



# Tower-shaped Organizational Model of Chinese Postgraduate Academic Discussion

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**Abstract.** Extensive and in-depth postgraduate academic discussion activity is one effective way to cultivate high-level innovative talents. This paper mainly focuses on the organizational mode of tower-shaped postgraduate academic discussion, including tower-shaped daily academic discussion, tower-shaped postgraduate group meeting, tower-shaped postgraduate forum, and tower-shaped participation in academic conferences and lectures. This paper chiefly intends to improve the effect of the postgraduate student academic discussion. Based on the tower-shaped method, through building liberalization, specialization, normalization and frontier of postgraduate academic discussion atmosphere, we can realize post-graduate academic thinking training and ability promotion. As a valid example, in our project team each postgraduate student has published at least one SCI paper, and each postgraduate student has attended more than two international academic conferences. This work can further provide a reference for the future postgraduate student academic discussion organization.

**Keywords:** Tower-Shaped Organizational Model, Postgraduate Academic Discussion, Innovation.

## 1 Introduction

High-level innovative talents are the foundation of a country's future development. Academic discussion activity is one effective way to cultivate high-level innovative talents. Academic discussion is an important part of modern scientific activities [1], which generally refers to all related scientific activities. The scientific activities are carried out with academic research, scientific and technological information, and academic thought. Academic discussion differs from information discussion [2]. Information discussion is aimed at the purpose of information circulation, while academic discussion is aimed at inspiring and enlightening researchers to produce new ideas, new findings and new spirits. Therefore, academic discussion is a mode of production of human knowledge productivity. It is an important way to improve the academic

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ability of researchers, and plays a pivotal role in scientific and technological inspiration.

The so-called postgraduate academic discussion mainly refers to the meeting, report, discussion, training, competition and other activities involving new theories and methods in the frontier fields attended by postgraduate students [3]. It is an important link in the postgraduate training process and an important way to cultivate research and innovation ability. In unknown territory many questions will have no fixed answers [3], and a lot of scientific researches should be performed to deal with them, so postgraduate students need to have the ability to find, analyze and solve problems. If they do not participate in academic discussions, work alone behind closed doors, and do not understand the trend of academic development, they will miss the academic frontier [4].

At the highest level of talent training, postgraduate students are not only learners, but also researchers and creators [3]. From this point of view, academic discussion should become a way of life for postgraduate students' academic career. Effective academic discussion can help postgraduate students expand their international academic field, stimulate academic inspiration, inspire innovative thinking and improve their innovation ability.

In recent years, colleges and universities have attached importance to the construction of postgraduate innovation education projects, among which the construction of academic discussion platform has attracted more attention [5–7]. However, based on our observation of related works [5–7] and current situation, there are also some problems in the current postgraduate academic discussion as follows.

1. The focus of postgraduate academic discussion is relatively single, the academic discussion is not sustainable enough, and it does not take into account the liberalization, professionalization, diversification and normalization. First, some postgraduate students are only willing to participate in activities related to their own proposal when choosing academic discussions. However, urgent issues that cannot be adequately addressed in one field may be answered or inspired by communicating with researchers in other fields. Therefore, the academic discussion of postgraduate students should not only have discussion in his field, but also the breadth discussion of other knowledge fields. Second, the academic discussion of postgraduate students is not sustainable enough. Currently, most academic discussion activities for postgraduate students are international conferences and academic reports. In these academic activities, postgraduate students might understand the academic frontier and inspire their scientific research thinking. However, this emerging scientific idea is not mature and may end with the end of short-term activities, lacking the impetus for subsequent sustainable development.

2. Postgraduate academic discussions are not frontier. In terms of the scope of post-graduate academic discussion, it is more inclined to the communication between domestic universities or peers. There are two reasons for this. One is the limitation of language, so the communication with domestic experts is more convenient than that with international experts. The other one is the lack of international communication and the lack of contact opportunities with international experts. If the postgraduate students can not participate extensively in the frontier discussions, and cannot

timely grasp the frontier trends of the international science and technology development, then it is likely to make our scientific and technological development into a complacent situation.

3. The postgraduate academic discussion activities lack the effective organizational mode and the effect is not significant enough. There is no doubt that postgraduate student academic discussion activities are beneficial and necessary. However, the postgraduate course requirements cause some postgraduate students are blindly participate in academic discussion activities, and difficult to understand and digest. Thus some postgraduate students are negative towards these academic discussion activities, which can not reach the desired effect.

In a word, postgraduate academic discussions have been paid more and more attention, and at the same time, they are also faced with questions such as insufficient effect of organizational mode. Therefore, it is necessary to study and create a free, professional, normal and frontier atmosphere of postgraduate academic discussion.

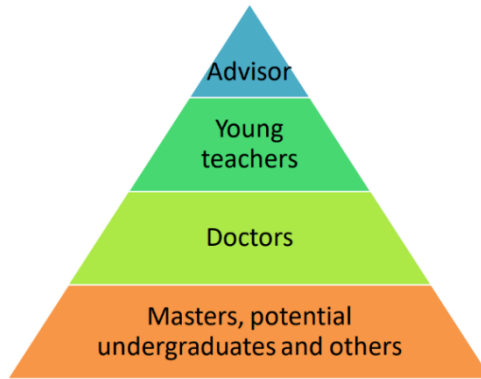
To the best of our knowledge, we did not find any past studies mentioned a tower-shaped organizational mode of Chinese postgraduate academic discussion. Therefore, this paper focuses on a tower-shaped organizational mode of Chinese postgraduate academic discussion, and intends to solve the key problems such as the insufficient effectiveness of the postgraduate academic discussion organizational mode. In some degree this work has certain theoretical and practical significance.

To deal with the issue that the postgraduate student academic discussion organizational mode effect is not significant, this paper exploits the method of tower-shape. We study and put forward a tower-shaped organizational model of daily academic discussion, postgraduate student group meeting, postgraduate student forum and participation in academic conferences and lectures. The exploited tower-shaped organizational model can create atmosphere of liberalization, professionalization, normalization and frontier for postgraduate student academic discussion. We hope to train and improve the thinking ability of postgraduate students, and provide reference for the future postgraduate student academic discussion organization.

The following of this work is organized as follows. Section 2 introduces the connotation of the tower-shaped organizational model, and Section 3 is devoted to the specific implementation method of the exploited tower-shaped organizational model. Section 4 discusses the practical result of the exploited tower-shaped organizational model. Finally, Section 5 summarizes this paper.

## **2 The Connotation of Tower-Shaped Organizational Model**

In this Section, we will introduce the connotation of the tower-shaped organizational model and the content of the exploited tower-shaped organizational model.



**Fig. 1.** The connotation of tower-shape.

The connotation and components of tower-shape are shown in Fig. 1 and Fig. 2, respectively. It includes advisors, young teachers, doctors, masters, potential undergraduates, experts and professors, and administrative organizations, which is conducive to the realization of the mentoring work.

1. Advisor mainly focuses on finding frontier topics and general research direction of postgraduate, through international conferences and making friends.

2. Young teachers mainly focus on implementing a research topic in detail with postgraduates, through daily academic discussion at postgraduates' side.

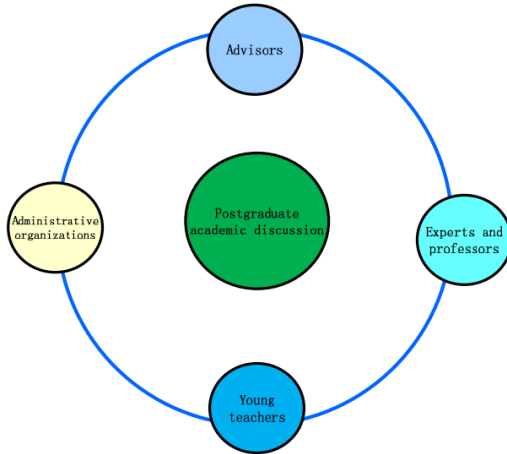
3. Potential undergraduates mainly focus on developing and implementation, through cooperating with postgraduates. Postgraduate qualification examination and comprehensive ability interview can be used to select these students, who have a strong scientific interest and positive research attitude.

4. Experts and professors mainly focus on direction overview and giving suggestions of research direction, through lectures and reports. The supervisor will supervise the postgraduates face to face at least one time every week, and mentorship will contribute the experience to their academic development.

5. Administrative organizations mainly focus on services for postgraduates, through trying their bests to satisfying the needs of postgraduate academic discussion.

In such a way, advisors, young teachers, doctors, masters and potential undergraduates will form a tower-shaped team. Advisor and postgraduates mutually train each other.

The tower-shaped organizational model of postgraduate academic discussion includes four parts: 1. tower-shaped daily academic discussions; 2. tower-shaped postgraduate group meeting; 3. tower-shaped postgraduate forum; 4. tower-shaped participation in corresponding academic conferences and lectures. Their relationship is shown in Fig. 3. They are essential and they complement each other.



**Fig. 2.** The components of tower-shape.

1. Tower-shaped daily academic discussion. Tower-shaped daily academic discussion aims to create a free atmosphere of daily academic discussion.

2. Tower-shaped postgraduate group meeting. Tower-shaped postgraduate group meeting aims to create a professional discussion atmosphere of the postgraduate group meeting.

3. Tower-shaped postgraduate forum. Tower-shaped postgraduate forum aims to create a normal and diversified communication atmosphere of postgraduate forum.

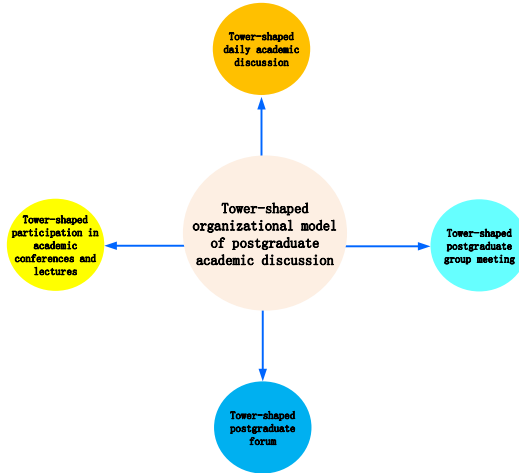
4. Tower-shaped participation in academic conferences and lectures. Tower-shaped participation in academic conferences and lectures aims to create a frontier atmosphere of participation in academic conferences and lectures. The international conference should be indexed by EI and related with your major. It is helpful to know frontier topics, make peer friends and improve their academic insights. You can search for a conference with high evaluation through WikiCFP, Call4paper, China Computer Federation (CCF) list and so on.

### 3 Implementation Method

In this Section, we will discuss in detail how to implement and apply the exploited tower-shaped organizational model to organize postgraduate academic discussions. As shown in Fig. 4, the specific implementation and application methods chiefly include free tower-shaped daily academic discussion, professional tower-shaped postgraduate group meeting, normal tower-shaped postgraduate group meeting, and frontier tower-shaped participation in academic conferences and lectures.

Some general ideas of implementing a tower-shaped organizational model are considered as follows.

1. The value of a teacher is the student, and the student is the main value of a teacher.



**Fig. 3.** The proposed tower-shaped organizational mode content of postgraduate academic discussion.

2. The key to success is in making research a part of your daily life. A lot of breakthroughs and inspiration happen during your walk. If all the time and all the subconscious are thinking research, you will find a surge of ideas. You'd better note and expand every emerging scientific idea, and discuss it with your group as soon as possible, which will be beneficial to make your innovations more sustainable in the long term.

3. To be a successful researcher, the persistence is generally more important than talent. Keep in mind that research ability is a skill learned and not innate. Failure and waste are also part of the research process.

4. You had better plan and prepare carefully, and participate in the related academic activities with your brain.

5. The atmosphere of discussion and communication is very important for research.

Tower-shaped daily academic discussion aims to create a free atmosphere of daily academic discussion which can be implemented as follows.

1. Academic learning and discussion have been evolving and changing, constantly learning new knowledge and new skills.

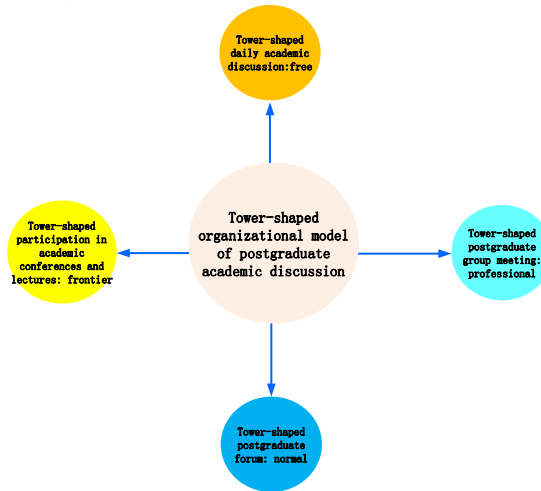
2. At any time according to the need you can start a small scope of discussion, and strive to be in-depth and meticulous.

3. In the process of learning and doing experiments, any discovery is valuable even if it is different from expected or wrong.

4. When submitting a paper, you'd better invite a professional brother to guide you according to the requirements of the journal. The journal had better be indexed by SCI and related with your major. According to your reference, you can search for a journal with high evaluation through Chinese Academy of Sciences (CAS) sub-districts, CCF list and so on.

5. You can record your thoughts at any time because many of them are just inspiration.

6. You can think first, and then look at the literature.



**Fig. 4.** The implementation method and motivation of the proposed tower-shaped organizational mode of postgraduate academic discussion.

Tower-shaped postgraduate group meeting aims to create a professional discussion atmosphere of the postgraduate group meeting which can be implemented as follows.

1. Group meeting is usually held once a week.
2. At the group meeting, everyone can discuss his work progress and problem, and report the recent work including idea, experiment, manuscript, follow-up ideas, etc.
3. Doing research is not for mentors or others, and it belongs to yourself.
4. We need to come up with as many explanations and ideas as possible, and in the debate we will slowly get closer to the truth.
5. Active consciousness. You had better push your mentor rather than that the mentor push you.
6. Protect the postgraduate's interest in scientific research and cultivate his interest in his major
7. For the constructive suggestions put forward by the tutors and classmates, you should listen to them and put them into practice.
8. You may pursue your goal of training senior mentors into academicians and young mentors into full professors.
9. You can take the applause of the group meeting as the honor of the group to inspire everyone.

Tower-shaped postgraduate forum aims to create a normal and diversified communication atmosphere of postgraduate forum which can be implemented as follows.

1. Postgraduate forum is usually held once every 1-2 weeks.
2. A forum has 1-2 speakers each time, mainly talking about the opening topic, papers, thesis, new technology, and other contents.

3. It is helpful to expand your personal knowledge and become a T-type talent.

4. Research domain crossing and collision may generate new ideas and sparks.

5. It is helpful to sort out the research progress and ideas for the speaker, listen to everyone's opinions and suggestions, and cultivate the academic expression ability.

6. Each graduate student will report at the forum at least once a year.

Tower-shaped participation in academic conferences and lectures aims to create a frontier atmosphere of participation in academic conferences and lectures which can be implemented as follows.

1. By attending the corresponding academic conferences, you can make friends and explore new research directions. It is very important for you to enter the circle of a research direction. If necessary, you can send a letter to contact and consult Daniel.

2. Academic conference will be carefully selected and determined with or without a conference paper accepted.

3. Pre-conference preparation. Use the PPT in advance, and get familiar with it for many times. A student will practice the paper report in the previous group meeting before attending the conference following the total time and mode required by the conference. Generally, the advisor will lead the team to attend the conference. They must study the keynote reports and related papers in advance and their related backgrounds, and prepare targeted questions and discussions. Leave time at least one more days than the conference.

4. During the conference. The conference keynote reports must be carefully studied.

Selected related oral papers to study and discuss. Pay attention to communication and get acquainted with peers, know more than five peers. Discuss and summarize the conference situation every day.

5. After the conference. One postgraduate will report the conference situation, the introduction of the keynote reports, the new technologies, the new directions and experiences.

## 4 Practical Result

In this Section, we will employ our team as an example to discuss the practical result of the exploited tower-shaped organizational model.

Our team applied the tower-shaped of daily academic discussion, tower-shaped postgraduate student group meeting, tower-shaped postgraduate student forum and tower-shaped participation in the corresponding academic conferences and lectures.

The academic discussion atmosphere of our team is good, and a relatively mature academic discussion system has been formed. The postgraduate students are active in academic discussion and achieve obvious results. They have published the first SCI paper for master's and doctoral studies in the discipline. Each postgraduate student has published at least one SCI paper [8], and each postgraduate student has attended more than two international academic conferences during his study. The number of



published papers by postgraduate students increased by more than average 10% compared with the previous year.

We remark that the model has only been applied to our team, which is not enough to validate its comprehensive practicality. To establish its effectiveness in practice, we will apply it to a larger number of participants and present the results.

## 5 Conclusion

In this paper, we exploit the organizational mode of tower-shaped postgraduate academic discussion, including free tower-shaped daily academic discussion, professional tower-shaped postgraduate group meeting, normal tower-shaped postgraduate forum, and frontier tower-shaped participation in academic conferences and lectures. Taking our project team as an example, the organizational mode of tower-shaped postgraduate academic discussion might improve the effect of the postgraduate student academic discussion. In the future, more examples or more tests will be performed to further validate the effectiveness of the organizational mode of tower-shaped postgraduate academic discussion.

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