

Research on the Construction and Practice of Working Mechanism of Scientific Research Workshop in Higher Vocational Colleges

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Abstract: The basic elements of scientific research workshop include objectives, training objects, instructors, academic activities and platform operation management mechanism. When screening the training objects, they can be classified according to their entry time, professional title, participation in scientific research, etc. The instructors of the scientific research workshop are formed by the backbone of scientific research and academic experts outside the school, so as to give full play to the exemplary role of the backbone of scientific research. Explore the platform operation management mechanism of scientific research workshop, adopt the project management mode, and put forward the long-term mechanism of scientific research workshop system. The design and development methods of the scientific research workshop include the initial development, replication development and upgrading development of the scientific research workshop, so as to ensure the efficient operation of the scientific research workshop. Present the practice of scientific research workshop by way of examples, and draw the conclusion that the operation of scientific research workshop can effectively improve teachers' scientific research ability.

On December 24, 2020, the Ministry of Education and other six departments issued the "Guiding Opinions on Strengthening the Construction and Reform of the Faculty of Colleges and Universities in the New Era", suggesting that the faculty of colleges and universities should enhance the ability of scientific research and innovation. The scientific research strength of higher vocational colleges is related to the development of higher vocational colleges. The scientific research and innovation level of its teachers is the foundation of the school's academic competitiveness. Improving the scientific research and innovation ability of teachers will help improve the society of higher vocational colleges. Influence. There are many ways to improve teachers' scientific research and innovation ability. It is a new attempt to improve teachers' scientific research ability through scientific research workshops.

1. Basic elements of research workshops

As a participatory, interactive, and expert-led training platform, scientific research workshops are a work platform for the cultivation of scientific research capabilities. When building a scientific research workshop, you first need to clarify several basic elements: objectives, training objects, Instructors, academic activities and platform operation management mechanism. The training object of the scientific research workshop is the scientific research "newcomers" of the school. The instructor is the person who teaches basic knowledge of scientific research and shares and exchanges scientific research experience to the trainees.

1.1 Target

The primary goal of the scientific research workshop is to promote the improvement of teachers' scientific research ability, and then do some cultivation and storage of results, so as to realize the personal development and common development of teachers. Focusing on the development of higher vocational schools, taking the basic skills training of scientific research project application as

the starting point, result-oriented, and instructing teachers to apply for the different characteristics of each type of project application. Improve the scientific research capabilities of a group of teachers, and form school-level results, reserve for municipal, departmental, provincial and ministerial project declarations, and prepare teachers for participating in provincial and national competitions.

1.2 Cultivation target: the definition of scientific research "newcomers"

Regarding the "newcomers" of scientific research in higher vocational colleges, the conditions of each school are different, and the definitions will vary. Research "newcomers" can be classified from different dimensions. Higher vocational colleges can choose specific dimensions according to different purposes when setting up scientific research workshops to locate and screen the training objects. Generally, there are the following dimensions.

1.2.1 Divided by entry time

Divided according to the entry time, that is, all new recruits are included in the scope of scientific research "newcomers", especially full-time teachers among new recruits can be used as training objects for scientific research workshops to learn basic scientific research knowledge such as scientific research principles and methods.

1.2.2 Divided by job title

According to the division of professional titles, that is, employees with junior professional titles are included in the category of scientific research "newcomers". This method and the division by entry time are both "one size fits all" methods, which are relatively simple to operate, but lack pertinence.

1.2.3 Divided by participation in scientific research

This classification method is more accurate when screening personnel. The scientific research management department of the school comprehensively sorts out the responsibility and commitment of scientific research projects of the faculty and staff of the school, and selects employees who have not participated or rarely participated in the research of the project and included them in the category of scientific research "newcomers" to cultivate basic scientific research capabilities.

In the actual division, it can also be combined with different backgrounds and needs to synthesize various factors to screen and divide, so as to determine the training objects. Take the "Scientific Research Workshop-Curriculum Ideological and Political Special" of Sichuan International Boss Vocational College as an example. The members of the workshop are mainly 13 teachers recommended by the secondary college to apply for the school-level "Curriculum Ideological and Political" special teaching reform topic, and are managed by the school's scientific research department. The department sorted out the person in charge of the application (in research) related to "Curriculum Ideological and Political" and "Lide Shuren" in recent years, and included them in the workshop.

1.3 Instructor

The instructors of the scientific research workshop can be composed of internal and external personnel. In the specific practice, the two-level construction method of school scientific research backbone and external academic experts can be adopted to give full play to the role of internal scientific research backbones and optimize the training of the teaching team with the lowest cost. Maximize its value.

The school's scientific research backbones are cultivated by "new people" in scientific research, and have a personal experience of the path to improve scientific research capabilities. The "grounded" scientific research practice and scientific research experience sharing will be more targeted by them. The backbone of scientific research plays the role of "the old bring the new" and "passes through" and demonstrates, which can promote the formation of a good learning

atmosphere and help teachers improve their scientific research awareness.

Of course, academic experts outside the school are also essential. Academic experts have broader academic experience, deeper academic insights, and more unique grasp and understanding of academic hotspots. Inviting academic experts from outside the school to conduct special scientific research lectures to inject fresh nutrients into the improvement of teachers' scientific research capabilities, which is of great significance for broadening academic horizons and enhancing scientific research capabilities.

1.4 Academic events

The scientific research workshops are based on academic activities, and a variety of targeted academic activities are held to invigorate the academic atmosphere. Through holding special academic lectures in the school, or sending students to participate in large-scale academic exchange activities, etc., teachers can broaden their scientific research horizons and improve their scientific research capabilities.

1.5 Platform operation management mechanism

The operation of the scientific research workshop platform adopts a project-based management method. Each scientific research workshop sets up a project team. The composition of the project team members will be adjusted appropriately according to the training content of the scientific research workshop. The project team is generally led by the school leader in charge of scientific research, the head of the scientific research department serves as the head teacher, and the staff of the scientific research department serves as the class administrator.

1.5.1 Responsibilities of the project team

Responsible for program development, training content design, formation of a training team, organization of the training process, and attendance. Responsible for combining scientific research management with research and educational administration work for management, data collection and sorting, and publicity work. Responsible for the relevant budget and organization arrangements during the training process.

1.5.2 Assessment and evaluation

In order to ensure the effectiveness of scientific research workshops, an assessment and evaluation mechanism should be established for each scientific research workshop. The assessment content includes attendance and task completion. The scientific research workshop is a result-oriented operation platform. Teachers participating in the scientific research workshop are required to take the task to participate in the training and complete the research tasks on time and with quality and quantity. Take the "Scientific Research Workshop-Scientific Ability Improvement Project" as an example. The teachers participating in the scientific research workshop should follow the goal-oriented requirements and join with the research and teaching reform projects at school level and above, and after several seminars and exchanges, external experts After the special training and the guidance of experts inside and outside the school are revised, the project declaration form is repeatedly polished and perfected, and a school-level project or a vertical project can be obtained. After the project is established, the project research can be successfully completed in accordance with the research schedule and the requirements of the research task, and the project can be completed at the school level.

1.5.3 Operation Management

The operation and management of scientific research workshops adhere to the principle of result-oriented. The achievement orientation is teacher-centered, project-driven, and scientific research output as the goal. The scientific research workshop project team should strengthen the guidance to the results of the training objects, and dig out different achievement goals for faculty and staff of different genders, different ages, different educational backgrounds, different teaching ages, and different positions, strengthen the preliminary planning and cultivation of the results, and

provide for the training objects. Provide scientific research services of "leading the road and helping the journey".

In the research and training arrangements of scientific research workshops, a combination of intensive training and independent learning can be used. The trainees systematically learn the basic principles and methods of scientific research in intensive training, digest and absorb theoretical knowledge in independent learning, and complete various stages of research and training. Task. Conducting communication activities among members while intensive research and independent learning can realize the sharing of cross-disciplinary resource advantages, form a learning community, and realize mutual assistance, sharing and common development.

The training arrangement can also adopt a templated learning method to subdivide the training content into several sections and arrange the training content in a targeted manner. Taking the "Scientific Research Workshop-Special Project for Enhancement of Scientific Research Capability" as an example, the training content includes two sections: "Scientific Research Methods" and "Scientific Research Practices". "Scientific research method" mainly introduces the basic methods and basic steps of education and scientific research to enhance the students' scientific research knowledge; "Scientific research practice" focuses on guiding the trainees to distill the problems in the job into educational scientific research topics, carry out the entire scientific research practice, and declare from the topics The writing, revision and improvement of the book are constantly being polished, driven by tasks, to improve scientific research awareness, scientific research capabilities and radiation influence. During the entire training process and after the completion of the training, the school's scientific research management department will organize to provide each student with tracking and services for the entire scientific research process from project application, opening report, project research, mid-term inspection, and final acceptance.

2. Long-term mechanism of scientific research workshop work system

For scientific research workshops to be implemented in a long-term and sustainable manner, the establishment of a long-term mechanism for the operation of scientific research workshops is indispensable. The long-term mechanism of scientific research workshops includes the "people-oriented" principle; clearly leading the management department; and the design and development methods of scientific research workshops. The working system of the scientific research workshop is based on the principle of "people-oriented", and is classified according to the actual situation of teachers, so that all teachers can get targeted assistance in the "scientific research workshop", effectively improve their scientific research ability, and realize the individual Development and common development. Generally speaking, the lead management department for scientific research workshops in higher vocational colleges should be the scientific research management department. The design and development of scientific research workshops include the following aspects.

2.1 Initial development of research workshop

The initial development of the scientific research workshop is a process from scratch, and the lead management department of the scientific research workshop is responsible for it. Through the investigation of teachers' scientific research ability, design and develop corresponding scientific research workshop projects. In the design and development, the objectives, training objects, instructors and platform operation management mechanism should be clarified.

2.2 Copy development of scientific research workshops

Scientific research workshops can be replicated in the context of different training objects. For example, a special "scientific research workshop" for new recruits can be developed. This workshop can be implemented among new recruits every year. It is simple and easy to implement. The effect is better.

2.3 Upgraded development of scientific research workshops

In addition, scientific research workshops can also be upgraded on the original basis, providing traceable scientific research services for a certain batch of training objects, and developing a series of scientific research workshops. For example, "Scientific Research Workshop-Special Project for New Employees", "Scientific Research Workshop-Special Project for Longitudinal Project Application", "Scientific Research Workshop-Special Project for Writing High-quality Papers" and "Scientific Research Workshop-Special Project for Title Improvement". A batch of training targets' career development needs will be developed to provide timely opportunities for scientific research and learning to be more accurate and effective.

Through the initial development of the scientific research workshop, the basic structure of the scientific research workshop system of higher vocational colleges can be built, the development efficiency can be greatly improved through the replication and development of the scientific research workshop, and the targeted development of the workshop can be improved through the upgrading and development, and the operation can be improved. quality. The copy development and upgrade development of scientific research workshops, as well as further amendments and improvements to the work system, make the framework of the work system stronger and run more smoothly, thereby ensuring the long-term and effective operation of the scientific research workshop work system.

3. Practice of scientific research workshops

Take Sichuan International Boasting Vocational College as an example. Since 2014, the school has continuously explored the operating mechanism of scientific research workshops and carried out a series of practical activities, including "Scientific Research Workshop-Special Project for Improving the Research Ability of Young and Middle-aged Teachers" and "Scientific Research Workshops" -Scientific research process management special project, "Scientific research workshop-curriculum ideological and political special project", "Scientific research workshop-scientific research ability improvement special project", etc.

By summarizing and sorting out the results of the operation, the practical effect of the scientific research workshop is remarkable. It can be seen that the scientific research workshop can effectively improve the scientific research ability of teachers. Take the "Scientific Research Workshop-Special Project for Improving the Research Ability of Young and Middle-aged Teachers" as an example. Among the 19 members participating in the workshop, 17 projects were approved, with a project approval rate of 89%; 13 of them (68%) became the backbone of the school's scientific research, Playing its own wisdom and exemplary role in all areas of the school. Take the "Scientific Research Workshop-Curriculum Ideological and Political Special Project" as an example. Through the intensive research and independent learning activities of the scientific research workshop, teachers can understand what the subject is ideological and political; grasp the ideological and political elements; how the ideological and political elements and professional courses are organic There is a more systematic understanding of integration, etc. The quality of the application has been improved in the process of continuous revision, adjustment and improvement, and it has reached the requirements for applying for school-level topics. After review, a total of 11 curriculum ideological and political special topics have been approved by the school. Class-level projects have been approved, with a project approval rate of 84%.

4. Conclusions

The design and development of scientific research workshops should adhere to the principle of "people-oriented", and take the real problem solving in scientific research currently faced by higher vocational colleges as the starting point, select suitable training objects, develop research content from different angles, and configure reasonable Instructors and project management personnel develop various special scientific research workshops at different stages of the development of higher vocational colleges to meet the needs of school development. It can be seen that the scientific research workshop is aimed at "new people" in scientific research, supported by scientific

research backbones, led by academic experts, supported by academic activities, and results-oriented research ability training mode. The trainees take tasks to participate in training. The scientific research management department provides full-cycle services for scientific research, cultivates a batch of mature batches, brings the old to the new, spreads and helps, enhances the internal hematopoietic ability of school teachers in scientific research, forms a virtuous circle of scientific research development in the school, and continuously improves the scientific research capabilities of teachers.

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