

The Thinking and Countermeasure of Lacking Scientific Research Atmosphere in Colleges

Di Sirun

Office of R&D Administration, Jilin University of Finance and Economics, Changchun, China

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Abstract: Colleges are an important base for creating a strong atmosphere of scientific research. In the condition of provincial universities serving the local market economy, colleges are facing a significant issue, how to promote the scientific research atmosphere and develop their own research potential, which aims at implementing the strategy of “prosper school basing on research” as well as “science research enhancing universities” and serving the local political and economic development.

1. Introduction

Colleges are an important base for creating a strong atmosphere of scientific research. It is the central work of scientific research institutions of universities that is to organize full-time teachers to do scientific research, technological development and social service. ^[1]In the condition of provincial universities serving the local market economy, colleges are facing a significant issue, how to promote the scientific research atmosphere and develop their own research potential, which aims to implement the strategy of “prosper school basing on research” as well as “science research enhancing universities” and serve the local political and economic development. The provincial colleges, however, have formed weak research atmosphere and have seriously restricted the development of scientific research, due to objective factors such as geographical differences, orientation, combined with late scientific research. Favorable atmosphere is indispensable to scientific research development in colleges. Therefore, how to create a good scientific atmosphere to promote the development of scientific research has become an urgent problem for local universities.

2. The Reasons for the Deficiency of Scientific Research Atmosphere

Firstly, the various professional research directions are unable to form a composite force. The universities have large scientific research teams with synthetic disciplines and multiple majors. The scientific research force of universities should be able to undertake large, comprehensive scientific research tasks and high-tech research projects. But, the phenomenon of individualization, miniaturization and decentralization of scientific research teams is quite serious so far. Multiple researches are divided into several directions in the same field of subject. Different subjects establish different departments, which set up diverse teaching and research sections, laboratories or research institutions, according to the different professional directions. Teachers apply their professional knowledge to scientific studies in the corresponding departments or institutions. Nowadays this model is not fit in the rapid development of interdisciplinary study, leading that it is hard for a multitude of colleges, especially the provincial colleges, to bear major and key projects involving multi-discipline and multi-fields, which caused that universities can not maximize their advantage of qualified men intensive and comprehensive disciplines and hindered the expansion of university scientific research, and also laid restraints on the specificity of scientific research of teachers. Furthermore, it is impossible to unify the research directions and form stable chain model facing the fact that major research topics present the trend of small size, multiple quantity and target dispersion, which has affected the research direction and atmosphere.

Secondly, the research of professional field is not deep enough and the research is lack of

consistence. Research leaders are rare and multiple research branches have always been located in the field of professional research. Academic leaders usually do research in accordance with their personal interest and the judgment for lack of strategic vision, resulting in doing work individually. Because of the scattered research direction, it is difficult to do thorough research and generate great achievements in the whole field of expertise. The research projects in the field for specialist are only research on itself and have not promoted systematic integration and strategic advancement for the development of the whole subject area.

There is a gap existing in the academic echelon. The phenomenon of academic echelon is relatively serious. The shortage of research achievements accumulated in the early stage of the successor leads to be short of the consistence of scientific research. A number of older research leaders and senior professional technical teachers accounting for a great proportion, with the insufficiency of young and middle-aged leading candidates and previous research achievements of young teachers, make it difficult to continue to carry out scientific research on the basis of the original professional fields, which leads to be short of the consistence of scientific research.

Thirdly, scientific research is not down to earth. The transformation of scientific research achievements is unpractical and the achievements divorce from local practical needs. Scientific research results cannot be effectively transformed into real productivity and competitiveness, reducing the benefit of technology input^[2]. Although the number of patent application and authorization in colleges is increased by tens of times or even hundreds of times, the quality of patents declines instead, with shorter average life expectancy, generally lower patent conversion rate and large number of locked away outstanding patents, which divorces from local practical needs.

The maturity of scientific and technological achievements is not sufficient or feasible. Some results can not apply out of colleges finally because of lacking an important link in practical operation, or these exceeding or lagging results are short of application value owing to the insufficiency of serious practical investigation, despite spending a great deal of human resources and material resources and financial resources.

Above reasons caused the lack of a sense of achievement of researchers, who think research study has little practical significance and whether they research or not, the expected results are the same. This reduces the enthusiasm and initiative of researchers leading to the deficiency of scientific research atmosphere.

Fourthly, the single organizational system of research team members is lack of vitality. Some scientific research teams are made up of tutors and graduate students in “mentoring” organizational system, which has small size, single way of research and not flexible research methods and lacks academic innovation among provincial colleges^[3]. Many teams in universities are formed due to the project undertaken by director who needs different professionals to attend temporarily. The feature of this kind of group is more utilitarian, more short-term behaviors and poor stability. In fact, scientific research teams indeed needed by universities are those relatively stable team.

Provincial scientific research teams of colleges mostly take on intra-provincial research projects and the commissioned assignments entrusted by enterprises. Scientific research subject is nota frontier and innovative subject for lack of external experts and high-level personnel and is unable to produce creative scientific research achievements, causing the slow progress of scientific research and the impossibility of driving the scientific research atmosphere.

In conclusion, the scattered professional research directions, shallowresearch on professional field, scientific research serving no real purpose and the single organizational system of research team members result in lacking scientific research atmosphere of the provincial universities.

3. Theway of Building Scientific Research Atmosphere in Provincial Universities

First, universities may condense the directions of professional research and form the research composite force in the way of integrating research resources, classifying the subjects of primary school, so that the same or similar fields would be generalized to the same research direction. The research directions are explicit, thus the research composite force will be formed in professional

field.

Research lectures would be carried out actively among disciplines in the access of using scientific research resources of universities to operate the various academic exchange activities, such as meetings, training classes or lectures, communicating with experts and professors in related fields, and hiring well-known experts as a visiting professor in order to guide the university scientific research technology. Colleges can learn from each other and broaden the vision of research professional fields through continuous learning and communication, to shorten the difference between the same professional fields, condense professional directions and form the research composite force, which has a great positive impact on building the scientific research atmosphere.

Second, universities would better enlarge scientific research resources, deepen the field of professional research and strengthen consistence. Academic communication research platforms should be provided to young teachers, which are supported by existing scientific research platforms like scientific research bases and think-tanks, aiming at consolidating the scientific research achievements of young teachers in the field of professional research and enhancing the expertise and stability of young teachers in the professional fields. The joint cooperation is required, with the method of learning from each other and equality and mutual benefit, and could be adapted to the application of a project or in researching project between various think-tank platforms in order to increase the research resources, which is not only beneficial to the improvement of the technology for each other, but more conducive to cultivate group of research leaders composed of young and middle-aged full-time teachers, as the backbone of scientific research, and strengthen scientific research consistence.

Third, the scientific research findings should be connected with the local practical needs at colleges. The information platforms of transformation of scientific research achievements are needed to be set up within the university, laying emphasis on more practical scientific research achievements of the strength of scientific research reward and supporting strongly the scientific research project on servicing the local economy and increasing the actual benefits of the enterprises, which benefits for providing researchers with convenient research conditions, consolidating the achievements and enhancing the practicability of research results.

The promotion and transformation of scientific research results is of great importance to find the target, inject vitality and increase motivation for scientific research and it can also make scientific research more vivid and specific, thus it drive the research atmosphere. The transformation platforms of scientific and technological achievements is helpful to understand the social needs, foster scientific concepts and innovative spirit and make scientific research achievements more adapted and more acceptable to society. Meanwhile, a variety of awards are supposed to be set up during the process of scientific research achievements transformation, such as the invention award and promotion award of the scientific research achievements, in order to activate the energy and power of every link of the chain of the conversion of scientific research achievements and further arouse the enthusiasm of the transformation of scientific and technological achievements in universities.

Fourth, universities are supposed to offer the young backbone of the research team an opportunity to go abroad and bring in the high-level talents by the way of cultivation and introduction of talents, which is contribute to innovate training mechanism and improve the innovation of the research teams. International exchanges and cooperation ought to be promoted actively between young teachers to broaden their international vision^[4]. Young teachers, as a new force of scientific research innovation at colleges, should have international vision and foresight. In addition, short-term visiting mechanism should be established to encourage those young teachers who have a passion in scientific research to go abroad for further study, and high-level scientific research personnel could be recruited to lead the innovation of research teams, at the same time, according to conditions of each colleges.

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