

Research on the Cultivation of Top Talents in Public Finance Majors Based on Scientific Research Training

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Abstract: This article explores the role of scientific research training in the cultivation of top talents in public finance, analyzes the current situation of scientific research training in the process of public finance talent cultivation, clarifies the existing problems and shortcomings, and finally proposes corresponding policy recommendations, including creating a scientific research atmosphere to improve scientific research literacy, innovating scientific research training methods, and improving the supporting mechanism of scientific research training.

Keywords: Top Talents, Public Finance Majors, Scientific Research, Training.

1. Introduction and Review of Related Literature

As a social discipline serving national governance, public finance plays an important role in the construction of China's humanities and social sciences system. The cultivation of public financial talents is of great significance for the development of Chinese economics and economic and social construction. However, there are still problems in the current teaching activities and talent cultivation of public finance, such as excessive "cramming" education, insufficient integration of science and education, and weak cultivation of innovative abilities, which seriously restrict the cultivation of top talents in public finance. Therefore, it is necessary to form and strengthen a training mechanism that promotes students' self-directed learning through scientific research, integrating scientific research, experimental training, etc. into undergraduate teaching of public finance, enhancing students' self-directed learning ability and innovation awareness through the integration of science and education, and consolidating the foundation of the discipline construction of public finance.

In recent years, with the cultivation of innovation ability becoming an important aspect of undergraduate education, many scholars have explored how to cultivate top-notch talents in economics from the perspective of integration of science and education. Some scholars believe that scientific training can cultivate students' innovation awareness and enhance their innovation ability (Steven & John, 2009; Ding et al., 2021; Du, 2021)[10][11]; Some scholars believe that the integration of science and education in undergraduate economics education can be achieved by guiding students to participate in teacher research projects (Liu & Wang, 2019; Lou et al., 2021)[4-5]. As an important component of the economic discipline, scholars have paid attention to how to cultivate top-notch talents in public finance through scientific training. They believe that deep integration of science and education is an important way to cultivate innovative talents in public finance (Fan et al., 2022; Zheng & Zhang, 2023)[6-7]. At the same time, with the development of behavioral public finance (Kristina, 2005; Raymond et al., 2020; Dai & Chen, 2021)[8-10], more and more experimental research methods have entered the field of public finance (Ma et al., 2022)[11],

posing higher requirements for enhancing the innovation ability of top public financial talents through scientific training.

Based on this, this article explores the role of scientific research training in cultivating top-notch talents in public finance, analyzes the current situation of scientific research training in the process of cultivating top-notch talents in public finance, clarifies the problems and deficiencies, and proposes corresponding policy recommendations.

2. The Role of Scientific Research Training in Cultivating Top Public Financial Talents

2.1. Cultivate Innovative Thinking and Enhance Innovation Ability

The traditional teaching model, which focuses on classroom education, often leads to a single way of thinking for students and a lack of innovative thinking to actively explore and solve problems. To conduct research training for undergraduate students majoring in public finance, it is necessary for them to consolidate their knowledge structure, based on the practical problems in the field of public finance in China, and cultivate problem-solving methods and ideas under the guidance of teachers. Therefore, through the integration of science and education, students' exploration and thinking abilities can be improved, and their observation ability on macroeconomic issues and financial and tax operation mechanisms can be enhanced (Yang & Huang, 2021)[12]. At the same time, scientific research can also stimulate students' imagination, cultivate their spirit of daring to question and challenge, and enhance their exploratory thinking and innovative abilities to achieve the cultivation of top-notch talents in public finance.

2.2. Broaden the Professional Knowledge and Optimize the Knowledge Structure

Traditional public finance teaching focuses more on imparting textbook knowledge, and teachers transmit public financial theories through classroom teaching, with less practical connection. This "cramming" teaching model often leads to students rote memorization, scattered knowledge

memory, and failure to form a more complete knowledge system. The public finance talent cultivation model of integrating science and education focuses on cultivating students' ability to integrate theory with practice. By guiding students to carry out scientific research activities, such as applying for projects and writing papers, students can timely understand the latest research trends in public finance at home and abroad, master new methods and means to analyze practical problems in public finance, thereby expanding professional knowledge, building a knowledge system, and forming their own core competitiveness.

2.3. Enhance Comprehensive Capabilities to Meet Social Needs

The world is currently in a stage of technological explosion, with the emergence of new formats and economies brought about by digital technology, new energy, etc., which also bring opportunities and challenges to national governance. Public finance is the pillar of national governance capacity and governance system, and the cultivation of top talents in finance must adapt to social needs and meet national needs. Therefore, innovation ability is the key to cultivating top-notch talents in public finance. Scientific research training is beneficial for cultivating and strengthening students' innovative interest, enabling them to achieve a transformation from "I want to learn" to "I want to learn". In addition, scientific research training is also a process of cultivating students' willpower and character. Through scientific research training, students' ability to independently learn and overcome difficulties can be enhanced, and their ability to apply professional knowledge to analyze and solve problems can be enhanced.

3. Analysis of Scientific Research Training in Public Finance

3.1. The Scientific Research Foundation is Relatively Weak

For the vast majority of undergraduate public finance students, scientific research is not only sacred, but also mysterious. Due to long-term constraints on one-way knowledge transmission in classroom teaching, students' economic knowledge foundation is not solid enough, their knowledge structure is not optimized enough, and their awareness of actively conducting scientific research exploration is insufficient; Moreover, due to the fact that classroom teaching mainly focuses on theoretical teaching, the ability of public financial students to integrate theory with practice is significantly insufficient, making it impossible to connect real public financial problems with classical public financial theory. In addition, the main participants in scientific research training are lower grade students, and most students do not receive systematic scientific research training (Li et al., 2017)[13]. They lack scientific research thinking, methods, and related skills, and often feel at a loss when facing scientific research tasks.

3.2. Insufficient Enthusiasm for Scientific Research Participation

Most universities force students in the process of undergraduate study at least to participate in a scientific research project to meet the graduation requirements, but from the students, participate in the present situation of the

scientific research project, most students just to complete this, a task passively participate in the research training, or invited by classmates, hard to refuse, few students based on high learning interest and enthusiasm to actively participate in (Xiang & Zhou, 2022)[14]. In addition, the process of scientific research training is also a test students learning endurance and problem solving ability process, although some students in the scientific research, beginning with full enthusiasm, but the lack of scientific research, patience and persistent attitude, in the project in the process of professional knowledge, in such as data collection and processing, research method selection, such as difficult, often show a fear, unable to keep research interest and motivation, eventually unable to get the expected results in the scientific research training.

3.3. Isolation of Teachers and Students in Scientific Research

At present, China's finance and economics colleges and universities mainly carry out student scientific research training in the following two ways: first, students can explore independently by applying for various projects, for example, students can exercise their scientific research ability in the process of writing applications and closing reports by participating in the Challenge Cup, Internet plus, Undergraduate Innovation and Entrepreneurship Competition and other projects. The second type relies on research projects led by mentors, such as the National Social Science Foundation and the National Natural Science Foundation, to carry out various research activities under the guidance of mentors. From the perspective of practical effectiveness, the two types of methods did not form a mutually reinforcing atmosphere, but rather isolated each other. On the one hand, students actively participate in various projects, but lack guidance from teachers in terms of ideas and methods. On the other hand, teachers require students to participate in the data collection and organization of projects, but the number of applicants is very small. In this situation, not only did the good effect of mutual learning between teachers and students not be achieved, but scientific research activities cannot be integrated. Students can only explore on their own without guidance from teachers, which not only makes scientific research activities difficult, but also greatly reduces the enthusiasm of students to participate in scientific research activities.

3.4. The Management of Scientific Research Projects Needs to be Optimized

Although both the Ministry of Education and various universities have fully recognized the importance of integrating science and education in recent years, and actively encouraged students to apply for research projects, the management mechanism of research projects still needs to be further improved. Firstly, there is a problem of "prioritizing project approval and neglecting project completion" in scientific research projects. For research projects applied by students, there is a common phenomenon of "strict entry and leniency exit" in various universities. The requirements for application forms are high, but they often relax and become formalistic at the end of the project, leading to students' mindset of dealing with errands in research and unable to improve their innovation ability through research on research projects. Secondly, there is insufficient monitoring of the entire process of scientific research projects. The lack of full

process monitoring of students' research projects has resulted in a lack of effective supervision of student research activities and teacher guidance activities, leading to the failure to truly implement research activities. Finally, there is a lack of incentive mechanisms for guiding teachers and students during the project implementation process, which makes it difficult for teachers and students to devote enough energy to guiding and learning in scientific research training.

4. Suggestions for Strengthening Research Activities in Public Finance

4.1. Building a Research Atmosphere and Cultivating Research Awareness

In the process of cultivating top-notch talents in public finance, finance and economics universities need to establish a good research atmosphere at the school and college levels, forming a good environment that advocates scientific research and actively thinks and explores. At the school level, on the one hand, it is necessary to increase the hosting of various innovative competitions, actively encourage students to participate in subject competitions, and improve their professional abilities through various competitions. Especially, special attention should be paid to financial and tax skill competitions, tax risk control competitions, and financial and tax professional competitions. On the other hand, it can be achieved by organizing domestic and international events. By conducting academic exchanges and inviting renowned scholars from both domestic and international sources to give lectures, we aim to broaden students' horizons and enhance their interest in scientific research. At the college level, we should focus on the construction of top-notch experimental classes in public finance and actively promote the integration of science and education. The college can explore the cultivation mode of classified teaching by organizing top-notch experimental classes in public finance through GPA ranking, exam selection, and other forms. Undergraduate students who are interested in scientific research will be included in the experimental classes for classified cultivation, with a focus on cultivating their scientific research awareness and innovation ability. At the teacher level, actively explore curriculum reform and form a teaching model that combines theory with practice. Finance teachers can integrate real-life public financial issues into classroom teaching through flipped classrooms, online discussions, and after-school debates, and enhance students' research abilities by explaining relevant research hotspots and methods.

4.2. Innovating Research Training Methods

In the process of talent cultivation, the public finance major can enhance students' research abilities through innovative research training methods. Firstly, strengthen the integration of science and education among teachers. Schools and colleges can encourage teachers to integrate scientific research training into the teaching process, cultivate students' exploration awareness through experimental teaching activities, and achieve the unity of theory and practice. In addition, teachers can also use their own research projects to attract students and guide them in scientific research activities such as data collection, paper writing, and literature summarization, so that students can build basic academic

norms by participating in teacher projects. Next is to build a research and training platform. As a humanities and social sciences major, the experimental application of finance is relatively limited, but corresponding research and training platforms still need to be established. Through relevant software such as government accounting and tax planning, we can increase the cultivation of students' practical operational abilities and equip them with basic scientific research qualities. Emphasizing the integration of modern digital technology and traditional financial teaching, adding digital elements to the curriculum, and imparting knowledge such as econometric analysis, statistical application, and data processing, students are given basic tools to engage in scientific research activities, providing research tools for cultivating top-notch financial talents. Finally, deepen professional integration. Encourage students to choose topics based on their research interests, and give them autonomy in interdisciplinary, interdisciplinary, and cross school academic activities, guiding them to explore and solve practical problems independently when necessary.

4.3. Improving the supporting mechanism for scientific research and training

The supporting mechanism for scientific research training is of great significance in motivating teachers to integrate science and education and improving students' scientific research ability. Therefore, it can be carried out from the following four aspects: firstly, formulate relevant policies to promote the integration of science and education among teachers. Schools can introduce relevant documents from the perspective of top-level design. For teachers who implement the integration of science and education and guide students in scientific research training, they will be given preferential treatment in terms of annual assessment and professional title evaluation. They will also incorporate guiding students to win awards in competitions and complete scientific research projects into their scientific research and teaching performance. The second is to formulate relevant policies to motivate students to engage in scientific research training. For students who engage in scientific research and have achieved certain results, bonus points will be given in the evaluation of awards and excellence. At the same time, specialized research activity scholarships will be established to motivate students to engage in scientific research activities and cultivate innovative abilities. The third is to promote the reform of talent cultivation models. Add research-oriented learning courses to the financial talent training program, emphasizing systematic training of students' scientific research literacy and laying a solid foundation for their research. The fourth is to jointly build a research internship base. Explore the training mode of jointly building internship bases with local financial departments, tax departments, financing platforms, accounting firms, and other government agencies, as well as enterprises and institutions. Guide students to conduct research and training at the internship base, enhance their innovation ability through on-site research, and also guide students to explore research topics during the on-site research process, serving local socio-economic development (Xiang, 2022)[15].

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References

- [1] Steven D. Levitt, John A. List. Field experiments in economics: The past, the present, and the future [J]. *European Economic Review*, 2009(53).
- [2] Renzhong Ding, Kaichen Gai, Zhixiang Xu. The construction of the top-notch talents training mode of the "six in one" basic discipline of economics [J]. *Chinese University Teaching*, 2021 (4).
- [3] Yu Du. Research on the training of top economics talents based on scientific research training [J]. *Educational Observation*, 2021 (11).
- [4] Haibo Yuan, Yuting Wang. Research on the innovative talent training system of economics major in the new era background [J]. *Journal of Changchun Institute of Education*, 2019 (6).
- [5] Dengji Lou, Zhen Chen, Qihong Zhao. Investigation and analysis of undergraduate students based on scientific research projects: Take Yuxi Normal University as an example [J]. *Educational Observation*, 2021 (2).
- [6] Liming Fan, Shaobing Shi, Hua Li. The transformation of fiscal education in the new era: From professional education to "Three Circle Education" [J]. *China Higher Education Research*, 2022(3).
- [7] Wei Zhen, Lei Zhang. The construction of the "1+4+1" training model for innovative talents in public finance majors based on the deep integration of science and education [J]. *Science and Education Guide*, 2023 (20).
- [8] Kristina Murphy. Regulating more effectively: The relationship between procedural justice, legitimacy, and tax non-compliance [J]. *Journal of Law and Society*, 2005 (11).
- [9] Raymond Fisman, Keith Gladstone, Ilyana Kuziemko, Suresh Naidu. Do Americans want to tax wealth? Evidence from online surveys [J]. *Journal of Public Economics*, 2020(4).
- [10] Zhixin Dai, Yixin Chen. Behavioral public finance: methodology and practice [J]. *Financial Science*, 2021(7).
- [11] Haitao Ma, Yanfeng Bai, Tong Yue. The practical dilemma of traditional public finance and the application of behavioral finance [J]. *Research on New Liberal Arts Education*, 2022 (2).
- [12] Jinyan Yang, Chenming Huang. Understanding and participation of scientific research training of undergraduates of different grades: Take the environmental science major of Sichuan University as an example [J]. *Higher Science Education*, 2022 (2).
- [13] Maoguo Li, Hongfang Zhou, Zhengwei Zhu. Integrated teaching model of science and education: Current Situation and countermeasures [J]. *Research on Higher Engineering Education*, 2017 (4).
- [14] Xiaowei Xiang, Jianzhong Zhu. Practice, problems, and suggestions on integrating science and education to cultivate innovative talents [J]. *Chinese Journal of Education*, 2022(10).
- [15] Li Xiang. Exploring the teaching reform path of industrial economics under the background of new liberal arts [J]. *Foreign Trade*, 2022(5).