16%	31.82%
11	I am good at academic writing	6.49%	31.17%	38.96%	20.13%	3.25%
21	I have published academic papers	40.91%	20.78%	12.34%	19.48%	6.49%

Table 3. English academic writing competence

Item	Content	Totally disagree	Basically disagree	Sometimes agree	Basically agree	Totally agree
22	Acquire the process of academic writing in English	11.69%	25.97%	26.62%	27.27%	8.44%
23	Acquire the structure of academic writing in English	8.44%	18.18%	31.17%	36.36%	5.84%
24	Acquire how to write the literature review	9.74%	16.23%	32.47%	33.12%	8.44%
25	Acquire how to express in formal style	11.04%	17.53%	30.52%	36.36%	4.55%
26	Acquire how to write a application	23.38%	24.03%	25.97%	20.78%	5.84%
27	Acquire how to write a research report	16.88%	25.97%	22.73%	27.92%	6.49%
28	Acquire how to write a draft for an academic forum	22.73%	25.32%	23.38%	20.13%	8.44%

3.1.4. The Teaching Environment of English Academic Writing for Non-English Major Graduate Students

From the graph, it can be seen that many participants are satisfied with the graduate English course, and some schools have also started offering courses on English academic paper writing. In the classroom, teachers also teach writing skills and standards for English academic paper writing, but many

schools do not have specialized textbooks for English academic paper writing. This makes it necessary to establish specialized English academic paper writing textbooks. Meanwhile, over 60% of the participants believed that the school encourages students to participate in English academic paper writing and encourages students to publish English academic papers, and the participants were relatively satisfied with the English academic paper writing environment.

Table 4. The Teaching Environment of English Academic Writing

Item	Content	Totally disagree	Basically disagree	Sometimes agree	Basically agree	Totally agree
29	I was satisfied with the English curriculum	1.94%	7.1%	27.1%	49.68%	14.19%
30	There was academic writing class except public English	4.52%	9.03%	23.87%	39.35%	23.23%
31	There is a need to set up the academic writing class	0.65%	2.58%	14.19%	48.39%	34.19%
32	The English class in our university involved in contents of academic writing	3.23%	8.39%	13.55%	52.9%	21.94%
33	The writing skills of some genre has been taught in the English class in our university	1.29%	6.45%	18.06%	50.97%	23.23%
34	The English class stressed the writing criteria of academic writing	1.29%	6.45%	24.52%	46.45%	21.29%
35	The textbook hardly involved in academic writing	5.81%	23.23%	24.52%	36.77%	9.68%
36	The environment in our university helps a lot in academic writing	0.65%	8.39%	23.23%	51.61%	16.13%
37	My college encourages graduates to do academic writing	1.29%	7.1%	22.58%	43.87%	25.16%
38	My college encourages graduates to publish essays written in English	1.94%	10.32%	22.58%	41.29%	23.87%

3.2. The Problems in Academic Writing in English

From the survey on the current situation of English academic paper writing competence mentioned above, it can be seen that there are still many problems in English academic paper writing. Firstly, the purpose of writing English academic papers for graduate students is relatively singular, with the main focus being on completing their studies. Secondly, graduate students understand the importance of writing English academic papers, but lack corresponding practice, and there are still problems for students on how to conduct English academic paper writing. Thirdly, most graduate students have a certain understanding of English academic paper writing, but their understanding of writing different types of English academic papers is not deep enough. Fourthly, graduate students are relatively satisfied with the school's English curriculum design and the English academic paper writing environment, but the lack of professional textbooks in the English academic paper writing course is also worth paying attention to.

3.3. Main Influential Factors for Academic Writing in English

Based on the above analysis, the current situation and main problems for academic writing have been found. In this part,

the major influential factors that affect academic writing will be investigated. The data from questionnaire will be used together to analyze. According to Haynes and Richard & Kubang, the KMO value is a statistic for measuring the validity of the findings. Therefore, the results of KOM value will determine whether the data can be used to do factor analysis or not. If the KOM value is higher than 0.7, the data can be used to do factor analysis. As shown in the Table 5, the KOM value is 0.893, which falls in the level that means the data collected in graduates' questionnaire is perfectly suitable for doing factor analysis.

Table 5. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.893
Bartlett's Test of Sphericity	Approx. Chi-Square	1382.367
	df	105.000
	Sig.	0.000

After gaining the KOM of the data of each section, the next stage is using Principal Components Method to analyze the results of each question. At this stage, each of the items of questions will be done factor rotation for countless times to define the total variance explained.

Table 6. Total Variance Explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6.667	44.445	44.445	5.368	35.789	35.789
2	1.883	12.556	57.001	2.477	16.514	52.303
3	1.537	10.246	67.247	2.242	14.944	67.247
4	0.786	5.237	72.484			

As shown in the table above, three factors can be extracted based on eigenvalues greater than 1. The variance interpretation rate of factor 1 is 35.789%, the variance interpretation rate of factor 2 is 16.514%, the variance

interpretation rate of factor 3 is 14.944%, and the cumulative variance interpretation rate is 67.247%, which is greater than 50%. Therefore, the extracted factors have a good explanatory effect on the scale information.

Table 7. Rotated Component Matrix

	Component		
	Factor 1	Factor 2	Factor 3
	The knowledge of academic writing in English	The motivation of academic writing in English	The teaching environment of academic writing in English
Item 2		0.547	
Item 3		0.755	
Item 4		0.715	
Item 5		0.837	
Item 21	0.644		
Item 22	0.823		
Item 23	0.845		
Item 24	0.820		
Item 25	0.811		
Item 26	0.828		
Item 27	0.839		
Item 28	0.801		
Item 36			0.759
Item 37			0.835
Item 38			0.843

Then the data will be used to set the Rotation matrix to find the components. In this process of analyzing, the components will be found and named according to the contents of the

items of questions from the graduates' questionnaire. Table 7 shows that each factor has different loadings.

Item 21-28 are all about the knowledge of academic writing

like the structure of paper, the process of writing, the writing of literature review. So the first factor is named the knowledge of academic writing. Item 2-5 include some contents like “for further working”, “for graduation, which implicates the content is about the motivation of academic writing. So the second factor is called the motivation of academic writing. The third factor is about the teaching environment of academic writing.

3.3.1. The Knowledge of Academic Writing in English

Table 8. Correlations Between Competence and The knowledge of academic writing in English

		The knowledge of academic writing in English
Competence	Pearson Correlation	0.927**
	Sig. (2-tailed)	0.000
	N	155
**. Correlation is significant at the 0.01 level (2-tailed).		

The first influential factor is the knowledge of academic writing. So there must be some correlations between the knowledge and the competence. From the above table, it can be seen that using correlation analysis to study the correlation between competence and the knowledge of academic writing in English, Pearson correlation coefficient is used to represent the strength of the correlation. The correlation coefficient between competence and the knowledge of academic writing in English is 0.927 and $p < 0.01$, indicating a significant positive correlation between competence and the knowledge of academic writing in English.

As is well known, the format of English academic papers is relatively fixed. In the questionnaire survey, it was found that more than half of the participants believed that the literature review, experimental methods, results and discussion sections were the most difficult parts of paper writing. Perhaps in these sections, the author needs to integrate information and articulate viewpoints. In addition, 20 people believe that they can't write all the parts of the academic paper in English, which is also a reflection of their lack of knowledge in English academic paper writing.

Table 9. The most difficult part in writing an English paper

Content	Number	Percentage
Abstract	38	24.52%
Introduction	33	21.29%
Literature review	90	58.06%
Methodology	83	53.55%
Results and discussion	88	56.77%
conclusion	25	16.13%
Can't write all the parts of the academic paper in English	31	20%

3.3.2. The Motivation of Academic Writing in English

From the above table, it can be seen that using correlation analysis to study the correlation between competence and the motivation of academic writing in English, Pearson correlation coefficient is used to represent the strength of the correlation. The correlation coefficient between competence and the motivation of academic writing in English is 0.689 and $p < 0.01$, indicating a significant positive correlation between competence and the motivation of academic writing in English.

A person's motivation determines their behavior. As a graduate student, if he only wants to meet the graduation requirements and does not use it after graduation, he may not spend too much attention on writing English academic papers. On the contrary, if one wants to continue academic research, it is necessary to adhere to English academic paper writing. So, motivation can have an impact on the ability to write academic papers in English.

Table 10. Correlations Between Competence and the motivation of academic writing in English

		The attitude of academic writing in English
Competence	Pearson Correlation	0.689**
	Sig. (2-tailed)	0.000
	N	155
**. Correlation is significant at the 0.01 level (2-tailed).		

3.3.3. The Teaching Environment of Academic Writing in English

Table 11. Correlations Between Competence and The teaching environment of academic writing in English

		The teaching environment of academic writing in English
Competence	Pearson Correlation	0.595**
	Sig. (2-tailed)	0.000
	N	155
**. Correlation is significant at the 0.01 level (2-tailed).		

From the above table, it can be seen that using correlation analysis to study the correlation between competence and the teaching environment of academic writing in English, Pearson correlation coefficient is used to represent the strength of the correlation. The correlation coefficient between competence and the teaching environment of academic writing in English is 0.595 and $p < 0.01$, indicating a significant positive correlation between competence and the teaching environment of academic writing in English.

Table 12. Resources that should be provided for promoting paper writing in English

Content	Number	Percentage
Regular training lectures	74	47.74%
Establish an English academic writing network guidance center, arrange writing teachers, and provide guidance at fixed times	121	78.06%
Establish an English academic writing practice workshop, provide learning materials, increase communication and learning opportunities	120	77.42%
Improve writing skills through guidance from mentors in English academic paper writing and publication	118	76.13%
extensively studies foreign academic papers and journal articles	90	58.06%
Other	3	1.94%

From Table 12, the participants were asked which resources they want to promote paper writing in English 78.06% students want the school to establish an English academic writing network guidance center, arrange writing teachers, and provide guidance at fixed times. 77.42% students hope to improve writing skills through guidance from mentors in English academic paper writing and publication. And 76.13% students want to improve writing skills through guidance from mentors in English academic paper writing and publication.

4. Conclusion

This article investigates the writing competence of English academic papers among 154 non-English major graduate students through a questionnaire survey. By analyzing the collected data, we can conclude that: firstly, the purpose of writing academic papers in English for non-English major graduate students is relatively single, with the vast majority of them writing with the goal of graduating; Secondly, non-English major graduate students lack a deep understanding of English academic paper writing; In terms of the teaching environment, the participants are relatively satisfied but there is still room for improvement. Through principal component analysis, the author extracted three factors that affect the academic writing competence of non-English major graduate students in English, namely writing motivation, writing knowledge, and writing teaching environment. Based on this, the author proposes the following suggestions to enhance the writing competence of English academic papers for non-English major graduate students. Firstly, graduate students understand the importance of writing academic papers in English, but lack relevant writing practice. Teachers should adhere to student-centered teaching design, strive to create a student-centered teaching atmosphere, fully value the positive role of students in the learning process, and mobilize their enthusiasm and confidence in learning. (Li Yue, 2016) Secondly, to address the issue of graduate students having a limited understanding of English academic paper writing, specialized courses can be offered to explain the writing norms and methods of different genres of academic English, and task-based teaching methods can be used to teach English academic paper writing on different topics. In terms of textbooks, both original English academic writing textbooks can be introduced, and English academic writing textbooks written by well-known domestic universities can be used to optimize the environment for English academic paper writing.

At the same time, there is a lack of vocabulary in writing English academic papers, which can be improved by increasing practice in translating Chinese and English sentence structures, adding professional English vocabulary, sentence structure, and other learning explanations. (Zou, 2017)

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