

Investigation and Research on the Participation of Graduate Students in Academic Activities in Local Engineering Colleges

-- Taking Guangxi University of Science and Technology as An Example

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Abstract: This study takes some postgraduate students of Guangxi University of Science and Technology as the object. We adopt the field investigation method and questionnaire survey method to investigate and analyze the participation of graduate students in local engineering universities. There are several major problems: the number and quality of research achievements of postgraduate students in our university are not qualified; the academic research ability needs to be further improved; the motivation to participate in academic activities needs to be improved; academic activities in forms are relatively simple and not rich in level; the frequency of participating in academic activities is not high. Based on the above problems, the following strategies are put forward: tutors could strengthen the guidance to their graduate students and encourage them to participate in academic activities; to carry out and diversify academic activities; to expand the horizons of graduate students and focus on national and international academic conferences.

Keywords: Guangxi University of Science and Technology, Academic activities.

1. Introduction

"Many accomplished experts in all fields attribute their academic success in part to academic activities that start at the postgraduate career." [4] As an important part of scientific research activities in higher education, academic activities are a important way for students to understand the frontier of a discipline or industry, and an inherent requirement for developing the academic ability. Actively carrying out academic activities can promote academic exchange and innovation, broaden the vision of graduate students, improve their ability on scientific research and expression, and create a good academic environment.

Due to the COVID-19, many academic conferences in China have postponed or canceled out of the epidemic prevention and control. And many universities stay closure for a long time because of epidemic prevention policies. According to the 14th Five-Year Plan for the state and autonomous regions, the strategy of opening-up education to the outside world has been continuously promoted, which is imperative to promote the construction of a high-quality education system. [5] Colleges and universities, as talent gathering places, "carrying out academic activities is of great significance to improve the quality of the postgraduate students". [4]

This paper takes Guangxi University of Science and Technology as an example to investigate and study the participation of graduate students engaging in academic activities.

2. Data Collection and Research Methods

This questionnaire survey was conducted among the

graduate students in Guangxi University of Science and Technology using the "wjx" survey tool supplemented by oral answers. A total of 261 valid questionnaires were collected involving several engineering colleges. Among them, male students accounted for 72.8% and female students accounted for 27.2%. There were 167 first-year graduate students, 72 second-year graduate students and 22 third-year graduate students. (See Table 1.)

Table 1. Basic information of graduate students

Basic information		Number	Proportion
Gender	Male	190	72.8%
	Female	71	27.2%
Grade	First-year graduate students	167	63.98%
	Second-year graduate students	72	27.59%
	Third-year graduate students	22	8.43%

3. Results and Analysis of the Research

Questions in our questionnaire related to students' motivation, attitude, access to information, forms and levels of academic activities, and students' overall satisfaction with academic activities carried out by the university. It is hoped that this research can improve the enthusiasm of graduate students to participate in academic activities, and promote local engineering colleges to optimize graduate training programs. By improving the quality of academic activities

and the role of academic activities, the academic ability and training quality of graduate students are increased. The following contents are the results and analysis of the questionnaire.

3.1. Quantity and Quality of Postgraduate Scientific Research Achievements in Our University Are Not High

According to the survey, 74.71% of our graduate students did not publish papers, and 63.98% of the students participated in the survey. This indicates that the graduate students in our school almost did not publish papers in the first year, and then the second and third graduate students published fewer papers. According to the survey (Please refer to the 2021 training program for English Translation Graduate students majoring in Master of Translation in the School of Foreign Languages), and various professional courses in the first year graduate student in our school, academic lectures online arrangement more closely. They pay attention to the master degree of professional knowledge and the understanding degree of related academic frontier knowledge, and pay attention to the accumulation of the early period, but there is no substantive requirement for students to publish papers. One or two academic articles account for 20.69%, which is closely related to the graduate requirements of our school. 3-4 papers and more than 5 papers are rarely published, which reflects that most of the graduate students in our university focus on their academic achievement only to meet the graduation requirements, and they do not have high academic pursuit. Fundamentally, the first semester of the first grade mainly studies theoretical knowledge, which belongs to the initial stage of scientific research; In the second semester, there is a certain theoretical basis, but also

understanding the writing of academic papers, but most people still have not published papers. This involves many reasons: mainly their own research ability is poor, there is no systematic theoretical knowledge, no research direction, leading to no paper, and can not reach the level of publication.(See Table 2)

From the analysis of the published papers, the general academic journals accounted for the largest proportion, while the core journals accounted for the smallest proportion, indicating that the graduate research ability of our university is still lacking, and the quality control is not outstanding enough. This gives us the inspiration that graduate students should improve their scientific research literacy and innovation ability. The number of international journals is higher than that of core journals. We have communicated with some postgraduates, and they chose international journals mainly because they published fast. This is related to the whole situation of the domestic academic journals, and the domestic academic journals are competed, long auditing time and some objective factors such as less layout. For postgraduates, it is necessary to meet graduation requirements. That is a big benefit for the student awards recommendation, and they will not be hampered by too many factors; on the other hand, according to the 2021 college students in Guangxi university of science and technology (master) to go abroad to learn intention survey statistical analysis report shows (see table 3), 72.76% of postgraduates chose "professional + foreign language" of professional course learning to improve themselves. More than half of the students chose to go abroad during the period of school or after graduation to go abroad, that is 52.14%. This indicates that the master students in our university have a strong interest in foreign language learning and have the intention to study abroad, so international journals are relatively popular. (See Table 2.)

Table 2. Number of scientific research achievements

Basic information		Number	Proportion
Current number of published academic articles	Zero	195	74.71%
	1 to 2	54	20.69%
	3-4	7	2.68%
	≥5	5	1.92%
	There is no published	189	72.41%
The level of published academic articles	General academic journals	42	16.09%
	Core academic journals	17	6.51%
	International journal of	22	8.43%

Table 3. How can I improve Myself for the future

Basic information		Number	Proportion
How to improve yourself in the future	Major + Foreign language (one or more)	374	72.76%
	Look for opportunities to go abroad for exchanging during school	220	42.8%
	Do not go abroad for exchanging during the school period, and go abroad for further study after graduation	48	9.34%
	No need to go abroad, study or work in China	96	18.68%
	Never think about it	42	6.17%
	Others	20	3.89%

3.2. Students' Academic Research Ability Needs to Be Further Improved

To some extent, students' understanding of the content of academic activities reflects their understanding of academic

research. Only by achieving a certain amount of academic accumulation can students' academic ability be improved. The proportion of students who fully understood or barely understood the academic report was similar, 3.07% and 4.21%, respectively. The proportion of people who

understood most and a little was also similar, 45.21% and 47.51%, respectively. According to the above data distribution, 95.79% of the graduate students in our school can understand at least part of the academic report, have a basic understanding and understanding of the academic report, and can gain some benefits from the academic report. While

only 3.07% of people understood it completely, the largest percentage of people understood a little, at 47.51%. This indicates that the graduate students in our school do not understand the frontier academic, and their ability is not good, which needs to be improved.(See Table 4.)

Table 4. Understanding of content for participating in academic activities

Basic information		Number	Proportion
How much do you understand when attending an academic presentation?	Totally understand	8	3.07%
	Understand most	118	45.21%
	Understand a little	124	47.51%
	Barely understood	11	4.21%

3.3. The Enthusiasm to Participate in Academic Activities Needs to Be Improved

In terms of the motivation for participating in academic activities, improving one's academic thought, broadening one's horizon and broadening one's scope of knowledge accounted for 85.44% and 84.67%, respectively. The second motivation was to find collaborators in scientific research, accounting for 46.36%, which was the same as the two motives of communication and interest, accounting for 41%.

To cope with the requirements of the school or the supervisor accounted for only 28.35 percent. It can be seen from the data that most postgraduates want to improve their scientific research ability and actively participate in academic activities out of self-improvement drive. Only a small number of students are forced to participate in academic activities out of mission, which indicates that postgraduates have good ideological quality and the overall academic atmosphere is positive.(See Table 5.)

Table 5. Motivation to participate in academic activities

Basic information		Number	Proportion
What is your motivation for participating in academic activities?	To improve your academic thinking	223	85.44%
	Open your eyes and broaden your knowledge	221	84.67%
	Communicate with the speaker	107	41%
	Expand your knowledge to find scientific collaborators	121	46.36%
	To cope with school or tutor demands	74	28.35%
	Out of their own interest	107	41%

In terms of the attitude of participating in academic activities, "active and serious" accounted for 59.39%, indicating that most students have a strong thirst for knowledge, have a correct attitude, and are eager to participate in academic activities to improve their academic research ability. However, the number of students who chose "obey the arrangement" was 13.41%, ranking third, indicating that some students are not interested in academic activities and do not have a strong sense of participation, indicating that students have not yet changed their previous passive way of learning and do not have a strong sense of seeking academic activities related to their own majors on their own initiative, and do not have a good plan for their postgraduate career. They do not have a good plan for their postgraduate career. Even if they do participate in academic activities, they do so

partly to cope with the requirements of the university or their supervisors, accounting for 28.35%. The students participated in academic activities 0 times, 1-2 times and 3-4 times in total, which shows that this group of students is motivated to participate in academic activities out of a mandatory requirement. It can be seen that these students are out of rigid requirements to participate in academic activities and have low enthusiasm. There are three reasons for this phenomenon: Firstly, the topic of the report has nothing to do with their own interests. Secondly, the academic level of the report is strong. It is difficult for students to understand and needs to be adapted. Thirdly, the heavy study load requires science and engineering students to engage in heavy academic experiments, thus reducing the number of academic activities attended. (See Table 6.)

Table 6. Attitudes towards participation in academic activities

Basic information		Number	Proportion
What is your attitude towards participating in academic activities?	positive and serious	155	59.39%
	A more positive	66	25.29%
	Obey the arrangement	35	13.41%
	Not interested in	5	1.92%

3.4. The Form of Academic Activities Is Relatively Simple and the Level Is Not Rich Enough

Academic lectures account for 83.14% of the academic activities participated by master students in our university, indicating that most of the academic activities in our university are carried out in the form of academic lectures. More than half of the academic activities are carried out in the form of conferences, that is, 53.26%. Academic forums and research projects accounted for less than half of the academic

activities, accounting for 44.83% and 42.53%, respectively. The number of academic salons and academic paper writing was less, accounting for 30.65% and 36.4%, respectively. Only 23 of them had participated in other forms of academic activities, accounting for 8.81%. According to the data distribution, the main form of academic activities organized by our school is lectures, while the other six forms of academic activities are far less frequent. Therefore, the university can further carry out diversified academic activities, innovate and enrich its organizational forms, and make efforts to create a good academic atmosphere and cultivate high-quality and high-level graduate students. (See Table 7.)

Table 7. Forms of participation in academic activities

Basic information		Number	Proportion
What forms of academic activities did you participate in while in school?	Academic salon	80	30.65%
	Academic Forum	117	44.83%
	Academic lecture	217	83.14%
	Academic conference	139	53.26%
	Subject research	111	42.53%
	Academic paper writing	95	36.4%
	other	23	8.81%

From the level of participation in academic activities, the academic activities of our university are basically university level, college level, and other levels are less involved. District-level academic activities accounted for 18.01%, and interdisciplinary activities accounted for 15.33%, which showed that students mainly participated in academic activities through the university, relied on the organization of it, and did not have high initiative. Under the epidemic situation, the main form of participating in academic

conferences is online. The advantage of online participation is that it is not limited by time, place and other factors. Our graduate students should broaden their horizons, focus on the country and even the world, and actively participate in high-level academic activities in related fields, which is conducive to the study of cutting-edge knowledge, improve the theoretical system, cultivate academic awareness, improve their academic thoughts, and enhance their scientific research ability. (See Table 8)

Table 8. Levels of participation in academic activities

Basic information		Number	Proportion
What are the levels of participation in academic activities?	University level	201	77.01%
	College level	171	65.52%
	District level	47	18.01%
	Interdiscipline	40	15.33%

3.5. Not participating in academic activities frequently

The number of academic activities related to the research direction was at most 1-2 times, accounting for 37.16%, followed by 3-4 times, accounting for 29.5%, and 16.86% of them didn't participate any. There are many reasons for this. Perhaps the frequency of academic activities organized by our university is not high, or the notification is not in place, or the participation of graduate students is not high. The number of

students who participated in academic activities more than 5 times is very small, which may include online activities. According to the motivation of participating in academic activities, most of them are willing to participate in academic activities, but the actual participation results are not ideal. This gives us a revelation that university should first organize more academic activities and encourage students to actively participate in academic activities through multiple platforms and channels. The number of academic activities can be linked to the credits. (See Table 9.)

Table 9. Number of participation in academic activities

Basic information		Frequency	Number	Proportion
How many academic activities have you participated in this academic year (related to your research direction)?	zero		44	16.86%
	1 to 2 times		97	37.16%
	3-4 times		77	29.5%
	5-6 times		24	9.2%
	7 times in half		19	7.28%

4. Measures and Suggestions

4.1. Strengthen the guidance to their graduate students and encourage them to participate in academic activities

The independent academic research ability of graduate students still needs to be strengthened. Tutors can regularly hold group meetings which provides a platform for graduate students sharing experience with each others. Moreover, tutors could have more opportunities to strengthening the guidance and encourage students to actively participate in academic activities. In terms of the system, the number of times and the level of participation in academic activities led by graduate supervisors can be stipulated, so as to further improve the academic research ability and the understanding of cutting-edge academic knowledge of graduate students. However, for some academic activities that are not closely related to the research direction of graduate students, the participation of graduate students is not mandatory. Let postgraduates keep their interest in academic activities, and participate more in academic activities that are the same or similar to their research direction and those that are in line with their interests, so as to improve their initiative in academic activities.

4.2. Carry out small-scale and various forms of academic activities and diversify the forms of academic activities

The forms of academic activities in this survey are limited to academic salons, academic forums, academic lectures, academic conferences, project research and academic paper writing, but most postgraduates mainly participate in academic lectures and academic conferences. The advantage of academic lectures and conferences is that more graduate students can participate in them, but their disadvantages are also obvious. Academic lectures and conferences put more emphasis on the transmission of the speaker's ideas, while ignoring the initiative and participation of postgraduates. Schools can carry out more forms of academic activities, and try some academic activities that can fully mobilize the initiative and participation of graduate students. Schools should carry out some small-scale and different forms of experimental academic activities, and carry out more academic activities with good feedback through the feedback of graduate students. This is also conducive to increase the enthusiasm of graduate students to participate in academic activities and the diversity of forms of academic activities.

4.3. Expand the horizons of postgraduates and focus on national and international academic conferences

It can be seen that the academic activities that postgraduates participate in are mostly university-level or college-level. Most postgraduates in our university only limit their vision to academic activities organized by the university, but this is not enough for the academic level requirements for postgraduates. Under the background of epidemic, some national and international academic meetings will be held in the form of online meeting in order to facilitate the participants. The university can publicize such national and international conferences on the school's WeChat official account and official website, or through the counselors in various class groups, actively guide graduate students to participate in such academic conferences, expand their academic vision, and enable them to access cutting-edge academic ideas and academic ideas.

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