

Research on the Programmes Reformation of Bachelor Degree in Investment in Applied Universities: Based on the ‘Double Carbon’ Goal

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Abstract. With the goals of ‘carbon peaking’ and ‘carbon neutrality’ proposed, society’s requirements for the educational achievements of applied universities have also changed. In the context of frequent extreme weather, the impact of climate change, and the development of big data technology, students in the contemporary higher education system should improve their all-round abilities to boost their Curriculum Vitae (CV) for job hunting and even for further study in postgraduate. Especially for undergraduates majoring in investment, it is both an opportunity and a challenge. The development directions of investment products, such as diversification, greenness, and technological intelligence are all self-development directions as well as career planning paths that students majoring in investment grasp. In the process, applied undergraduate universities should help students become new-era talents that meet the requirements of the ‘dual carbon’ goal from the following aspects: i) Establish a teaching system with green finance as the core module ii) Strengthen school-enterprise cooperation to promote investment to improve the practical ability of students majoring in investment and set career planning goals iii) Pay attention to the cultivation of comprehensive abilities of students majoring in investment to adapt to the rapidly developing international financial market and complex financial environment as soon as possible in their careers.

Keywords: ‘Dual Carbon’ Goal; Application-oriented Universities; Bachelor Degree in Investment; Programmes and Module Design; Bachelor Education.

1. Introduction

After the goals of ‘carbon peaking’ and ‘carbon neutrality’ were proposed, China has gradually established all-round construction goals to achieve a comprehensive green transformation of the economy and society. In the context of the ‘dual carbon’ goal, the talent training model of applied universities is also facing opportunities and challenges. As a popular professional direction for financial enrolment, the investment major is also facing the transformation of talent training models to meet the needs of social talents under the current economic situation. In the context of the ‘double carbon’ goal, strengthen the construction of the investment major, integrate cutting-edge knowledge related to green finance, green technology and traditional financial theory. Meanwhile, it is crucial to incorporate energy finance, green finance, big data, climate risk and other course content into investment studies. The contemporary higher education goal for the teaching system to achieve the goal of cultivating high-level interdisciplinary talents.

2. The Current Situation of Talent Training Model for Investment Majors in Applied Universities

(1) Course configuration



Regarding the current curriculum configuration of the investment major in China, there are four-year undergraduate courses, with professional courses concentrated in the third year. Although there are a few professional courses in the first two years, the content mainly focuses on the basic content and simple conception. Although the professional development courses carried out in the third year begin to lead students to gradually introduce relatively in-depth professional theories studies, students' acceptance is generally not high. It is due to the relatively short study time and relatively high academic pressure on students, that the students' acceptance is generally not satisfied. At the same time, in the context of the 'dual carbon goals', the setting of professional courses needs to be adjusted (Zhang et al., 2022). Courses related to energy finance, green finance, financial technology and big data are expected to be included in the course configuration. Moreover, the curriculum design does not pay enough attention to the cultivation of practical ability improvement. Especially for students who choose to find employment after graduation, the practical trainings of professional courses are particularly important (Achar, 2012).

(2) Development of 'school-enterprise-cooperation' and 'industry-university-research' teaching-study model

'School-enterprise-cooperation' is an efficient way for schools and enterprises to jointly complete students' training. This training method can avoid the disadvantages of classroom training that focuses on theoretical teaching. 'Industry-university-research' teaching-study model refers to a model in which industries, schools, scientific research institutions and so on. They cooperate to jointly promote technological innovation and economic development. Both training models are designed to cultivate investment professionals that meet the needs of social development. However, the setting of specific content needs to be adjusted according to the content of the 'dual carbon goals' and the requirement of social development.

(3) Teaching staff construction

There are problems in the construction of the teaching team. First, the age structure is unreasonable, and it is impossible to form an echelon of old, middle-aged and young teachers. Second, the cultivation of professional knowledge and ability is important. College teachers are expected to continue to learn and improve to achieve today's investment talent cultivation requirements. In particular, college teachers lack experience in relevant financial institutions and are unable to guide students' development from a more practical perspective (Teng, 2019). The third is that some teachers have strong scientific research capabilities but lack teaching capabilities. It is closely related to the imperfect and incomplete regulations on teacher professional title evaluation and recruitment.

3. Main Problems Currently Existing in the Talent Training Model for Investment Majors in Applied Universities

(1) Too few relevant courses meet the 'dual carbon' goal

With the goal of ensuring carbon peaking and carbon neutrality as the fundamental starting point for course teaching, the relationship between cultivating abilities, improving quality, and imparting knowledge must be accurately grasped and handled in a curriculum setting (Li and Li, 2023). In terms of curriculum setting, there are insufficient innovations, inertial thinking, single teaching methods, and single assessment methods.

(2) Investment graduates trained by universities cannot meet the requirements for the application of Internet technology in the financial industry.

Students majoring in investment not only need to master the application of related technologies and software such as online securities trading, online financial management and insurance business, online banking, and online information communication. In addition, they should also have a certain degree of knowledge and skills such as computer programming and investment modelling (Gilmer, 2007). Affected by the traditional financial thinking model, students majoring in investment lack the

understanding and investment application of new assets in the financial market, as well as investment portfolio management.

(3) The financial industry's requirements for the entry-level abilities of graduates majoring in investment are inconsistent with the training programs of universities.

The rapid development of the financial industry has changed the training requirements for students majoring in investment. The first is the requirement of innovation. Under the influence of financial innovation and dual-carbon goals, more new financial instruments have been produced (Wang et al., 2023). Investment students lack deeper and broader innovative training. The second is the practical requirement. Most undergraduate graduates majoring in investment will directly enter the workplace. Due to the strong theoretical nature of professional courses, it is difficult for students to adapt psychologically and in business work after entering society. The third is to meet the requirements of the development of the current era. At present, financial risks caused by climate change have gradually attracted attention. As students majoring in investment, they are currently unable to systematically study and think deeply about them from a professional perspective.

4. Ways to Implement the Talent Training Model for Investment Majors in Applied Universities based on the “Double Carbon” Goal

(1) Establishment of a curriculum system with ‘green finance’ as the core module

By studying the development and changes of society and economy, understanding the actual needs of corporate talents, and taking the employment-oriented approach of students, a curriculum system with ‘green finance’ as the core is constructed. The establishment of a green finance curriculum system requires support and cooperation from all parties (Yang, 2022). First of all, it is necessary to understand the relevant policies and systems issued by the government and clearly understand the guarantee and support for the development of green finance (Qian et al., 2022). Secondly, universities need to invite financial institutions to participate in the practice and innovation of green finance to provide support for carbon finance and green finance. Finally, the establishment of a curriculum system with ‘green finance’ as the core needs to be further improved. Strengthening courses related to energy finance, green finance, financial technology and big data need to be reflected in the course configuration.

(2) Enhance practical capabilities through ‘school-enterprise cooperation’ and ‘industry-university-research’ teaching-study model

In the formulation of training goals for investment major students in applied universities, local economic development and enterprise needs are oriented. Especially in terms of serving the local economy, the goal is to cultivate high-level technical application talents needed by governments, financial institutions, and enterprises (Xu and Wang, 2015). In the process of maintaining close contact with enterprises, we will strengthen the cultivation of students' technology application and development innovation capabilities.

Organize students to visit financial institutions for internships and simulate securities investments, and use the results of simulated investments as their internship results. It is useful to increase extracurricular practical teaching links and organize students to participate in stock trading competitions inside and outside the school. It is recommended to establish a school-wide securities investment association and organize an annual simulated stock trading competition. Teachers from the teaching team and researchers from securities companies can also be invited to give lectures during the competition.

(3) Enhancing students' comprehensive abilities through enriching teaching activities

The teaching process emphasizes practice and practicality, and strengthens thematic discussions, course experiments, academic lectures, on-campus job opportunities, and corporate internships that

are in line with the characteristics of the current era. It is important to gradually increase the proportion of practical and experimental courses in the curriculum (Jones, 1984).

It is necessary to reform the examination model to give equal emphasis to theory and practical results (Gu, 2008). In view of the characteristics of the investment major's courses, our exams are not entirely traditional theoretical exams. In addition to traditional exam content such as basic concepts and basic theories, practical results are equally important. For compulsory courses, practical results are an important part of the final grade. For elective courses, practical results are proportionable in the final scores going along with the exam marks. For graduates majoring in investment, we recommend that an investment value analysis report or investment planning plan be used instead of the graduation thesis.

Increase efforts to organize students to participate in employee qualification examinations to achieve seamless connection between schools and society. In order to enable students to better adapt to further employment requirement and to make the knowledge students learning how to be qualified. We can try to connect the knowledge taught in the classroom with the practitioner qualification examination modules of various industries to help students prepare for the practitioner qualification examination. The test scores of the Practitioner Qualification Examination are used as a reference for the final exam scores.

5. Conclusion

Nowadays, undergraduate education has been widely popularized. At the same time, problems such as ‘difficulty in finding employment’ for undergraduate graduates have become increasingly prominent. As an application-oriented university, there are still many aspects that need to be improved in the training of investment undergraduates. With the proposal and practical needs of the ‘dual carbon goals’, investment-related curriculum and vocational skills training need to be strengthened (Wang et al., 2023). Specifically, this article summarizes the relevant suggestions for curriculum reform into the following aspects: 1) Improve students’ professional practicality from all aspects 2) Set the curriculum around the realization of the ‘double carbon’ goal 3) Encourage student innovation 4) Strengthen the teaching staff construction.

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References

- [1] Achar, A., 2012. Saving and Investment Behaviour of teachers-An empirical study. *International Journal of Physical and Social Sciences*, 2(8), pp.263-286.
- [2] Gilmer, T., 2007. An understanding of the improved grades, retention and graduation rates of STEM majors at the Academic Investment in Math and Science (AIMS) Program of Bowling Green State University (BGSU). *Journal of STEM Education*, 8(1).
- [3] Gu, M., 2008. Identity construction and investment transformation: College students from non-urban areas in China. *Journal of Asian Pacific Communication*, 18(1), pp.49-70.
- [4] Hu, Y. and Zheng, J., 2021. Is green credit a good tool to achieve “double carbon” goal? Based on coupling coordination model and PVAR model. *Sustainability*, 13(24), p.14074.
- [5] Jones, A.H., 1984. A case for major investment in teacher education. *Action in Teacher Education*, 6(4), pp.7-12.
- [6] Li, X. and Li, H., 2023. Ideological and political reform of chemical courses based on the “double carbon” target. *Curriculum & Innovation*, 1(1), pp.1-4.

- [7] Qian, L., Shen, M. and Yi, H., 2022. Spatio-temporal pattern of coupling coordination between urban development and ecological environment under the “double carbon” goal: A case study in Anhui, China. *Sustainability*, 14(18), p.11277.
- [8] Teng, M.F., 2019. Learner identity and learners’ investment in EFL learning: A multiple case study. *Iranian Journal of Language Teaching Research*, 7(1), pp.43-60.
- [9] Wang, D., Tang, W. and Luo, Z., 2023. Exploring the feasibility of teaching case studies in basic courses in engineering colleges in the context of the dual carbon strategy. In *SHS Web of Conferences* (Vol. 168). EDP Sciences.
- [10] Wang, R., Zhang, W., Deng, W., Zhang, R. and Zhang, X., 2022. Study on Prediction of Energy Conservation and Carbon Reduction in Universities Based on Exponential Smoothing. *Sustainability*, 14 (19), p.11903.
- [11] Xu, J. and Wang, L., 2015, November. " Financial Management" Teaching Practice Research Based on EBL Teaching Model. In *2015 International Conference on Social Science, Education Management and Sports Education* (pp. 40-43). Atlantis Press.
- [12] Yang, W., Zhang, M., Long, H. and Yan, J., 2022. Thoughts on Teaching Reform of Resources Majors in Colleges and Universities under the Background of Carbon Peak and Carbon Neutralization--Taking Mineral Resources Exploration Course as an Example. *Sustainability*, 14(24), p.16523.
- [13] Zhang, L., Yan, Y., Xu, W., Sun, J. and Zhang, Y., 2022. Carbon emission calculation and influencing factor analysis based on industrial big data in the “double carbon” era. *Computational Intelligence and Neuroscience*, 2022.