

The Construction Ideas and Implementation Paths of Energy Economy Courses in Universities under the Background of Energy Revolution

Xinyun Tang, Zejiang Zhou*

School of Economics, Anhui University of Finance and Economics, Bengbu, Anhui, 233030, China

*Corresponding author: Zejiang Zhou (E-mail: aczzj123456@163.com)

Abstract: Currently, the progress of curriculum construction in energy economics is very slow, and the study of energy issues from an economic perspective is not yet in-depth enough, especially the specialized study of energy economics as an independent system is still at a relatively low level. The lagging research in energy economics has led to a lag in talent cultivation in the field of energy economics, resulting in weak education in energy economics. The progress of theoretical research in energy economics is highly inconsistent with China's rapid development and increasingly serious energy and environmental problems. In response to various problems in the construction of energy economy courses in Chinese universities, this article analyzes the important impact of the energy revolution on the construction of energy economy courses in Chinese universities, and proposes the implementation path of energy economy course construction in Chinese universities, providing theoretical reference for the construction of energy economy courses in universities.

Keywords: Energy Revolution, Energy Economy Course Construction Ideas, Implementation Path.

1. Current Situation of Energy Economy Course Construction in Chinese Universities

Energy is an important economic growth factor in human society. In its development and utilization process, there are various economic phenomena such as markets, prices, supply and demand relationships, public resources, and public products. Energy Economics, as a new branch of economics, began with the oil shock of the 1970s. Prior to this, people's understanding of input into production factors had always been broadly satisfied with labor, capital, and land, while energy was often seen as a part of raw materials and did not receive special attention. The oil shock that began in 1973, along with the subsequent increase in oil prices, led to a significant decrease in the growth rate of commodity energy consumption, resulting in a significant decrease in economic growth rate. This phenomenon has led more economists to shift their focus to energy and start researching the energy economy.

Energy economics, as a newly emerging research direction, is also a very important research hotspot in economics. Energy economics is a cutting-edge and interdisciplinary new discipline that integrates the advantages of economics, management, resources and environment. It mainly studies the economic relationships and laws of energy production, exchange, distribution, and consumption processes. It belongs to a branch of political economics and engineering economics, and focuses on economic issues throughout the entire process of energy production, distribution, and utilization. An applied economics that explains the relationship and corresponding economic laws between energy and socio-economic development, providing theoretical and methodological support for the effective allocation and management of energy and related resources in the socio-economic context. It is the fundamental theory of energy economic management research and practice. The research scope of energy

economics is very broad, including low-carbon economy, green environmental protection, ecological economy, etc., which involve energy issues and energy conservation and environmental protection. In 2010, the Ministry of Education launched the construction of strategic emerging industry related majors, including the Energy Economics major. The "Energy Economics" course is generally one of the core courses of this major.

Currently, the teaching content of energy economics courses mainly includes: the relationship between energy and economic growth, social development; The relationship between energy, environment, and climate change; Optimizing the allocation of energy resources; Energy prices, energy markets, and taxation; Energy conservation and circular economy; Energy substitution; International energy trade and energy finance; Energy policies, etc. Overall, the theoretical foundation and related sources of energy economics include neoclassical economics and resource and environmental economics, industrial economics, regulatory economics, energy technology economics, finance, and other theories. The theoretical analysis tools used mainly include operations research and mathematical planning, applied statistics and econometrics, computable general equilibrium (CGE) theory, systems science and system dynamics, game theory, and information economics.

The theoretical and practical sectors in China have gone through different stages of development in their research and attention to energy economy issues. Before the 1980s, due to the relatively small total energy consumption in China compared to its storage capacity, energy resources seemed endless, and the energy problem was mainly about how to develop and utilize them. Therefore, research on energy in China mainly focused on development and utilization. Although some domestic economists have been studying the energy economy since the 1980s, committed to establishing China's energy economy, the research progress has been very slow, and the study of energy issues from an economic

perspective is not deep enough. Especially, the study of energy economy as an independent system is still at a relatively low level. The lagging research in energy economics has led to a lag in talent cultivation in the field of energy economics, resulting in weak education in energy economics. The progress of theoretical research in energy economics is highly inconsistent with China's rapid development and increasingly serious energy and environmental problems.

Faced with the backwardness of research and talent cultivation in the field of energy economy, some universities and research institutions have established Institutes of Energy Economics in recent years, such as the "Energy Economy Research Center" of the School of Economics at Xiamen University, the Energy Research Institute of Shanghai Jiao Tong University, the Energy Research Center of the Institute of Macroeconomics of the National Development and Reform Commission, and the "Energy Economy Research Institute" of China University of Mining and Technology (Beijing) China Energy Strategy Research Institute at China University of Petroleum (Beijing), Energy Economy Research Institute at Southwest University of Finance and Economics, Energy Economy and Management Research Center at Xi'an University of Science and Technology, Energy Economy and Strategy Research Center at Fudan University, Energy Economy Research Center at Inner Mongolia University of Finance and Economics, Energy Economy Research Center at Beijing Institute of Petrochemical Technology, Energy and Environmental Policy Research Center at Beijing Institute of Technology Tsinghua University's "China Automotive Energy Research Center", Tsinghua University's "Institute of Energy, Environment and Economics", Tsinghua University's "Low Carbon Energy Laboratory", World Resource Institute, and the European Energy and Resource Security Center at King's College London. The "Energy Economy" (020106T) major is included in the "Economics" discipline category (02) and "Economics" (0201) of the special majors in the "Undergraduate Major Catalogue of Ordinary Higher Education Institutions (2012)" released by the Ministry of Education.

2. Problems in the Construction of the Energy Economy Major

Due to the wide coverage and diverse research perspectives of energy economics, there are significant differences in understanding of energy economics and its system. The course content also varies greatly due to differences in connecting courses and relying on different majors, with varying depths. The obvious problems currently existing are:

2.1. The curriculum content system is not standardized

For example, the analysis of resource and environmental economics on the extraction of exhaustible resources and environmental economics will also be taught in this course. In terms of the teaching plan and content of the "Energy Economy" major, the content related to the former, as one of the sources of energy economics theory, can be simplified and targeted into the content of the energy economics course as a basic theoretical module; Furthermore, there is some overlap in the teaching content of energy economics, environmental economics, climate change economics, and other related

fields. Compared to resource and industrial economics, energy economics has a stronger specialization and higher professional requirements. It not only requires researchers to have a considerable foundation in economics, but also requires a profound understanding of the production processes in various energy industries. As a crucial energy research discipline in the national economy, the lack of a curriculum system for energy economics seriously restricts the cultivation of specialized talents in this field.

2.2. The lack of universally recognized mature textbooks is also a prominent issue

In 1975, H A. The publication of Merklein's Energy Economics marks the official rise of energy economics as an important branch of economics. Subsequently, Michael G. The publication of Energy Economics by Webb, Martin J. Ricketz, and Richard Gordon had a significant impact on the later development of energy economics. The energy economics textbooks with significant influence in China and widely used in curriculum teaching are the series of tutorials on "Energy Economics" and "Advanced Energy Economics" compiled by Lin Boqiang and others. Although there are other related works published, compared to other disciplines, textbooks in the field of energy economics are still quite scarce.

2.3. Innovative teaching methods and methods are needed

For students majoring in economics with non engineering backgrounds who study energy economics courses with strong technical relevance, there may be some difficulty in understanding them. They may consider choosing multimedia courseware, videos related to energy production processes and technologies, on-site visits, and professional internships as diverse auxiliary teaching methods to improve their acceptance; On the contrary, relying on engineering majors to build energy economy majors requires the addition of courses related to economics and management, deepening students' understanding of energy economy from an economic management perspective.

2.4. Insufficient teaching hours

Under the current norms of undergraduate training systems in universities, most universities allocate only about 10-15% of the total number of hours to professional courses, and single subject courses often do not exceed 60 hours. Universities such as China University of Petroleum, which have a longer operating time in the construction of energy economy majors, save 20% of the total number of hours in professional training environments. The teaching hours are generally insufficient, mostly 32 or 48 hours. To meet the requirements of existing undergraduate training standards and to enable students to receive interdisciplinary knowledge transmission and literacy training in energy and economic management as much as possible, in order to meet the requirements of future practical and scientific research in the field of energy economy, it is necessary to grasp teaching laws and professional learning characteristics, arrange teaching resources more reasonably, reform teaching methods, combine in class and out of class, and improve students' knowledge acceptance.

2.5. The offering of energy economics courses has certain limitations

At present, many research institutes have gradually recognized the importance and necessity of cultivating specialized talents in energy economics, and have established undergraduate, master's, and doctoral programs in energy economics. Xiamen University is one of the key universities in China that started admitting undergraduate students in the field of energy economy earlier. Other universities with admission qualifications in this field include Renmin University of China, Beijing Institute of Technology, Shanxi University of Finance and Economics, etc. Overall, the training of energy economics professionals in China has just begun, and the corresponding curriculum system is still in the exploratory stage.

3. The Impact of the Energy Revolution on the Construction of Energy Economy Courses

The revolution of energy production and consumption is a major topic proposed in the report of the 18th National Congress of the Communist Party of China, and emphasizes the promotion of the four "revolutions". One is to promote the energy consumption revolution and curb unreasonable energy consumption; Secondly, promote the energy supply revolution and establish a diversified supply system; The third is to promote energy technology revolution and drive industrial upgrading; The fourth is to promote the revolution of the energy system and open up the fast lane of energy development. The energy revolution in China needs to start from the specific national conditions of China's energy, conform to the general laws of energy evolution, and adapt to the development trend of the international situation. China's energy and resource endowment is mainly coal, and its development is in the accelerated stage of industrialization and urbanization. At the same time, it is facing new challenges posed by climate change on renewable energy and green development internationally. The current and future energy development in China presents a trend of diversified and overlapping development. Firstly, fossil fuels are about to enter a "dual carbon" era where coal and oil and gas are equally important; The second is the shift in energy consumption from primary energy to secondary energy dominated by electricity; Thirdly, green energy has become an indispensable force in future development. In addition to the green revolution, the energy revolution in China also includes the oil and gas revolution and the electricity revolution. The energy revolution in China is to undertake the three revolutions of developed countries at one point in time. The energy revolution is an objective need to maintain national energy security and development, as well as an inevitable choice to achieve the upgrading and transformation of the coal industry.

The energy revolution has put forward new requirements for the construction of energy economics courses in Chinese universities, mainly manifested in the following aspects. Firstly, the energy revolution requires a large number of pioneering and innovative energy economics professionals, but the existing education and research system in energy economics is unable to meet these needs. If we do not reform the education and research system of energy economics, it

will be difficult for China to participate in international technological competition among other major countries, especially Western countries represented by the United States, and it will be difficult to maintain China's energy and security interests. Secondly, the investment in the construction of energy economics courses in Chinese universities is insufficient, the disciplinary system is not sound, and there is a lack of top-notch and innovative talents. It is necessary to increase investment in the construction of energy economics courses. The energy revolution will have a certain promoting effect on the construction of energy economics courses in Chinese universities, but it will also face some development difficulties.

(1) The energy revolution is not only a green revolution, but also includes the oil and gas revolution and the electricity revolution. The current consumption structure of energy in China still mainly relies on coal, and the new energy industry will become a major focus in the future. Therefore, the construction of energy economics courses in Chinese universities needs to shift from traditional coal research to new energy research. Further expand the research scope of energy economics courses in Chinese universities, providing certain theoretical guidance for the national energy revolution.

(2) The energy revolution is an objective need to maintain national energy security and development, as well as an inevitable choice to achieve the upgrading and transformation of the coal industry. With the advancement of the energy revolution, the research momentum of energy economics in coal is insufficient, and the ability for scientific research and innovation will also weaken. The energy revolution in China is not about "removing coal" but about "purifying coal". Although fossil fuels such as coal will eventually be replaced by renewable energy, this requires a long process. To meet the needs of the energy revolution, the coal industry must minimize the impact of coal mining and utilization on society. The teaching and research of energy economics in universities bear the task of scientific research and development in the coal industry. In the context of the energy revolution, whether the coal industry can achieve a transformation from traditional development methods to efficient, clean, and sustainable largely depends on the research and development capabilities and level of the energy economics major. Currently, due to the serious coal reduction in the teaching and research of energy economics in Chinese universities, the research and innovation ability of coal as the research object is not strong, resulting in insufficient momentum in serving the coal industry.

(3) The practical teaching process is weak, and the quality of talent cultivation is not high. In the context of the energy revolution, the teaching practice of energy economics mostly focuses on theoretical teaching, but lacks emphasis on practical teaching. This is mainly reflected in: firstly, the proportion of practical teaching in the entire teaching period is relatively small. Practical teaching in applied technology universities abroad accounts for more than half of the entire teaching, some even reaching over 80%, while in China, it is generally around 10%. Secondly, students have limited internship time and weak innovation ability. The expansion of internship of energy economics courses in universities is the practical application of theoretical knowledge learned, and is a necessary way to cultivate and improve students' innovation ability. From the current practice of energy economics courses, the duration is generally relatively short. Due to the weak practical teaching of energy economics, the quality of talent

cultivation is not high. Therefore, with the advancement of the energy revolution, it is necessary to increase the practical teaching time for students of energy economics courses and strengthen their understanding of energy economics knowledge in practice.

4. The Construction Path of Energy Economy Courses

4.1. Promote the overall integration of talent cultivation programs and energy economy curriculum teaching

(1) Emphasize the combination of the advantages of energy economics courses and the humanistic and historical traditions of our school. As a teaching and scientific research venue for energy economics courses, universities should adhere to the combination of course characteristics and the humanistic and historical traditions of their own universities in the cultivation of undergraduate talents, fully integrate the professional qualities and humanistic spirit cultivated in the courses, and achieve the cultivation of quality-oriented talents.

(2) Highlight the ability and quality indicators for cultivating professional talents. The talent training objectives are the core of the entire talent training program design and implementation. Based on the existing training objectives, the adjusted and optimized talent training program further clarifies the needs of economic and social development for talents and the ability and quality indicators that talents who meet market demands should possess, achieving the cultivation of applied talents.

(3) Emphasize the coexistence of commonality and individuality in talent cultivation. In the undergraduate education stage of higher education, what is truly needed to cultivate is learning ability rather than knowledge itself. The important driving force for stimulating active learning and exploring the unknown world lies in interest. Therefore, on the basis of completing a certain proportion of compulsory courses, students should increase the scope and credits of choosing elective courses in energy economics. This not only respects the individual development of students more, but also helps them to more efficiently engage in learning, to cultivate innovative talents.

(4) Highlighting economic theoretical research and international perspectives. According to the new requirements of national economic construction and social development for the knowledge and skills structure of talents, combined with the characteristics and advantages of energy economics courses, talent cultivation goals should focus on the dual goals of literacy and ability, so that students can meet the needs of economic and social development for talents in the economic field and related economic work processes. Tailor teaching, classify teaching, and cultivate talents through multiple channels. Based on the diversity of talent demand in economic and social development, as well as the duality of talent cultivation goals in economics, the implementation process of talent cultivation can adopt hierarchical and classified teaching. Based on market demand and the characteristics of talents, while respecting students' independent choices, appropriate classifications can be made, and some of them can be selected as top-notch innovative talent cultivation. On the one hand, it can cultivate reserve forces for academic research, On the other hand, it aims to

cultivate high-level specialized talents with strong innovation capabilities in the economic field and departments.

(5) Pay attention to the refinement of talent cultivation goals in the curriculum system setting. Promote the coordinated development of knowledge, qualities, and abilities. Talent cultivation should follow the educational concept of "teaching to fish". While imparting professional knowledge and enhancing professional abilities, it is more important to coordinate the development of talent quality and abilities. To achieve the long-term and dynamic nature of talent cultivation, it is necessary to cultivate talents' self-learning and self-improvement abilities, so as to enable students to have strong adaptability, adjustment ability, and development ability in the dynamic evolution process of economic and social development. Therefore, scientific adjustments should be made to the curriculum design around the dual goals of "academic oriented" and "applied oriented" talent cultivation, and the construction of the curriculum system should be improved. Establish a curriculum system that can organically combine the humanistic and economic literacy of college students, so that the curriculum system serves the goal of talent cultivation and effectively promotes the cultivation of high-level specialized talents in economics.

4.2. Improving course teaching content

4.2.1. Realize the transformation from focusing on imparting knowledge to cultivating abilities

Fully considering the needs of economic and social development for economic professionals, cultivating students should not only learn energy economics knowledge well, but also make good use of energy economics knowledge. The goal is to cultivate versatile talents, design course teaching content well, guide students to complete the learning of teaching content with questions, reflect the usefulness of knowledge in the process of solving problems, and cultivate students' ability to acquire and apply knowledge. In some core courses, practical problems that urgently need to be solved in our country are introduced, and economic theories are used to discover, analyze, and solve problems, enabling students to establish the concept that economic knowledge can be "applied" rather than just an input of economic theory. This guides students to learn energy economics theory knowledge in problem oriented "project research, Strengthen the application, critical thinking, and innovation abilities of energy economy theory by studying practical problems.

4.2.2. Reflect the practical value of energy economics knowledge

The reform of course teaching content is the core of improving students' comprehensive quality, and also the key to solving problems such as narrow knowledge scope, single thinking, and insufficient innovation and personality among students. The teaching content of the Energy Economics major course will be reformed around the construction of students' knowledge, thinking, and abilities, including theoretical teaching, experimental teaching, course design, and extracurricular practical activities. The reform of theoretical teaching content is the foundation, and the reform of theoretical teaching content is mostly reflected in the updating of teaching content.

In view of the renewal of the teaching content of the main courses, we should not only refine and optimize the classic content of the course, so that students can learn the essence of economics in the course content, but also strengthen the progressiveness of the teaching content, increase the reading

of relevant monographs and literature, so that students can understand the latest research results of the subject. The cultivation of economic professionals can not only ensure students' learning of basic economic knowledge, but also provide multiple choices for their personalized development. The update of the teaching content of the Energy Economics course also includes reasonable adjustment of the course setting, adding courses on economic problem analysis tools and emerging energy economics, while reducing outdated courses and improving the practicality of learning energy economics theory.

4.2.3. Establish a three-dimensional practical teaching system

The construction of the practical teaching system for the energy economics course reflects the talent cultivation concept of "strengthening abilities, valuing applications, and highlighting innovation", so that the practical teaching system is integrated as a whole, with a full process in time, a hierarchical structure in the upper layer, and a diversified form. The "2+3+2" practical teaching system is orderly promoted at different learning stages, which includes two types of practical teaching: experimental training and practical simulation, entrepreneurial design, and practical exercise. There are three types of practical teaching methods: curriculum practice, project research, and social practice, and two teaching bases: on campus experiments and off campus practices.

This practical teaching system comprehensively integrates resources within the school, industry, and field, closely focuses on the cultivation of application abilities, and fully unleashes students' autonomy in learning. It is a practical teaching system that integrates laboratories, entrepreneurial experimental areas, internship and training bases, and professional workstations, with clear levels and clear stages. Compared to classroom teaching, practical teaching has richer content and more flexible teaching methods. Therefore, in the construction process of economics majors, an assessment and evaluation system suitable for the characteristics of practical teaching will be established, encouraging students to actively participate in practical teaching activities. In addition, an independent practical teaching team will be established to provide professional guidance to students on the problems they encounter in paper writing and social practice. In order to improve the teaching effectiveness of practical teaching, the practical teaching team is composed of counselors, professional teachers, and personnel from relevant enterprises outside the school. Due to the unique work experience and social experience of the team members, they can complement each other's strengths and provide students with comprehensive practical teaching guidance from the psychological, theoretical knowledge, and social experience levels.

4.2.4. Strengthen the teaching content of "calculation outside of literature and numbers"

Increase the teaching content of courses such as Chinese, mathematics, foreign languages, economics, and computer science in terms of textbook selection, teaching content, and lesson design, to enhance students' three hard and three soft abilities; The three hard skills are expression ability (including language expression ability, writing expression ability, Mandarin expression ability, and foreign language expression ability), computational ability, and hands-on ability; The three soft abilities are critical thinking ability, communication ability, and health ability. These six abilities

are beneficial for enhancing students' adaptability in their future career and production life, and unleashing their innovative abilities.

4.3. Reform the mechanism for teacher training and utilization

The construction of the Energy Economics course will aim to optimize the construction of the teaching staff and improve the teaching and research level of the teaching staff. We will continue to adhere to the talent team construction concept of "internal excavation and external attraction", improve the gradient teacher training mechanism that combines "transmission, assistance, and guidance", create a "dual teacher and dual ability" training model that combines "going out and inviting in", establish and improve effective incentive mechanisms, and innovate the work mode of talent training and utilization, continuously improving the mechanism for teacher training and utilization, striving to build a teaching staff with cutting-edge theories, open thinking, and global perspectives, in order to meet the needs of cultivating innovative talents in both academic and applied fields in the field of energy economics.

4.3.1. Adhere to equal emphasis on "internal excavation" and "external diversion"

Based on "internal tapping", establish a special training fund for energy economics course teachers, support young and middle-aged teachers to pursue doctoral degrees or pursue postdoctoral studies, select outstanding teachers to visit high-level universities, key research bases, and well-known enterprises at home and abroad for learning or on-the-job training, support teachers to participate in high-level teaching and research seminars at home and abroad, and carry out modern educational technology training for young and middle-aged backbone teachers Bilingual teaching training and updating professional knowledge training aim to discover and cultivate talented individuals with potential and potential, and strive to cultivate local discipline leaders and even renowned teachers. Control the entry of talents, optimize external recruitment, and consider the required recruitment direction in advance based on the teaching situation and disciplinary needs of the economics major. Recruit talents globally, based on the development of the economics major with a global perspective, international standards, and local advantages, adhere to high education, high-level, and high-level standards, and continuously improve the overall level of the economics teaching staff.

4.3.2. Creating a functionally complementary gradient teacher training model

Based on the construction of disciplines and professional settings, establish and improve a pool of mentors for the main leaders, senior professors, outstanding young and middle-aged backbone teachers, and subject leaders of the Energy Economics course group. Upon entering the position, initiate and implement a mentorship system, continuously improve the "transmission, assistance, and guidance" mechanism of the Energy Economics course teaching, and fully utilize mentors in teaching and educating through extensive internal teaching discussions, classroom observation, academic exchanges, and other means The demonstration and guidance role in lesson planning, classroom writing, teaching methods, research on teaching methods, research methods and procedures, etc., helps young teachers adapt to the work environment and pace as soon as possible. Strengthen

"resource sharing", implement "condition guarantee", encourage professional teachers to establish "team style" teaching and research groups around their respective teaching courses and research directions, and create a gradient teacher training model with complementary functions and reasonable structure.

4.3.3. Promote two-way interaction of "going out and inviting in"

Actively connect with practical needs, relying on the national university advantage platform, actively building talent, technology, and information sharing mechanisms with enterprises and government departments, and continuously enhancing the theoretical and practical ability of the teaching staff. According to the work situation of the school and college, excellent teachers are scheduled to be sent to the grassroots level of government agencies for on-the-job training in batches and stages with a planned and focused approach every year. They are closely contacted with cadres and masses from various industries to experience their talents and make up for the shortcomings of energy economics course teaching teachers who come from the school to the school. After returning to the job through on-the-job training, create various conditions to promote the application of what has been learned and promote innovative development in teaching and research. At the same time, creating favorable conditions, actively introducing entrepreneurs, entrepreneurs, and relevant personnel from administrative institutions at all levels and types into the economics classroom, practicing and improving the teaching of teachers and various industry experts on the same stage, and innovating the mechanism of school enterprise and government school cooperation to cultivate "dual teacher and dual ability" talents.

4.3.4. Establish and improve teacher incentive mechanisms

Adhere to an open and fair guidance mechanism, establish and improve various incentive mechanisms, and create a fair environment for outstanding teachers to stand out. Especially for young teachers, while emphasizing the cultivation and improvement of their professional qualities, they should also be cared for and cared for in their work and life. For outstanding performance, priority should be given to promotion and promotion, and strong support should be given to in-service education and further education. In the year-end assessment, teachers who have achieved significant scientific research results, good teaching results, and ranked among the top in quality evaluation will be commended and rewarded. Based on the disciplinary characteristics and teaching methods of economics, we actively carry out and enrich various teaching competitions, lesson plan evaluations, courseware production competitions, young teacher basic skills demonstrations, and other activities. Our participation results are used as an important indicator for teacher professional assessment, effectively stimulating the enthusiasm and enthusiasm of teachers in teaching and research. Fully explore the incentive effect of various teaching and research competitions in the school, form incentive mechanisms and a positive interaction with talent cultivation, and create a warm atmosphere of clean and upright work and entrepreneurship.

4.3.5. Innovative talent cultivation and utilization work mode

On the basis of actively cultivating and introducing talents, establish a talent concept of "not seeking everything, but

seeking what is needed", and innovate the work mode of talent cultivation and utilization according to the concept of sharing teaching resources, complementary advantages, and mutual benefit. Seize the favorable opportunity of vigorously introducing talents during the 13th Five Year Plan period of the school, create conditions to break the boundaries of disciplines and colleges, and attract outstanding young teachers from other colleges such as International Trade and Finance to give lectures and lectures to students majoring in Energy Economics. When conditions are ripe, seek support from superiors to establish an inter provincial teacher recruitment mechanism with energy economics teachers as the core members, and introduce excellent teachers from other universities to serve in economics teaching and research. Drawing inspiration from sister universities, summer and winter camps, and attracting excellent domestic and foreign teachers to train economics teachers and students.

Acknowledgment

This work is supported by 2023 Anhui Province Undergraduate Teaching Quality Engineering First Class Textbook Project "National Economic Warning (Digital Textbook)".

References

- [1] Cao Liping, Zhou Fengqi. Research on the Challenges and Countermeasures of China's Energy System Transformation under the Background of Energy Revolution [J]. *China Environmental Management*, 2017, 9 (5): 84-89.
- [2] He Jiankun, Li Yang. The energy revolution is an inevitable choice for China's ecological civilization construction and energy transformation. *Economic Research Reference*, 2014 (43): 71-73.
- [3] Ju Keyi, Wang Qunwei. Exploration of Talent Training Models and Strategies for Energy Economics [J]. *Energy Technology and Management*, 2015, 40 (5): 21-24.
- [4] Li Wenchao, He Dan. The Teaching Status and Problems of Energy Economics [J]. *Journal of Tianjin University of Management*, 2013 (5): 85-86.
- [5] Lei Zhongmin. Energy Economics - Development History, Current Situation, and Future [J]. *Energy Base Construction*, 1994 (6): 3-19.
- [6] Liao Hua, Wei Yiming. The development stage of China's energy economy and the potential of medium and long-term energy conservation [J]. *Journal of the Chinese Academy of Sciences*, 2012, 27 (2): 214-218.
- [7] Liu Qiang. Building an Energy Economy and Management Research Team with International Standards to Promote the Discipline Construction of Energy Economy -- Energy and Environmental Policy Research Center of the Chinese Academy of Sciences [J]. *Management and Research of Scientific and Technological Achievements*, 2014 (12).
- [8] Lu Kui. Exploration of the transformation of coal industry characteristic universities from the perspective of energy revolution: Taking Henan University of Engineering as an example [J]. *Higher Education in Coal Industry*, 2015 (6): 12-15.
- [9] Mo Jianlei, Fan Ying. Energy Economics: New Challenges and Solutions - Overview of the Fourth Asian Conference of the International Association for Energy Economics (IAEE) [J]. *Journal of the Chinese Academy of Sciences*, 2014 (6): 684-688.

[10] Qi Yan, Diao Jinglu Expectations for the Development Prospects of "Energy Economy" and Analysis of the Training Standards for Energy Economy Professional Talents [J]. Economic Research Reference, 2016 (56): 44-50.

[11] Shen Zhirong, Wu Junmin, Wang Xiuping. Accounting Professional Construction Based on the Internationalization Goal of Accounting Education [J]. Finance and Accounting Communication, 2010 (12): 145-147.