

Double-Study Moving Station: Conception of Cultivation Model for "Theory and Practice Integrated" Teachers in Application-Oriented Universities

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Abstract:

Applied talents are cultivated in the application-oriented universities, which requires that the teachers shall be of "theory and practice integrated" teachers with rich professional theoretical knowledge, and excellent operation skills and practical teaching ability. The cultivation mode of teachers in application-oriented universities into the college learning station and industry learning station for double-study has been discussed for "college learning station" to meet the dual requirements of application-oriented universities for theoretical research literacy and practical teaching ability of teachers. In this paper, the dual improvement of theory and practice is the value orientation of "double-study moving station". The systematic deep cooperation is the thinking foundation of "double-study moving station" and four systems are core frame of "double-study moving station".

Keywords: Double-study moving station "Theory and practice integrated" teachers Application-oriented university Cultivation mode

1. FOREWORD

The application-oriented universities are based on the development of local economy, focusing on training the technical knowledge and practical ability of students. The application-oriented undergraduate education is a vocational education serving production, construction and management,^[1] and also serving the academic education enriching the spiritual life and pursuits of the local ordinary people. Such orientation has proposed new requirements and challenges to teachers, and require that the teachers shall be of "theory and practice integrated". In addition to strengthening the relationship with industry and improving the practical application ability, teachers shall also continue to strengthen theoretical research and learning. This has also proposed new requirements for the continuing educational pattern of the teachers in application-oriented universities. At present, the improvement of practical and application abilities of teachers in application-oriented universities has been focused in many researches, and such cultivation modes as university-enterprise cooperation have been studied more. The cultivation mode of teachers in the key universities with industrial double-study will be discussed by the "double-study moving station" to meet the dual requirements of application-oriented universities for the theoretical research literacy and the practical teaching ability of teachers in application-oriented universities.

2. DUAL IMPROVEMENT OF THEORY AND PRACTICE - VALUE ORIENTATION OF "DOUBLE-STUDY MOVING STATION"

Applied talents are cultivated in application-oriented universities. It is generally believed that the teachers who can train the applied talents are the "theory and practice integrated" teachers. In 1995, the State Education Commission first proposed the word, "theory and practice integrated" teachers: a team of "theory and practice integrated" teachers combining full-time and part-time teachers with reasonable structure and high quality shall be built, and the teachers of specialized courses and trainee teachers shall have a certain professional technical operation ability.^[2] In specific operation, the "theory and practice integrated teachers" are defined by the academic circles as follows. 1. "Theory and practice integrated = double-qualified". In the opinion of Zhou Shanxue, the "theory and practice integrated" teachers shall have the quality in two aspects: rich professional knowledge and theoretical education knowledge on the one hand, and skilled professional practical skills and practical teaching ability on the other hand to guide the students for study and practical training.^[3] 2. "Theory and practice integrated = double-certificate". In the opinion of Zhou Mingxing, the "theory and practice integrated" teachers shall have the Teacher Certificate, and relevant professional and technical qualification certificates as well.^[4] 3. "Theory and practice integrated = double-certificate + double-capability". In the

opinion of Yao Guiping, "double-certificate" is a seeming name of the "theory and practice integrated" teachers, but the "double-capability" is the real connotation of "theory and practice integrated" teachers.^[5]Both of them constitute an organic whole. It emphasizes that teachers not only have the corresponding certificates, but also have rich theoretical knowledge and practical skills. Several statements above, whether focusing on the "quality" of origin, or focusing on the "certificate" of operation, have the consistent interpretation for the core connotation of the "theory and practice integrated" teachers who are the compound teachers with rich professional theoretical knowledge, skilled operational skills and practical teaching ability.

Based on the above interpretation, the cultivation of "theory and practice integrated" teachers in application-oriented universities shall be able to improve the theoretical research literacy and practical teaching ability of teachers, and the "double-study moving station" is an effective way to achieve this objective. The "double-study moving station" includes two study stations: "key college learning station" and "industrial learning station". That is, teachers can be improved for their theoretical research literacy through "key college learning station", and for their operational skills and practical teaching ability through the "industrial learning station". The "double-study moving station" will promote the theoretical upper shift and practical down shift of teachers in the application-oriented universities, so as to achieve the in-depth integration of teachers' subject theoretical education and practical education, finally realize the professional transformation of teachers and promote their professional development. The dual improvement of theory and practice is the value orientation of "double-study moving station".

3. SYSTEMATIC DEEP COOPERATION - THINKING FOUNDATION OF "DOUBLE-STUDY MOVING STATION"

Education is a complex system. From the perspective of society, the society is the mother system, and the education is a subsystem of the whole social system, which constitutes the society together with other subsystems. For education itself, the education is the mother system, and various education types, education levels, teaching conditions and contents, teaching methods and approaches are its subsystems. The "double-study moving station" is an open education subsystem composed of such basic elements as teachers in application-oriented universities, key universities and industries.

To be efficient, all elements of the system must cooperate and cooperate deeply. That is, the learning relationship of deep cooperation between the teachers in "double-study moving station" and the "key college learning station" and "industrial learning station" is a must for the "double-study moving station" to really achieve the effect of improving teachers' theoretical research literacy and practical operation ability among system elements, which is the foundation to

build the "double-study moving station". This cooperative relationship has the following characteristics.

3.1 Emphasis on the value of systematic cooperation

The value of cooperation system is the core element of the system. If resources are only shared in a system, this system is not an efficient system of cooperation. The establishment of "double-study moving station" will not only introduce more resources for the continuing education of teachers in application-oriented universities, and the deeper value is for the mutual promotion and joint development of university and industries. Through the "double-study moving station", the key universities will be able to improve the local professional influence, and establish the partners for theoretical research. The teachers in the application-oriented universities have been improved for their dual accomplishments of theory and practice. The industries (kindergartens) will be provided with the front-line guidance by the teachers in universities, contributing to solving the educational problems and improving the educational effect. The purpose of collaboration is not just to share information, but to create value.

3.2 Emphasis on the establishment of system vision

The vision is an idea, a scene or an image about the future, namely the design to be made in the future. It is the objective of the "double-study moving station" and also a guide to action, and such vision shall be mutually beneficial, operational and achievable. The vision of "double-study moving station" shall be jointly by three parties. From process, the objectives and total objective in all stages shall be designed. From content, except for containing the systematic general objective, the objectives which shall be respectively achieved by key universities, application-oriented universities and industries (kindergartens) shall be included.

3.3 Emphasis on the construction of cooperation platform

The development of teachers cannot be separated from the support of the platform. The construction of cooperation platform of "double-study moving station" must be focused. Strictly speaking, three parties have cooperation needs in multiple aspects including teacher education, course development, education scientific research, resource sharing and information exchange. Only with cooperation, it is possible to achieve the efficient allocation of resources. Three parties shall fully excavate and integrate the existing manpower, material resources, financial resources, information and other resources to build an effective platform for the "three-study moving station". At the same

time, the cooperation is an art, and effective cooperation is not possible with cooperation consciousness and cooperation platform. Effectively planning the contents, modes and evaluation of cooperative learning enables the establishment of the subject system, content system, mode system and evaluation system of the "double-study moving station" for deep and effective cooperation to achieve the visions of all parties.

4. FOUR SYSTEMS - CORE FRAMEWORK OF "DOUBLE-STUDY MOVING STATION"

The mode of "double-study moving station" is studied from the perspective of system theory. From system theory, teachers' rational learning and practical application are regarded as a system to build the teachers' professional construction comprehensively. The mode includes four subsystems: subject system, content system, mode system and evaluation system. The subject system is about "who is learning", the content system is about "what to learn", the mode system is about "how to learn", and the evaluation system is about "How is learning going". These four systems rely on and influence each other, and form a joint force to play a role, so as to promote the theory and practice of teachers in the application-oriented universities, as shown in Figure 1

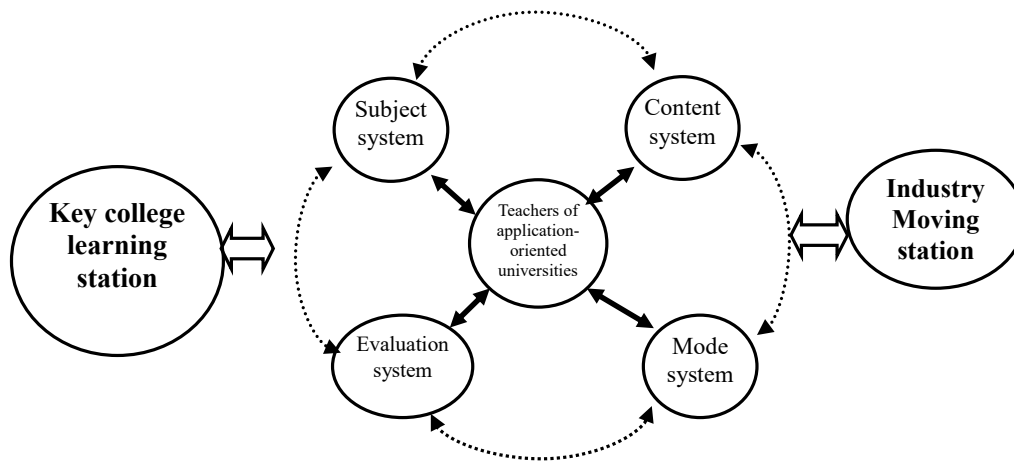


Figure 1: Diagram of Mode of "Double-study MovingStation"

4.1. Subject system of "double-study moving station"

The mode of "double-study moving station" is to improve the theoretical research literacy and the practical creation ability by means of study by teachers in key college learning station and industrial learning station. Therefore, the subject system of the "double-study moving station" includes the teachers in application-oriented universities, tutors in key universities and industry elites. The teachers in the application-oriented universities are the center of the subject system, and they shall improve their theoretical literacy and practical level through the "double-study moving station". Tutors in key universities are the front wing of the subject system. Their overall theoretical literacy and scientific research ability are strong. Some teachers are leaders in the field of this industry, and most of their subjects are in the national leading level, assisting the teachers in application-oriented universities in improving their theoretical research literacy. Industrial elites are the rear wing of the subject system. They have accumulated rich experience in the years of front-line work, forming a complete set of practical operating system. They will help teachers in application-

oriented universities to improve their practical operation ability.

4.2. Content system of "double-study moving station"

The content system of "double-study moving station" solves the contents of learning, namely the carrier of the teachers in application-oriented universities to learn from the tutors in key universities and industrial experts. For adults, the "problem learning" is an effective way to improve the knowledge structure and ability system and an important way of learning. Some scholars in China believe that the teaching process is actually an interactive process based on problem solving. [6]In the process of problem solving, learners will improve their knowledge structure and enhance their ability. Therefore, the learning mode of "double-study moving station" is "problem learning", and the core to learn the content system is "problem", namely that the teachers of application-oriented universities learn with problems, and will improve their theoretical research literacy and practical operation ability in the process of solving problems. For different advantages of "key universities" and "industries", the ways of problem learning

shall be different. For key universities, the teachers in application-oriented universities shall have the projects for academic visit, use the scientific education theory and the appropriate education research methods under the guidance of tutor to effectively complete the projects which shall be solved by themselves, so as to promote the enhancement from theory to theory, namely "academic visit with projects - enhancement process from theory to theory". For industries, the teachers of application-oriented universities shall have the problems for practice, to inspect the theoretical problems in practice, so as to complete the dialogue between theory and practice and promote the application from theory to practice, namely "practice with problems - application process from theory to theory".

4.3. Method system of "double-study moving station"

To implement the "academic visit with projects - enhancement process from theory to theory" and the "practice with problems - application process from theory to theory", it is a must to realize by reasonable operational methods. For details, targeted handling is required during implementation according to different moving objects. 1. Project participation. The growth of teachers needs "professional guidance". The most important way for teachers to grow up is to learn, especially for practical teachers. In order to grow up as soon as possible, it is a must to strengthen the theoretical learning. It is an effective way to promote their professional growth to follow the tutor to participate in the project research in key universities. 2. Fixed-point binding. The effective cooperation between university teachers and industrial experts is an effective measure for both sides to grow up together. However, the cooperation between both sides for a long time is more based on a one-way - demanding way, and such relationship is adverse to stable cooperation. Fixed-point binding refers to the establishment of a mechanism for long-term cooperation between university teachers and industrial experts and the formation of a linked and mutually promoted way of cooperation. Such relationship will enable both sides to be mutually beneficial and make the cooperation stable and lasting.

4.4. Evaluation system of "double-study moving station"

The mode of senior teacher "double-study moving station" has provided the reference mode for the professional growth of teachers in application-oriented universities from subject system, content system and method system. However, whether the teachers can be developed really during the operation of this mode shall be fed back by a certain evaluation mode, so as to know the professional growth effect of teachers in the application-oriented universities. In the meantime, some elements of the "double-study moving station" system (such as content system and mode system)

shall be improved and adjusted. Therefore, a multi-aspect and effective evaluation system is required for the mode of "double-study moving station". Refer to the concepts of "field experience evaluation" and "value-added evaluation" for the specific evaluation methods. The field experience evaluation is to evaluate the professional growth effect of teachers by analyzing their records and achievements in key universities and industries. The value-added evaluation is to vertically evaluate the professional growth of teachers in the "double-study moving" by comparing the differences of theoretical literacy and practical skills of teachers before and after learning in the "double-study moving station". Both of them are important evaluation methods of the mode of "double-study moving station".

5. CONCLUSIONS

This paper studies the post-job training mode of "bilateral cooperation", discusses the value and significance of "double-study moving station" to train the teachers in application-oriented universities, and proposes the operation mechanism for this training mode regarding the dual requirements ("theoretically" and "practically") of teachers in the application-oriented universities. This paper discusses the subject system, content system, method system and evaluation system of the "double-study moving station", and has certain practical value.

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