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Greening Reform of Higher Education: The Value of the Times, Theoretical Basis and Promoting Strategies

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Abstract: Education is an essential means of green development and an important part of the connotation construction of higher education. The greening of higher education is to integrate the concept of green development into the whole process of management and education of higher education, build green schools, implement green management, carry out green adjustment and transformation of teaching content, and create resources saving, pollution reduction, and harmony between man and nature. Get along with the campus's ecological culture. By analyzing the era value and theoretical basis of the green reform of higher education, this paper puts forward the promotion strategy of the reform: integrating the concept of green development into the cultivation system of socialist core values, building an open school system compatible with green development, and developing higher education institutions. The cultivation of green talents, professional adjustment, and the comprehensive integration of green concepts into the education and teaching of colleges and universities.

Keywords: Higher Education; Green Reform; Green Development.

1. Introduction

Chinese President Xi Jinping pointed out: "The concept of development is the forerunner of development actions; it manages the overall situation, the fundamentals, the direction, and the long-term. It is a concentrated expression of development ideas, directions, and efforts." It is an essential embodiment of the people's pursuit of a better life." [1] Green development is one of the five major development concepts put forward by the Fifth Plenary Session of the 18th CPC Central Committee, with the core goal of "overall improvement in the quality of the ecological environment". [2] The latest theoretical achievements of the theory of ecological civilization and the localization of sustainable development in China demonstrate the new political vision of the Party Central Committee with Chinese President Xi Jinping at the core, and it is also a guideline for action during the "13th Five-Year Plan" period and even longer. In 2015, the Central Committee of the Communist Party of China deliberated and passed the "Opinions on Accelerating the Construction of Ecological Civilization", which proposed "coordinating the promotion of new industrialization, urbanization, informatization, agricultural modernization and greening". In the same year, the State Council issued the strategic document "Made in China 2025" to comprehensively promote the implementation of manufacturing power, requiring the implementation of five major projects, one of which is the "Green Manufacturing Project".

Education is an essential means to achieve green development. Higher education is committed to cultivating hundreds of millions of senior professionals, and college students who receive green education will become the main force in practicing green development. However, the green reform of my country's higher education is full of difficulties. The state still runs most colleges and universities, and the participation of social forces and the depth of school-enterprise cooperation are minimal. There are still many colleges and universities major similar to the large-scale national adjustments in the 1950s. School majors, teaching materials, teaching methods, and even the establishment of teaching and research departments (groups) have copied the Soviet model. [3] Although after the reform and opening, Comrade Deng Xiaoping proposed that "education should be oriented toward modernization, the world, and the future", higher education ushered in vigorous development, social forces began to participate in running schools, international exchanges and cooperation became increasingly close, and various forms of higher education Gradually formed. After 1999, my country's colleges and universities expanded their enrollment, and completing the "211 Project" and "985 Project" contributed to several high-level professional and high-level universities. Soon my country's higher education entered the stage of popularization. [4] But, regrettably, the number of newly added majors is not much, and the quality needs to be improved urgently. The education method still takes the class as a unit and adopts a unified syllabus, teaching materials, and unified teaching. This unified teaching mode embodies the adaptation of standardized, large-scale, and centralized industrial civilization, but the result is that every student's Specialties and innovations are not brought into play, and school knowledge lags far behind the development of the market and is far from meeting the needs of the third and fourth industrial revolutions.

In stark contrast: economic globalization, the fourth industrial revolution is taking shape; Internet +, cloud computing, artificial intelligence, mixed reality, extensive data analysis, synthetic biology technology, and other new technologies are fashioning and expanding at an exponential rate; new energy, new logistics, new biology, new agriculture, new transportation, and other new formats are emerging one after another. New technologies and industries have created new jobs, which will inevitably bring about changes in new positions and occupations. According to the U.S. Department of Labor's estimates, in 2017, solar photovoltaic installers who install photovoltaic power generation systems on building roofs are the fastest-growing occupational field in the United States, and their annual salary will increase by 105.3% in the next ten years. Another clean energy job is wind turbine maintenance technician, whose salary growth is

expected to be as high as 96.1% in the next ten years. [5] It is gratifying that the world's education system is also stepping up to complete the transformation of the third education revolution, which is about to transform from the original education compatible with the third industrial civilization to education in line with the fourth industrial civilization.

Green development is one of the five significant strategic developments of the country and is the unanimous pursuit of the international community. Higher education's duty-bound responsibility is to carry out green education, cultivate green talents, and promote the formation of green development methods and lifestyles. Is it possible to promote the green reform of higher education? This article will discuss the real significance of the times, where is its theoretical basis, and how to integrate it into the study, work, and life of college students.

2. The Era Value of the Green Reform of Higher Education

2.1. Provide Human Resources for Sustainable Economic Growth and Green Ecological Construction

While the Asia-Pacific region has achieved rapid economic growth and millions of people have been lifted out of poverty, the regional ecological environment system is also facing challenges. Air pollution, water pollution, excessive waste discharge, and extreme weather will become environmental pressures in the region. [6] My country is still on the left side of the "Environmental Kuznets Curve". While the economy is developing rapidly, environmental pollution and ecological problems are worrying. The Bulletin on the State of the Environment in China shows that among the 338 prefecture-level and above cities in the country, 121 cities have met the ambient air quality standards, accounting for 35.8% of the total number of cities; 217 cities have exceeded the ambient air quality standards, accounting for 64.2%. There were 1899 days of severe pollution in 338 cities: 822 days. Among the 10,168 national-level groundwater quality monitoring sites across the country, 1.9% of the water quality monitoring sites meet Class I, 9.0% meet Class II, 2.9% meet Class III, 70.7% meet Class IV, and 15.5% meet Class V. Exceeding the standard indicators are manganese, iron, turbidity, total hardness, total dissolved solids, iodide, chloride, "tri-nitrogen" and sulfate. The problem of harmonious coexistence between man and nature needs to be solved urgently. [7]In 2010, Chinese President Xi Jinping attended the Boao Forum for Asia and delivered a keynote speech titled "Jointly Promoting Asia's Green and Sustainable Development". , to embark on a road of green development and sustainable development that conforms to the trend of the times and has Asian characteristics", China must "transform the development mode, strive to achieve green development, vigorously promote the concept of ecological civilization and environmental protection awareness, and make the country adhere to green development, green consumption, and A green lifestyle, caring for the earth home shared by all mankind, has become a conscious action of every member of society", and it is necessary to "vigorously cultivate talents and promote the realization of all-round development so that green development and sustainable development in Asia and the all-round development of people can promote each other and complement each other." [8] In 2018, the First Session of the Thirteenth National People's Congress voted to pass the Constitutional Amendment. New development concepts, ecological civilization, and requirements for building a beautiful China were written into the Constitution. My country has promoted green development, ecological civilization, and other issues related to the harmonious development of man and nature to an effective national governance strategy and primary development direction.

In December 2016, at the National Conference on Ideological and Political Work in Colleges and Universities, Chinese President Xi Jinping put forward for the first time precise requirements for the development direction of my country's higher education "four services", namely: serve the people, serve the governance of the Communist Party of China, and serve the consolidation of and the development of the socialist system with Chinese characteristics, and serve the reform, opening up, and socialist modernization drive. Therefore, the reform direction of higher education must solve the main difficulties faced in developing our country and the main task to achieve future development. The green reform of higher education implements the concept of green development in my country, provides academic support for the cultivation of harmonious coexistence between man and nature, and provides the necessary talent guarantee for the transformation of my country's extensive scale economic growth mode to intensive efficiency growth mode. The trainees of higher education are not only the leading force in the construction of a green economy in the future but also the reformers and practitioners of green production modes and lifestyles. Therefore, the green reform of higher education is to build a resource-saving and environment-friendly society and promote the only way to build a beautiful China.

2.2. The Inevitable Choice to Deal with the Third and Fourth Industrial, Technological Revolutions

Since the 1760s, human history has experienced several major technological revolutions, and each technological breakthrough has brought about profound changes in human production, life, and even the entire society. From the 1860s to the middle of the 19th century, the first industrial revolution powered by steam engines set off an industrial wave in which machines replaced labor. Since then, human beings have entered industrial civilization. From the 1860s to the beginning of the 20th century, generators came out, and soon internal combustion engines fueled by gas and gasoline were born one after another. Petroleum became a new energy source, and humanity entered the electrical age. The second industrial revolution promoted the significant development of the petrochemical industry, the rise of heavy industries such as electric power, steel, and chemical industry, the gradual emergence of monopoly organizations and the world colonial system, the severe exploitation of resources, and the increasing emergence of climate and environmental problems. Since the 1950s, high-tech products and technologies represented by electronic computers, space technology, atomic energy technology, and biological engineering have developed rapidly, the Internet has become increasingly widely used, robots have gradually appeared in the production, and human beings have entered the information age. After the first three industrial revolutions, human material civilization has achieved unprecedented prosperity, but at the same time, the environment, ecology, resources, and climate have caused significant damage. How-to live-in harmony with nature has

become an urgent problem in the sustainable development of human society problem.

Since the 21st century, new technologies such as graphene, quantum information technology, virtual reality, and clean energy have been born and matured, and the fourth industrial revolution has begun to brew. In 2013, the "Industry 4.0" strategy was officially launched at the Hannover Messe, with the theme of intelligent factories, innovative production, and smart logistics to enhance the competitiveness of the national manufacturing industry. In 2018, the Federal Cabinet adopted and released the German government's "High Technology Strategy 2025" (HTS 2025). The framework, with the theme of "research and innovation for people", proposed 12 specific items, including "significantly reducing plastic waste in the environment". Tasks and corresponding action plans and landmark milestones. [9] In 2011, the United States proposed to "return to the manufacturing industry", advocating the connection of people, data, and machines and focusing on software, network, big data, etc. to subvert the service methods in the industrial field, to enhance national competitiveness.

In 2015, the Chinese government officially released "Made in China 2025", focusing on accelerating the deep integration of the new generation of information technology and manufacturing and fully implementing the strategy of manufacturing a solid country. The strategy puts forward five basic principles, such as "green development" and "talent-oriented", as well as five significant projects, such as the "green manufacturing project". Based on this, we believe that the fourth industrial revolution is a technological revolution characterized by the input of green production factors, which will be committed to the "decoupling" of economic growth and carbon dioxide emissions, and finally realize the "codable" repetitive work by robots replace. There is a set of data in the 2019 World Bank Development Report: Since 1943, the Swedish IKEA Group has spent almost 70 years of unremitting efforts to achieve a global annual sales revenue of 42 billion U.S. dollars. However, China's Alibaba Group has attracted 1 million users in just two years through digital technology and accumulated more than 9 million online merchants in 15 years, with annual sales revenue reaching 700 billion U.S. dollars. [10] The technological revolution has given birth to new growth methods for enterprises, new economic development methods, and new human working methods. At the same time, it is also reshaping the new knowledge and technologies required for new jobs.

2.3. Adapt to the Inevitable Needs of Green Development in the International Community

In the 1960s and 1970s, Rachel Carson's "Silent Spring" in the United States described environmental pollution and ecological damage caused by excessive use of chemicals. Dendera Meadow's "Limits to Growth," told people that following the current growth method will inevitably lead to disastrous results. Since then, the issues of environmental protection and sustainable economic development have entered the field of vision of humanity. In the 1980s and 1990s, documents such as "Our Common Future" by the World Commission on Environment and Development, the "Rio Declaration on Environment and Development" and "Agenda 21" of the United Nations Conference on Environment and Development were successively issued, and the international community gradually formed a unified view of green development. Recognize it and start putting it into action. The United States is one of the first countries in the world to carry out green protection. In 1980, the United States passed a series of legal bills, such as the "Comprehensive Environmental Response, Supplement, and Liability Act" and "Superfund Act", using various methods such as economics, laws, and even insurance to protect the environment. After the outbreak of the financial crisis, the Obama administration even used US$100 billion directly to encourage the investment and development of clean energy, focusing on investing in universities, laboratories and other research institutions for the research and innovation of technologies related to green development and the cultivation of talents. IN 2008, United Nations Secretary-General Ban Ki-moon called on governments to implement a "Green New Deal" at the United Nations Climate Change Conference, which received responses from many countries. In 2009, the British government promulgated the "UK Low-Carbon Transformation Plan" and "Should Renewable Energy Strategy", set up a carbon emission budget, and vigorously supported the research and development of green technologies and the promotion of green lifestyles. In 2009, the German government promulgated the "Renewable Energy Law" to carry out the ecological transformation of industries by implementing green credit, environmental protection education, and qualification certification. France is also actively promoting the green economy, trying to increase 200,000-300,000 jobs by implementing new renewable energy plans. The Japanese government leads the protection of a low-carbon society and green environment and successively promulgated measures such as the "Basic Law for Establishing a Recycling Society", "21st Century Environmental Nation Strategy", and "Green Economy and Social Change" to support the green development of the whole society. [11] The practices of these countries have not only effectively protected the environment but also promoted the upgrading and transformation of production methods, significantly promoting the development of a green economy.

My country is the most populous in the world and the largest developing country in the world. Over 40 years of reform and opening have given birth to "great creations". Since the 21st century, the Chinese government has repeatedly proposed at the Party's National Congress to strengthen the construction of ecological civilization and take the road of green development. The report of the 16th National Congress of the Communist Party of China proposes that in an all-round well-off society, "the capacity for sustainable development will be continuously enhanced, the ecological environment will be improved, the efficiency of resource utilization will be significantly improved, the harmony between man and nature will be promoted, and the whole society will be promoted to achieve product development and a prosperous life." Ecologically sound civilized development path"; the report of the 17th National Congress of the Communist Party of China pointed out that "to build an ecological civilization, basically form an industrial structure, growth mode, and consumption pattern that saves energy resources and protects the ecological environment"; the report of the 18th National Congress pointed out that "accelerate the transformation of economic development The report of the 19th National Congress of the Communist Party of China puts "green" among the five major development concepts, "adhere to the harmonious coexistence between man and nature", "build a beautiful

China, and create good products for the people" living environment and contribute to global ecological security". [12] In recent years, my country has achieved good results in environmental governance by formulating planning objectives, revising the "Environmental Protection Law", improving institutional construction, supporting critical pollution prevention and ecological protection projects, and implementing tax incentives. The Ministry of Ecology and Environment of my country pointed out in the "2019 Annual Report on China's Policies and Actions to Address Climate Change" that my country has reached the carbon emission target of a 40%-45% reduction in 2020 compared with 2005 ahead of schedule. [13]

Green development is the unanimous pursuit of the international community, and it is my country's unshakable international responsibility to participate actively in global green governance. The construction of an ecologically civilized society is still a long way off, and there is an urgent need for professionals who understand green concepts and master green technologies to contribute. The green reform of colleges and universities is responsible for cultivating talents and conducting scientific research.

3. Theoretical Basis for the Green Reform of Higher Education

3.1. Embodies the Ecological Value of Marxism

The green reform of higher education aims to cultivate young people in the new era who will build a resource-saving and environment-friendly society, promote sustainable economic and social development, and achieve harmony between man and nature. Although there are few direct expressions of concepts such as "ecological society" and "ecological civilization" in Marx's classic works, many of his views reveal positive ecological values. Marxism believes that the natural world "is the basis on which we humans (itself a product of nature) grow" [14], "is the "perceptual external world" and "human's inorganic body" [15], and the natural world exists objectively, is "the first source of all labor materials and labor objects", and the relationship between man and nature is directly the relationship between man and man" [16]. Man is the product of the long-term development of nature. "We should not be overly intoxicated by our human victory over nature. For every such victory, nature will retaliate against us." "We must always remember that we must never rule the natural world as we rule the Like other nations". [17] Humans should respect nature, conform to nature, protect nature, and live in harmony with nature. In general, Marx criticized the alienated production and human alienation caused by capital appreciation centered on human value while maintaining a moderate anthropocentrism, pursuing the communism of "reconciliation between human beings and nature" and "reconciliation of human beings themselves" Society, this positive ecological value is precisely the value followed by the green reform of higher education. It not only requires higher education to firmly establish the value of harmonious coexistence between man and nature and green development at the macro level but also teaches students to solve social problems at the micro level. Various problems may be encountered in the process of building a socialist ecological civilization and practicing green schools, green communities, green families, and green travel.

3.2. Inherited the Theory of Sustainable Development

In 1987, the United Nations World and Environmental Development Commission published the report "Our Common Future", formally proposing the concept of sustainable development, namely: "development that meets the needs of the present without compromising the ability of future generations to meet their own needs", And pointed out that fairness, continuity, and commonality are the three basic principles of sustainable development. In 1992, the United Nations Conference on Environment and Development passed the "21st Century Agenda" and established the Sustainable Development Committee. The participants unanimously recognized the concept of sustainable development. This initial concern caused by environmental protection has eventually evolved into a complex global adaptive thinking and practice of the economy, society, and ecological environment. It has become a comprehensive development strategy to guide humanity in the 21st century. In 2016, the United Nations officially launched the "2030 Agenda for Sustainable Development", proposing 17 sustainable development goals covering the economy, society, and environment. Mohammad Bandi, President of the 74th session of the United Nations General Assembly, stated in an interview that "education is the key to achieving the United Nations 2030 Agenda for Sustainable Development" [18]. Sustainable development is not only the goal that education needs to achieve but also an essential means to achieve other sustainable development goals. The green reform of higher education has inherited and developed the sustainable development theory.

On the one hand, the government must provide inclusive and fair high-quality education and encourage all people to learn lifelong. On the other hand, it supports education in improving the environment and protecting the ecology. Actively try and work hard.

3.3. Practice Xi Jinping's Concept of Green Development

Chinese President Xi Jinping's concept of green development is the inheritance and development of Marxist ecological values. It is the practice and enrichment of sustainable development theory in China. The green reform of higher education has practiced Xi Jinping's concept of green development. In 2005, Chinese President Xi Jinping, then Secretary of the Zhejiang Provincial Party Committee, accurately put forward the scientific thesis that "lucid waters and lush mountains are golden and silver mountains" when he inspected Yu Village in Anji, Zhejiang. [19] Chinese President Xi Jinping has emphasized the relationship between green water and green mountains and mountains of gold and silver on many occasions. It is the concept of developing productivity and more consciously promoting green, circular, and low-carbon development" [20]. The education community recognized the critical role of education in green development earlier and launched a series of activities. The national activities began at the end of the last century. In 1996, the Propaganda Department of the Central Committee of the Communist Party of China, the Ministry of Education, and the Ministry of Environmental Protection of the People's Republic of China issued the "National Environmental Protection Publicity and Education Action Outline" and the country gradually launched the "Green School" campaign.

Since then, I have often learned and communicated with the International Environmental Education Foundation, and many green schools in my country have begun to be established. As of 2017, 450 primary and secondary schools (kindergartens) across the country have won the Green Flag Award for International Ecological Schools. [21] The green reform of my country's higher education is the continuation and deepening of green schools. It not only focuses on the overall environmental management and education of schools but, more importantly, integrates the concept of green development into the overall management and teaching of schools, especially colleges, and universities. Students' future work and life will go deep into all aspects of students' learning and actions in the form of integration and participation and extend to families and communities. At present, our country is in a critical period of transition from industrial civilization to ecological civilization. Establishing and improving the economic system of green, low-carbon, and circular development, accelerating the reform of the ecological civilization system, and building a beautiful China require hundreds of millions of builders, and the green reform of higher education is the leading actor in it.

4. Promoting Strategies for the Greening of Higher Education

4.1. Integrate the Concept of Green Development into the Cultivation System of Socialist Core Values

In 2015, the State Council issued the "Opinions on Accelerating the Construction of Ecological Civilization", stating: "Actively cultivate ecological culture and ecological morality, so as to make ecological civilization become the mainstream value of society and an important content of socialist core values." The newly revised "Environmental Protection Law of the People's Republic of China" stipulates that "education administrative departments and schools shall incorporate environmental protection knowledge into school education content". To become "qualified builders and reliable successors" of my country's socialist construction, college students should have the concept of ecological civilization and environmental protection awareness, understand green knowledge and skills, and gradually develop green consumption and lifestyle. How to incorporate the concept of green development into the scope of socialist core values education mainly proceeds from the following three aspects: First, create a green campus environment and cultivate a green cultural atmosphere, from the aspects of university buildings, roads, greening, water flow, and electrical departments Build a campus environment and atmosphere that is low-carbon, environmentally friendly, and resource-saving; second, start with the actual needs of college students and solve their practical difficulties through the popularization of green knowledge, such as: analyzing green occupations and The specific needs of green work can solve the employment problem of students; by learning green life skills, beautify the living environment of the dormitory, develop a thrifty living habit and a green travel lifestyle, Etc. The third is to combine with the learning practice of college students, integrate green development concepts and skills into the learning of professional courses, and add green-related professional elective courses and public elective courses. At the same time, it integrates ecological culture with students' practice and pays attention to students' practice of ecological civilization actions in practice.

4.2. Construct an Open School-Running System Compatible with Green Development

Recently, the European Union passed a mid-term budget proposal of up to 1.1 trillion euros and a European recovery plan of 750 billion euros, focusing on green development and digital transformation. In the context of the huge impact of the new crown pneumonia epidemic on the economy, the EU has established the general direction of "green recovery". The European Union has always been a pioneer in green transformation. Its low-carbon technology, emission standards, and green management have long been at the world's top level, and it has contributed classic examples in the energy revolution, circular economy, ecological parks, and waste-free cities. [22] In the "White Paper on China's 21st Century Population, Resources, Environment, and Development", my country first incorporated sustainable development into the long-term planning of economic and social development, and in the 16th National Congress of the Communist Party of China, "continuously enhancing the ability of sustainable development" One of the goals of building a moderately prosperous society. With the rise of the fourth industrial-technological revolution, the green economy is becoming the development model of the world's mainstream economy, and it is the bounden duty of colleges and universities to build a talent training model compatible with green development. On the other hand, first-class institutions of higher learning are inseparable from an open school-running system: one is to keep pace with the times and be open to enterprises. In 2015, the State Council issued the "Overall Plan for Coordinating and Promoting the Construction of World-Class Universities and First-class Disciplines", emphasizing that "deepen the integration of production and education, closely combine the construction of first-class universities and first-class disciplines with the promotion of economic and social development, and strive to improve the contribution of universities to industrial transformation and upgrading. rate", put forward clear requirements for deepening the integration of production and education for the construction of "double first-class". In 2016, the Party Central Committee issued the "Opinions on Deepening the Reform of the Talent Development System and Mechanism", which requires "the establishment of a technical and skilled talent training model that integrates production and education, and school-enterprise cooperation." In 2017, the State Council will introduce policies and measures to deepen the integration of industry and education, which will be included in the annual deepening of economic system reform key tasks. [23] The integration of production and education has become an important policy to promote the development of higher education and strengthen the cultivation of innovative talents and technical skills in recent years. It is necessary to keep pace with the times, carry out in-depth school-enterprise cooperation and integration of production and education, and actively encourage enterprises to participate in the school's talent cultivation and scientific research. Vigorously promote the cooperation between colleges and universities, and enterprises, especially those in emerging industries, to strengthen the provision of talent support and technical services in areas such as energy conservation and emission reduction, environmental

protection, and new energy. The second is to open to the international community, learn from and learn from the successful experience of the international community, and improve the practical ability to green colleges and universities. For example, drawing on the practices of the European Environmental Education Foundation, through the establishment of ecological school committees, environmental review, development, and implementation of action plans, testing and evaluation, the establishment of links with courses, social publicity, and participation, and formulation of ecological regulations, Etc., encourage students, Communities, and enterprises work together to build green schools. [24]Learning from the Australian government, first pass policy documents at the national level, such as: "Green Skills Agreement", "Green Skills Action Plan", "National Vocational Education and Training System Sustainable Policy and Action Plan", Etc., and establish a special responsible agency The National Center for Sustainable Development, and it falls into the curriculum, that is, the "sustainable development" course will be included in all training packages, which will be implemented by the TAFE (Technical And Further Education) college and become a compulsory course for the TAFE college. The third is to open to the community. The green school radiates to the community to which it belongs and provides the community with green education-related vocational training, employment services, professional experience, and academic education. Different from community colleges, the opening to the community advocated here means that colleges and universities will popularize continuing education and training related to green education to the community, and on the other hand, it will serve the ecological construction of the community by publicizing and promoting the efficient recycling of resources and energy. Utilization, reduction of waste emissions, Etc., to achieve an ecologically effective cycle and economically efficient growth in the community.

4.3. Carry out Green Talent Training and Professional Adjustment in Colleges and Universities

With the advent of the third and fourth industrial revolutions, various new formats have gradually entered people's work and life, and the original professional margins have become increasingly blurred. "Greening" the majors is the primary direction for revising the talent training program. Majors are the basic teaching units of colleges and universities. The cultivation of talents and the adjustment of majors should not only consider the external environment, such as the needs of the economy and society, the expectations of enterprises for talents, the school's teachers, and teaching conditions but also consider the needs of students themselves, such as the needs of growth and success, the needs of future work and life, etc. 2010 Germany revised a new professional catalog, adding 82 new majors and 219 old majors. The revised professional catalog focuses more on majors or course content related to environmental protection and the low-carbon economy. [25] Due to many historical reasons in our country, the professional setting of many colleges and universities still needs to catch up, unable to keep up with the changes of the times and far from meeting rapid economic and social development. How to carry out green development theoretical innovation and related technological innovation, accelerate the development of low-carbon technology, promote high-efficiency energy-saving technology, and provide strong support for green development and sustainable development is an important task. The cultivation and professional adjustment of green talents should also consider the types of higher education, that is, focusing on research-oriented, application-oriented, and vocational-skilled universities. [26] For example, research-oriented colleges and universities should mainly cultivate theoretical research related to green development, green economy, and green design, as well as carry out practical research in the fields of energy conservation and environmental protection, clean production, and clean new energy, to provide academic research talents with The higher vocational colleges engaged in the training of specialist-level skilled talents in the front line of production management services mainly reform talent training and professional adjustment from the aspects of green skill technical services and skill application reform and innovation. Specifically, we must first improve the mechanism for scientifically setting up new majors based on social needs, school-running capabilities, and industry guidance, establish an evaluation system for setting up disciplines and majors that enterprises, industries, and schools jointly participate in, and combine economic and social development trends and strategic emerging industries. To meet the demand, vigorously develop majors suitable for green industries such as new technologies, new industries, and new formats, formulate green professional cluster construction plans, promote the precise connection between majors and industries, and the development of interdisciplinary and emerging disciplines. At the same time, early warning settings are set and gradually guided to exit for majors that are seriously lagging in market development and have a low counterpart employment rate.

4.4. Integrate the Green Concept into the Education and Teaching of Colleges and Universities in an All-Round Way

The green reform of colleges and universities must be closely integrated with the third and fourth industrial revolutions. Under the concept of green development, green jobs should be taken as clues, green capabilities should be used as the basis, and green products (service chains) should be used as carriers to integrate green Embedding reforms into all aspects of education and management. Specifically, one is the clue of green jobs: In the traditional sense, green jobs refer to jobs in agriculture, manufacturing, R&D, administration, and service departments essential in protecting or restoring the environment. These efforts help protect ecosystems and biodiversity; reduce energy, material, and water consumption efficiently; decarbonize the economy; minimize or avoid various forms of waste and pollution. [27] However, the green job referred to here is based on the traditional meaning, including new technological elements such as "artificial intelligence", "mixed reality", "big data analysis", and "synthetic biotechnology". Green work is the future. The primary trend of work, taking green work as a clue, is to enable the cultivation of green skills to meet the requirements of protecting biodiversity, reducing pollution and waste, and decarbonizing work as much as possible. The second is based on green ability: the purpose of greening higher education is to train students to adhere to green environmental protection in green work and daily life, to have green professional knowledge and skills, and to practice low consumption, low pollution, and low pollution—wasteful green action. Therefore, green training should be based on green ability.

This ability is mainly divided into two dimensions. One dimension is to cultivate students' green professional knowledge and skills. This kind of skill is integrated with the learning of professional knowledge. By closely following the green industry in the professional setting, connecting green jobs in the curriculum system, and infiltrating green skill elements in the core curriculum, greening will be infiltrated into professional learning, future life, and work; another dimension is that it mainly focuses on cultivating students' general green knowledge and skills. This general skill is mainly to train students to reduce the use of resources, cultivate the concept of green environmental protection, and use simple green abilities in study, life, and work to protect the environment and protect the environment—resources and energy conservation. The third is to use green products (service chain) as the carrier. The development of green skills in colleges and universities must use typical products or services to develop a green economy as the carrier to cultivate skilled talents more effectively. Different majors or professional groups can choose different products or services.

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