

International Journal of Education and Teaching Research

MARCH 2024 VOLUME 5 NUMBER 1

Publisher: ACADEMIC PUBLISHING HOUSE
Address: Quastisky Building, Road Town, Tortola, British Virgin Islands
UK Postal Code: VG1110

E-mail: editor03@acadpubl.com
<http://www.acadpubl.com/ijetr.aspx>



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CONTENTS

Research on the Construction of Postgraduate University-Enterprise Joint Training Base under the Background of “Double First-class”	1
<i>Xiangzheng Xu</i>	
Reflections on the Civic and Political Reform of the Course “Environmental Protection and Sustainable Development”	5
<i>Li Chen, Tao Yang</i>	
Policy-guided Diversion and Anticipated Effects: Educational Choices of Intermediate Students in County-level Schools	12
<i>Guiping Sun, Chenyang Bu</i>	
Innovation and Development of Ideological and Political Education for College Students in the Mobile Learning Environment	21
<i>Hongwei Ji, Dongjin Mao, Shougang Zang</i>	
A Study on the Evaluation System of College English Teaching Quality in Blended Learning	28
<i>Ying Zhao, Qingyu Wu, Hui Wang</i>	

Research on the Construction of Postgraduate University-Enterprise Joint Training Base under the Background of “Double First-class”

Xiangzheng Xu

School of Electrical and Automation Engineering, East China Jiao-tong University, Nanchang, Jiangxi, 330013, China

Abstract: The construction of postgraduate university-enterprise joint training bases serves as a significant avenue for graduate education, effectively promoting the reform and development of postgraduate education. This paper, set against the backdrop of the “Double First-Class” initiative, integrates demand-oriented perspectives and constructs the connotation of our university's postgraduate university-enterprise joint training base based on three aspects: functional positioning, construction environment, and the involvement of key stakeholders. That is the function orientation of the university-enterprise joint training base should develop to “comprehensive”, the environmental construction should be transformed to “sustainable”, and the main body should participate to “multiple cooperation”. According to the “double first-class” construction task, by addressing functional needs, service requirements, and interest demands, the paper outlines a path for specialized, sustainable, and diversified construction of our university's postgraduate university-enterprise joint training base. Through the binding of rights, responsibilities, interests, scientific research and talents between universities and enterprises, enterprises and universities are guided to carry out diversified industry-university-research cooperation from all levels, so as to achieve the win-win interests of universities, enterprises and graduate students. This is of great significance in enhancing the quality of graduate education and accelerating progress towards the “Double First-Class” initiative.

Keywords: Graduate Education; University-enterprise Collaboration; Training Base Construction

1. INTRODUCTION

As a bridge connecting enterprises and universities, the university-enterprise joint training base is an effective means to enhance scientific research levels and improve the practical skills of graduate students. In the context of the “Double First-Class” initiative, the construction of a well-designed university-enterprise joint training base contributes to deepening the integration of academia and industry, driving major scientific innovations, achieving breakthroughs in key technologies, and transforming them into advanced

productivity [1]. In recent years, the development of our university's postgraduate university-enterprise joint training base has been rapid, achieving significant results in talent cultivation and knowledge dissemination. However, challenges such as unclear functional positioning, inadequate service environments, and lack of coordination among stakeholders have emerged [2]. These issues make it difficult for universities to achieve the goals of the “Double First-Class” initiative. Therefore, within the context of the “Double First-Class” initiative, integrating demand-oriented perspectives and exploring the construction path of university-enterprise joint training bases is crucial for cultivating outstanding innovative talents.

2. CONSTRUCTION OF THE POSTGRADUATE UNIVERSITY-ENTERPRISE JOINT TRAINING BASE CONNOTATION UNDER DEMAND ORIENTATION

How the construction of university-enterprise joint training bases aligns with the practical needs of both academic programs and corporate development, and how it serves the socioeconomic development while enhancing the quality of graduate education, are essential considerations for the connotation construction of these bases. The connotation construction is the core of base development, influencing the innovative progress of university-enterprise joint training bases. This paper introduces the concept of demand orientation into the construction of joint training bases based on empirical analysis of the existing problems in our university's postgraduate joint training base construction [3]. It constructs the connotation of our university's postgraduate university-enterprise joint training base based on demand orientation, focusing on functional positioning, service environment, and interest stakeholder participation.

(1) Evolution of functional positioning towards “comprehensive development”

Currently, most postgraduate joint training bases are specialized, mainly meeting the requirements for graduate students to engage in social practices. However, the overall level of base construction is generally low, with unclear expectations regarding the functions, roles, and effective management of the base.

This lack of clarity in functional positioning leads to a loss of direction in the development of postgraduate joint training bases [4]. To address this issue, the guiding ideology and training objectives of base construction should be clear. Based on the actual development of the school's disciplines and closely aligned with societal needs, competitive industries should be selected as the main development focus. Long-term and stable cooperation agreements should be signed, ensuring the supply of practical projects and stable financial investment for the postgraduate training base. During the construction of the joint training base, the refinement of disciplinary characteristics should be continuously emphasized, promoting the development of the base towards comprehensive functionality.

(2) Transformation of environmental construction towards "sustainability"

In recent years, the construction of postgraduate joint training bases has rapidly developed, akin to mushrooms after rain. However, short-term actions have led to significant resource wastage, creating bottlenecks in funding once initial support phases conclude. Subsequently, there is often a lack of proper maintenance of the base, resulting in aging facilities, insufficient experimental equipment, and inadequate spaces to meet the needs of graduate practical teaching [5]. The construction of postgraduate university-enterprise joint training bases should address the environmental creation and facility support for sustainability. As a hub for nurturing talents, the joint training base aims to provide an essential platform for graduate students to enhance their research, practical, and innovative capabilities. Therefore, a long-term perspective should be considered in base construction. Sustainable development can be achieved through understanding market demands, continuously adjusting joint training models, establishing long-term university-enterprise cooperation mechanisms, creating a favorable "industry-academia-research" joint training base service environment, optimizing base facilities, and ensuring the sustainable development of the postgraduate joint training base.

(3) Transition of stakeholder participation towards "diversified collaboration"

The construction of postgraduate joint training bases involves multiple entities such as universities, enterprises, and research institutions. The traditional model of university-enterprise cooperation should evolve into a new form of "strategic partnership." It is essential to break away from the previous model where universities unilaterally dominate the graduate training process and achieve a deep integration of talent cultivation and economic development [6]. This can be realized by having technical experts from enterprises and university professors jointly undertake graduate practical teaching tasks. The training of graduate students should be organically integrated with the development of enterprises, aiming to

produce more practical and innovative talents. The university should actively provide technical services to enterprises and solve technical problems, while enterprises offer practical platforms and innovation opportunities to the university. Collaboration between universities and enterprises should involve multiple aspects, achieving a win-win situation for universities, enterprises, mentors, and students.

3. RESEARCH ON THE CONSTRUCTION PATH OF POSTGRADUATE UNIVERSITY-ENTERPRISE JOINT TRAINING BASES UNDER DEMAND ORIENTATION

Meeting demands is a crucial criterion for the success of talent cultivation. In response to the shifting demands of postgraduate joint training bases, it is essential to explore the construction path that establishes a diversified demand mechanism, allowing various stakeholders to fully participate in the innovation talent cultivation of universities and harnessing the subjective initiative of graduate training subjects. This is undoubtedly an important aspect of postgraduate university-enterprise joint training base construction research [7]. By introducing the concept of demand orientation into the construction of postgraduate university-enterprise joint training bases, the paper outlines a path for the construction of our university's postgraduate joint training base based on three aspects: functional needs, service needs, and interest needs. Through the binding of rights, responsibilities, benefits, research, and talent, the paper aims to meet the needs of multiple societal interest entities, fully inspiring the vitality of the joint training base, making it a true "incubation ground" for urgently needed outstanding innovative talents.

(1) Specialized construction of postgraduate university-enterprise joint training base based on functional needs

Talent cultivation is the foundation of joint training base construction and the central focus of universities. The traditional model of cultivating single theoretical talents no longer meets the requirements of the times. The cultivation of outstanding innovative talents is the development direction of postgraduate education under the "Double First-Class" background. The construction of postgraduate university-enterprise joint training bases should meet the functional needs in three aspects: talent cultivation, research and development training, and achievement promotion [8]. Through the practical training in the joint training bases of the university and enterprises, the postgraduates will go from the mastery of the basic knowledge system to the application of the specialized technology system, and then to the enhancement of the comprehensive research skills, and finally become the composite and innovative talents adapted to the needs of the society. Through the practical training in the joint training bases of the university and enterprises, the postgraduates will go from the mastery of the basic knowledge system to the application of the specialized

technology system, and then to the enhancement of the comprehensive research skills, and finally become the composite and innovative talents adapted to the needs of the society [9]. Simultaneously, deepening the integration of industry and education, focusing on promoting achievement transformation, and advancing major scientific innovations and breakthroughs in key technologies will enhance the driving force of university innovation resources for economic and social development, providing robust intellectual support for enterprises.

(2) Sustainable construction of postgraduate university-enterprise joint training base based on service needs

Postgraduate joint training bases are typically constructed collaboratively by universities, enterprises, and governments. During the initial operation phase, bases can operate smoothly, but support from the government or enterprises is limited. Once the support period is over, financial bottlenecks are encountered. This often leads to inadequate later-stage service functions and insufficient maintenance work, resulting in the aging of most base facilities and a failure to meet the needs of graduate practical teaching [10]. The construction of postgraduate university-enterprise joint training bases should address the service needs in terms of environmental creation and facility support. As a place for talent incubation, the joint training base aims to provide a vital platform for graduate students to improve their research, practical, and innovative capabilities. Therefore, long-term considerations should be taken into account in base construction. The joint training base's construction requires an in-depth understanding of market demands, continuous adjustment of the postgraduate joint training model, establishment of a long-term university-enterprise cooperation mechanism, creation of a favorable "industry-academia-research" joint training base service environment, optimization of base facilities, and realization of the sustainable development of the postgraduate joint training base.

(3) Diversified collaboration construction of postgraduate university-enterprise joint training base based on interest needs

The construction of postgraduate university-enterprise joint training bases is a process that involves the coordinated efforts of multiple interest entities. Promoting the synergy of various interest stakeholders between universities and enterprises is the key focus and difficulty of base construction. Joint construction by universities and enterprises is based on their intrinsic needs. Enterprises primarily pursue economic and managerial benefits, focusing on obtaining technical support that can be transformed into market products. On the other hand, universities focus on the social benefits of achievement transformation and talent cultivation. Due to the divergent focuses of various interest entities, collaboration partners have similar directions but varied content demands, leading

to potential conflicts. The construction of postgraduate university-enterprise joint training bases should address the interest needs in terms of establishing mechanisms for shared interests and cooperation. By binding the rights, responsibilities, benefits, research, and talent of both universities and enterprises, the paper aims to guide various levels of industry-academia-research collaboration, realizing a win-win situation for universities, enterprises, and graduate students.

4. CONCLUSIONS

Postgraduate university-enterprise joint training bases, as platforms for talent cultivation, are effective means for nurturing innovative professionals. Based on the three aspects of functional positioning, service environment, and interest stakeholders, this paper constructs the connotation of our university's postgraduate university-enterprise joint training base using a demand-oriented approach. In line with the tasks of the "Double First-Class" initiative, the paper introduces the concept of demand orientation into the construction of postgraduate university-enterprise joint training bases, focusing on three paths: functional needs, service needs, and interest needs. This strengthens the demand-oriented construction of our university's postgraduate university-enterprise joint training base in terms of specialization, sustainability, and diversified collaboration, realizing a win-win situation for universities, enterprises, and graduate students.

ACKNOWLEDGMENTS

This paper is supported by the Research Project on Teaching Reform for Jiangxi Province Degree and Graduate Education (Research on the construction of demand-oriented joint training base for graduate students under the background of double first-class) under grant No JXYJG-2020-102.

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Reflections on the Civic and Political Reform of the Course "Environmental Protection and Sustainable Development"

Li Chen, Tao Yang

School of Economics and Management, Anhui Jianzhu University, Hefei 230000, Anhui, China

Abstract: With the global climate change, the future society will face the double challenges of scarcity of energy and accumulation of pollutants at the same time, and the environmental problem has become an important issue facing the human society today. The awareness of the protection of the environment and the concept of sustainable development is not only an important quality of human development, but also a core value and world view of human beings, and one of the core qualities that professionals in the field of architecture need to have. Based on this, the article takes the course of Environmental Protection and Sustainable Development as a carrier, focuses on the nurturing goal of architectural colleges and universities, combines with the national development needs, makes an investigation of the reform measures of the course's ideological and political teaching, and provides certain references for architectural colleges and universities to promote the environmental protection education of college students and to achieve the goal of establishing morality and nurturing people.

Keywords: Course ideology; Protection of the environment; Sustainable development; Foster virtue through education; Practical responses

1. INTRODUCTION

Since the twentieth century, passive changes in the environment have brought about ecological imbalances, climate anomalies, melting icebergs, earthquakes and tsunamis, and environmental pollution, which have seriously affected the habitats of flora and fauna and the health of human beings. For the first time, the 18th National Congress of the CPC put forward the new requirement of building an ecological civilisation in the overall layout of the "Five-in-One", and proposed that it should be integrated into the construction of various fields, including the economy, politics, culture and society. The Twentieth National Congress report once again emphasised that "nature is the basic condition for human survival and development. It is necessary to firmly establish and practise the concept that green water and green mountains are golden silver mountains, and to plan development from the height of harmonious coexistence between human beings and nature." [1] It has also made a major decision to

"promote green development and the harmonious development of human beings and nature".

The national conference on ideological and political work in colleges and universities stressed that we should pay attention to building a synchronous and synergistic mode of ideological and political work in philosophy and social sciences and other disciplines, and that under the leadership of Marxism, all kinds of forces, all kinds of resources, and all kinds of courses can all play a role in nurturing people to achieve a "synergistic effect". In 2019, General Secretary Xi presided over the symposium for teachers of school ideology and politics and delivered a speech. In 2019, General Secretary Xi hosted a symposium for teachers of school ideological and political courses and delivered a speech, in which he stressed that "the ideological and political work of colleges and universities is fundamentally about doing people's work, and the central link lies in establishing morality and nurturing people, and the core lies in improving the ability to cultivate talents" [2]. 2020, the Ministry of Education issued a "Guideline for the construction of ideological and political construction of higher education courses", which puts forward that the construction of ideological and political construction of colleges and universities courses is basically solving the problem of "what kind of people to cultivate, how to cultivate people, and for whom to cultivate people".

The development of China's research related to curriculum ideology and politics has been relatively fast in recent years, and the volume of literature related to curriculum ideology and politics has grown rapidly in the past three years. In 2019, after General Secretary Xi convened a symposium, the Chinese chain growth rate of the volume of literature related to curriculum ideology and politics reached a peak (as shown in Figure 1). Led by the spirit of "to run a good socialist university with Chinese characteristics, we must insist on establishing moral education, and integrate the cultivation and practice of socialist core values into the whole process of teaching and educating people" [3], all kinds of colleges and universities across the country have rapidly carried out comprehensive reform of ideological and political education. The new teaching concept of "Curriculum Civics and Politics" has been put forward, and it has

gained good teaching effect in the relevant practice and research activities of various universities and colleges. Based on this, this paper takes "environmental protection and sustainable development" course as the carrier to explore the construction path of ideology and politics in professional courses of architectural colleges and universities.

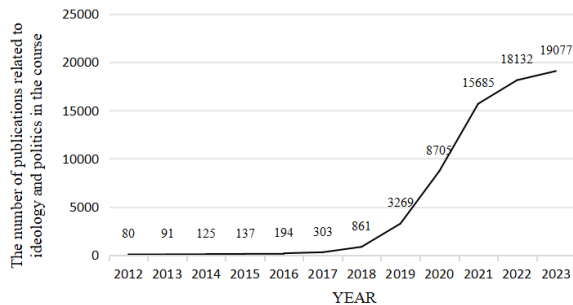


Figure 1 Domestic data on literature related to curriculum Civics in recent years

2. BACKGROUND TO THE REFORM OF THE REFORM OF THE "ENVIRONMENTAL PROTECTION AND SUSTAINABLE DEVELOPMENT" PROGRAMME

2.1 Current Status of Development of the course "Environmental Protection and Sustainable Development"

At the present stage of higher education, the combination of curriculum politics and professional courses has become a very important educational mode, and all disciplines are accelerating the development of integration with curriculum politics, and colleges and universities are gradually elevating the integrated teaching of curriculum politics and professional courses to a strategic position, and gradually expanding the breadth and depth of the combination of professional courses and curriculum politics. Under the background of economic globalisation, the pressure on the ecological environment is increasing globally, and environmental problems have become the shackles of sustainable survival and development of mankind. Development and environmental protection should go hand in hand to seek harmony, and sustainable development will be a decisive challenge for the global development strategy. As a result of the continuous enrichment and development of the theory and practice of environmental science, mankind has gained a deeper understanding of environmental problems, improved technologies and measures to combat pollution, and a further understanding of the relationship between environment and development. Therefore, it is particularly important to strengthen the education of all people, especially students in higher education institutions, on the awareness of environmental protection and the theory of sustainable development[4].

As a public course in general education for students in institutions of higher learning, "Environmental

Protection and Sustainable Development" is designed to enable students to grasp the scope of the environment, to guide them to begin with an understanding of the basic characteristics of the Earth's environment, to learn about the energy shortages and environmental problems facing mankind in today's world, and to understand the pressures that population growth is placing on resources and ecosystems. They will correctly assess the pressure of population on resources and ecosystems, identify the main pollutants and the main methods of preventing and controlling pollution, and discuss the pollution of different environmental elements, discuss the pollution of various environmental elements by human activities and the principles and technical means of controlling them, and understand the connotation and basic means of ecological civilisation and sustainable development. "Environmental Protection and Sustainable Development" focuses on the combination of theoretical and experimental knowledge in the course content. The course introduces the ecological footprint, the triple bottom line and the new concept of measuring sustainable development, so that students can understand the basic functions and means of environmental management, China's environmental management system and the system of environmental protection law, understand how to ensure the quality of the ecological environment through environmental planning, environmental testing, etc., and have a deep understanding of the new production mode and economic development mode of human society. The theory of sustainable development and the importance of clean production are explained, and the latest environmental quality standards, environmental monitoring methods and macro-control tools, such as environmental quality assessment, environmental planning and environmental management, are also introduced. The programme focuses on developing students' professional competence in analysing and assessing the social, health, safety and cultural impacts of environmental engineering solutions, as well as cross-cultural communication and interaction. It aims to ensure that students in architecture schools are guided by the concepts of environmental protection, sustainable development and cleaner production when acquiring and applying their professional knowledge, as well as throughout their careers.

2.2 The Necessity of Integrating the Course "Environmental Protection and Sustainable Development" into Political Education

Curriculum ideology and politics is not simply to open a class or add an activity[5], but to deepen and extend the responsibility of teachers to educate people in daily life, and to cultivate students' worldview, life view and values. In the theoretical dimension, Civics in the curriculum is a development on the traditional education concept, aiming to guide

the various disciplines and Civics courses to go hand in hand, give full play to the effectiveness of ideological and political education, and build up the educational ideology of the "whole-course parenting" model; in the practical dimension, the Civics education curriculum construction is aimed at studying the elements of ideological and political education embedded in each course. In the practical dimension, the construction of the Civic and Political Education Curriculum aims to study the elements of ideological and political education contained in each course, optimise the configuration of the curriculum, renovate the teaching materials, improve the teaching design, strengthen the teaching management, etc., so that ideological and political education can be carried out through all aspects of teaching and realize the unity of ideological and political education and professional knowledge education.

With the progress of society and the gradual improvement of environmental requirements, the state has higher requirements for the environmental protection consciousness of young students in higher architectural colleges and universities. The promotion of environmental protection is a prerequisite for the development of science and technology, and architectural colleges and universities need to systematically cultivate students' awareness of sustainable development. As a basic course for architecture majors, "Environmental Protection and Sustainable Development" contains a variety of ideological and political elements such as ecological civilisation, environmental awareness, low-carbon life, sustainable development concepts, etc. By reasonably integrating the elements of ideology and politics, students can further improve their ideological and moral qualities and comprehensive qualities while learning the knowledge of environmental protection and sustainable development. Ideological and moral quality and comprehensive quality, exercise their awareness and ability to consider environmental factors in building design and construction, and cultivate them to become talents with a sense of social responsibility and innovative ability. In addition, in the teaching of the curriculum, it is crucial to convey to students the worldview, life view and values of Marxian theory. Focusing on the development of students' life view, worldview and values is the basis for educating students on low-carbon and environmental protection awareness, which is an important embodiment of the worldview, and it can fundamentally promote the development of a correct low-carbon and environmental protection awareness among students. Enhancing students' awareness of environmental protection and carbon emission reduction in ideological and political education is not only a condition for the construction of ecological civilisation in China, but also a condition for the development of ideological and political education

itself. The introduction of this programme is an important way to enhance students' awareness of low-carbon environmental protection, their ability to take action, and to achieve all-round development. The implementation of the ideological and political education programme can not only provide a long-lasting impetus for the development of ideological and political education, but also enrich the content of teachers in ideological and political education and transform the methods of teachers in ideological and political education. Carrying out curriculum ideology and politics can not only sound the existing professional teaching system, on the other hand, it can improve the ideological and moral level of professional students in construction colleges and universities, so that the ideological and political spirit of the teaching of professional courses in the teaching of tacit and subtle positive impact on students. Students actively think about how to reduce environmental pollution, resource waste and ecological damage through the concept of green building design and sustainable development. In order to implement the Party's line, guidelines and policies, promote China's green development, and realise the grand vision of a beautiful China, construction colleges and universities carry out the construction of ideological and political construction of professional courses not only meets the social demand for environmental protection, but also is the inevitable requirement for the sustainable development of the construction industry.

3. DIFFICULTIES FACED IN REFORMING THE IDEOLOGY OF THE "ENVIRONMENTAL PROTECTION AND SUSTAINABLE DEVELOPMENT" PROGRAMME

Since the promotion of the teaching reform of "Civics and Politics in the Curriculum", colleges and universities have made many attempts to integrate Civics and Politics in the curriculum into professional courses, and have achieved certain results. However, there are still a lot of problems in the construction and reform of the Civics and Politics education. Taking "Environmental Protection and Sustainable Development" as an example, the problems at this stage are mainly reflected in the following aspects:

3.1 Lack of Systematic Thinking and Unclear Curriculum Objectives

The idea of ecological civilisation is one of the important contents of the ideological and political education for students in architectural colleges and universities, and "Environmental Protection and Sustainable Development" should be a professional basic course to cultivate students' environmental awareness, environmental protection skills, sustainable development thinking, as well as ideological education and value guidance for students. However, some schools do not follow the principle of integrating ideological and political elements into professional courses and do not fully implement the

education reform programme in the construction and reform of course ideology and politics, resulting in insufficient ideological and political elements, which in turn leads to unclear emotional values and a lack of clear emotional values in the teaching of professional courses.

3.2 Teachers of Professional Courses Lack a Comprehensive Understanding of Curriculum Civics
Teachers of professional courses, as the main body of teaching, must pay attention to the top-level design and overall planning of the course if they want to fundamentally solve the problem that professional courses and Civic and Political courses go in the same direction[6]. In the teaching process of the course "Environmental Protection and Sustainable Development", some teachers are not teachers of professional Civic and Political courses, and their level of political theory is limited. In the teaching process, most teachers' teaching focus only stays on the explanation of professional knowledge, and the Civic and political education is very easy to be neglected, which leads to the Civic and political education floating on the surface of the course teaching, and only stays in purely and rigidly instilling theoretical concepts to students, and the professional education and Civic and political education are split into "two skins". Some teachers explain the content of the course as an independent part, resulting in the teaching content of the entire course is fragmented phenomenon. This is not conducive to the systematic absorption of relevant knowledge by students, and it is also impossible to systematically present the contents of Civics and Politics.

3.3 Single Teaching Method and Form

"Environmental protection and sustainable development" is mainly taught through traditional classroom lectures, students are in a passive acceptance of the situation most of the time, the lack of classroom participation, students can not feel the importance and urgency of environmental protection for the human economy and society. On the other hand, the traditional teaching method is difficult to stimulate students' interest in learning when teaching policies, regulations, theoretical concepts and other contents such as "environmental protection policy" and "sustainable development strategy", making the teaching content mechanical and rigid. The intrinsic attraction of political educating is weakened, and the effectiveness of political educating cannot be brought into full play, which is not conducive to improving the quality of talent cultivation.

3.4 Inadequate assessment and evaluation mechanism

The course "Environmental Protection and Sustainable Development" aims to cultivate students' awareness of low-carbon environmental protection, environmental protection responsibility, strengthen the understanding of the concept of sustainable development, and lead students' values in a subtle

way. The existing assessment methods of the course mainly rely on the closed-book examination at the end of the semester, which focuses on students' memory and understanding of the book knowledge, and ignores the examination of students' awareness of environmental concerns and responsibility for environmental protection in their daily lives. In the daily course, there is a lack of stage-by-stage assessment and evaluation, students are unable to feedback their stage-by-stage problems in a timely manner, teachers can only obtain part of the feedback lagging behind and limitations, and fail to adjust the teaching programme as early as possible, students' classroom learning is ineffective, which leads to students' reliance on the "temporary clasp of the Buddha's feet" before the examination to "cope" with the final examination. Students' learning efficiency in the classroom is low, resulting in students relying on the pre-test "cramming" to "cope" with the final examination, which deviates from the initial goal of the course.

4. "ANALYSIS OF MEASURES FOR REFORMING THE TEACHING OF CIVICS AND POLITICS IN THE COURSE OF "ENVIRONMENTAL PROTECTION AND SUSTAINABLE DEVELOPMENT".

4.1 Injecting Civic and Political Education into Teaching Objectives

The teaching objectives of a course are the basis and premise of the course teaching reform. Take "Environmental Protection and Sustainable Development" as an example, the main objectives of the course are: to lead students to understand the basic concepts of environmental protection, the basic principles and methods of environmental governance, and to cultivate students' awareness of environmental protection, skills of environmental protection and thinking of sustainable development. By analysing the characteristics of the course, the teachers of the professional course have explored the points of integration of Civics and Politics of the course, taking Xi Jinping Thought on Socialism with Chinese Characteristics in the New Era as a foothold, and integrating Xi Jinping Thought on Ecological Civilization, the theory of sustainable development, and other concepts of green development into their teaching from multiple perspectives. On the one hand, students can expand their understanding of the global and regional environmental problems currently faced by mankind, and also master the basic knowledge needed to implement the sustainable development strategy and build a beautiful China. On the other hand, the concept of green education is integrated into the practice of talent cultivation to improve students' awareness of ecological civilisation, establish the scientific view of nature that human beings and nature are a community of life and the green development concept that green water and green mountains are gold and silver mountains[7],

and cultivate the students into the backbone of the protection of the environment, the implementation of the strategy of sustainable development, and the construction of a beautiful China.

4.2 Enhancing the Quality of Professional Teachers in "Curriculum Politics".

At the present stage, the main ways to improve the quality of professional teachers' "Curriculum Civics and Politics" are as follows:

(1) Strengthening teacher training: the relevant departments need to actively organise teachers to participate in the training courses on curriculum civic and political education, seminars on the development of curriculum civic and political construction, and a series of lectures on curriculum civic and political education organised by the Academic Affairs Office of the university, the Teacher Development Centre, the Registrar's Office, and the colleges, so as to raise the teachers' awareness of the education on curriculum civic and political education and to enhance their political theory and awareness of civic and political education by participating in these trainings and seminars. Strengthening teachers' understanding of the dialectical relationship between knowledge transfer, skill development and value leadership.

(2) Strengthening teaching design and evaluation: Teachers of professional courses should naturally integrate the "Civic and political elements" into the design of teaching contents and methods, incorporate the contents and requirements of Civic and political education into the design of the courses, explore the educational factors in the teaching materials, ensure the organic combination of professional knowledge and Civic and political education, and infiltrate Civic and political education into the teaching of professional knowledge in the daily life teaching[8]. At the same time, ideological and political education should become an important part of course teaching, and the assessment of students' ideological and moral quality and social responsibility should also be emphasised in teaching evaluation.

(3) Strengthening Teacher Teamwork: Teachers of professional courses and teachers of Civics and Politics establish a cooperative relationship through mutual exchanges, joint preparation and teaching reflection, etc., to promote the synergy of professional courses and Civics and Politics education, and avoid the phenomenon of "two skins". In addition to fully communicating with students in the classroom, the teaching team also makes full use of the teaching platform of professional disciplines and social media to answer questions after class, so as to realise tailor-made teaching and enhance the ability and effectiveness of educating people. Strengthening the parenting awareness of teachers of professional courses in moral education, expanding the resource construction and teaching skills of professional parenting and curriculum ideology.

Curriculum ideology is also a way of thinking, and the education team as a whole plays an important role in promoting curriculum ideology. Teachers of professional courses need to make clear their main responsibility in creating the "Curriculum Civic and Political Education" and the main purpose of Civic and Political Education, so that they can take the initiative to provide students with ideological and political education effectively, and combine students' ideological and political qualities with their professional development education. Teachers can combine incisive social issues related to their majors, and gradually integrate such ideological and political elements as low-carbon awareness and sustainable development into the teaching of professional courses, so as to realise the nurturing effect of curriculum ideology and politics.

4.3 Adoption of Diversified Teaching Methods

In the era of explosive growth of knowledge and information, access to knowledge and information has become increasingly convenient and fast, and students can have personalised learning anytime and anywhere. Therefore, it has become more important for teachers to provide valuable teaching in the classroom within a limited time, and the ways to be used to incorporate the course Civics has been an urgent problem. Combining the teaching characteristics of architectural colleges and universities, the implementation of case teaching. In the teaching process of professional courses, teachers should give full play to their leading role, student-centred, using case-based teaching method, task-based teaching method, "online + offline" teaching method, etc. Civics elements into the teaching in a silent way.

(1) Case teaching method

Civic and political elements are integrated into the explanation of professional knowledge in a "point-to-point" way. For example, when explaining the "theory of sustainable development", the teacher can choose a typical case containing "Civics" among the many available cases. Such as the example of the sustainable use of natural resources, can be integrated into the Huzhou City, Anji County, abandoned mine restoration practice exploration, students in the learning process not only to grasp the relevant theoretical concepts, knowledge growth, while the "green mountains is the gold silver mountain" and other ecological concepts have a deeper level of understanding.

(2) PBL teaching method

PBL teaching method (Problem-Based Learning) is a kind of teaching method that puts students at the centre of learning, and transforms from teachers' "teaching" to students' "learning". Relying on the "task" designed by the teacher according to the current teaching theme, students are encouraged to work in small groups and solve problems through mutual communication and cooperation among the

groups, thus enabling students to have a further understanding of knowledge and improving their teamwork and communication skills. It is also a kind of ideological teaching mode compatible with the teaching of "environmental protection and sustainable development", through enhancing students' initiative and enthusiasm, demonstrating and upgrading students' ability to analyse and solve problems and apply knowledge in practice, so as to more effectively achieve the goal of cultivating morality and educating people. For example, when exploring "water pollution and its prevention", the PBL teaching mode is integrated to bring out the problem of "how to prevent water pollution", encourage students to conduct active research and in-depth thinking, and take water resources on earth as a starting point to gradually understand different water cycles, What is natural water, what is water pollution, the water body's self-regulating ability, and then in-depth to the wastewater treatment technology, deepening the students' understanding of the hazards of water pollution and ecological restoration and ecological red line[9].

(3) "Online + offline" teaching method

In recent years, online learning platforms such as "Super Star Learning Platform", "Tencent Conference" and "Rain Classroom" have developed rapidly, and "online + offline" mixed teaching has gradually become the most popular teaching method in colleges and universities. "Mixed teaching has gradually become an important mode of Civics education in colleges and universities, and from the students' point of view, mobile terminals are undoubtedly one of the most convenient teaching carriers[7]. Teachers of professional courses need to strictly grasp the goal and direction of Civic and Political Education, make full use of the unique attributes of online education, and provide a good platform for students to upload and forward Civic and Political Education content, make comments, obtain Civic and Political Education resources, and complete course tests. On the other hand, colleges and universities that have the conditions should set up websites for Civic and Political Education to create conditions for teachers and students to share educational resources, publish teaching information, conduct online interactions and other Civic and Political teaching activities.

4.4 Establishing a Teaching Feedback Mechanism and Improving the Evaluation System

In terms of course evaluation, innovative forms such as classroom discussions and quizzes, group presentations and case study writing are adopted as part of the overall grade to avoid relying on the final written examination results to assess students' learning effectiveness. In the process evaluation, a variety of assessment methods are used, such as student self-assessment, peer assessment, teacher assessment, etc., to comprehensively consider

students' "virtue, ability, attitude and innovation".

In terms of teaching quality, we have carried out innovative reforms on the assessment mode of classroom teaching quality and established a timely and effective teaching feedback mechanism. The two-way scoring system of teaching effectiveness is adopted to examine whether students are satisfied with classroom teaching, whether they approve of the teacher's teaching, and whether they agree with the internalisation and value of knowledge in the process of their ideological understanding[10]. Students and teachers can communicate with each other and give feedback on the strengths and weaknesses of classroom teaching in order to continuously improve and enhance the quality of teaching.

In terms of teaching means, combined with technical means, with the help of learning pass, rain classroom and other educational technology tools and online platforms, the implementation of the "online + offline" feedback mechanism of Civics and Politics, to achieve real-time monitoring and evaluation of the teaching process and students' learning, and to provide personalised teaching support.

Table 1 Assessment index system of the programme "Environmental protection and sustainable development".

Forms of assessment	Percentage of mutual evaluation and self-assessment	Composition of overall performance
Class discussion	Group self-assessment ×60% + teacher assessment ×40%	15%
post-test	Teacher appraisal ×100%	20%
Panel presentations	Group self-assessment ×40% + teacher assessment ×60%	30%
Case study writing	Teacher appraisal ×100%	35%

Teachers of professional courses should focus on students' learning attitudes and methods, while introducing process evaluation. Through the process of students' participation in actual projects or tasks, students' abilities at the level of problem solving, teamwork, thinking and innovation are assessed. This assessment can be composed of several parts, such as teacher assessment, group mutual assessment, student self-assessment, etc., to build a new and tryable course assessment index system, as shown in Table 1. In recent years, colleges and universities have gradually increased the proportion of course process assessment, and included the Civic and Political assessment, while establishing the evaluation standard of "before class - during class - after class". The gradual improvement of the assessment system helps to improve the quality of teaching, and is also a key part of improving the effectiveness of teaching Civics. For example, students' performance and academic results are included in the assessment criteria for party members and the creation of excellence, and the final closed-book examination increases the value of subjective questions and adopts

classic case study questions to test whether students can integrate environmental protection awareness into real-life applications, so as to improve students' sense of social identity and sense of responsibility.

5. CONCLUSION

Civic and political education is an indispensable and important part of the education system of colleges and universities, which is of great significance in cultivating students' correct values and ways of thinking, innovative and practical spirit, sense of social responsibility and sense of mission, as well as in promoting the comprehensive development of students' overall qualities. Based on the necessity and difficulties in the construction of "environmental protection and sustainable development" course, this paper analyses the reform measures of the course's Civic and Political Teaching in the light of the characteristics of the course, the teaching methods and the teaching mechanism, and the needs of the national development, and condenses the reform measures of the course's Civic and Political Teaching by injecting Civic and Political Education into the teaching objectives, enhancing the ability of teachers of the professional courses to establish morality and cultivate people, and adopting diversified methods. The measures include injecting Civic and political education into the teaching objectives, improving the ability of professional teachers to promote morality and ethics, adopting diversified teaching methods, and establishing a teaching feedback mechanism, so as to optimise the construction path of Civic and political education in the curriculum. It provides certain references for construction colleges and universities to promote the environmental quality education of college students and realise the goal of cultivating morality and nurturing people.

ACKNOWLEDGEMENT

2022 Anhui Jianzhu University School-level Quality Project: "Research on the Construction of Civic and Political Thinking in the Course of 'Environmental Protection and Sustainable Development'" (2022jy54)

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Policy-guided Diversion and Anticipated Effects: Educational Choices of Intermediate Students in County-level Schools

*Guiping Sun, Chenyang Bu**

Sichuan International Studies University, Chongqing, China

**Correspondence Author.*

Abstract: China is currently in a critical period of expanding secondary education, crucial for providing qualified candidates for higher education and shaping the overall coherence of talent cultivation through the diversion of students from compulsory education into general or vocational tracks. This empirical study investigates the influence of career planning on educational choices among the ‘sandwiched’ layer of students in county-level schools, concurrently exploring the moderating role of policy perceptions. The key findings indicate: firstly, career planning positively influences educational choices; secondly, higher policy perceptions amplify the positive relationship between career planning and educational choices; and thirdly, policy perceptions play a guiding role in educational choices. The study suggests that schools should establish and refine corresponding career planning teaching systems. Simultaneously, efforts should be made to enhance the publicity of policies guiding educational choices, aiming to construct a comprehensive and interconnected career planning education system from basic to higher education. This approach ensures the coordinated guidance of society, family, and individuals, facilitating the comprehensive development of career planning education. The study aims to provide a basis for optimizing education diversion policies, offering practical suggestions for career planning education in junior high schools, and contributing empirical research results to the further improvement of China’s career planning education system.

Keywords: Career Planning; Anticipated Effects; Policy Perception; Educational Choice; Intermediate Students

1. INTRODUCTION

In China, secondary education plays a pivotal role, acting as a bridge for delivering qualified candidates to higher education and as a crucial stage for diverting students from compulsory education into general or vocational tracks. This directly impacts the overall and coherent cultivation of talents in China, contributing significantly to the construction of a strong nation in terms of human resources and overcoming the middle-income trap^[1]. In February 2019, the General Office of the Central Committee of the Communist Party of

China and the General Office of the State Council issued the “Implementation Plan for Accelerating the Modernization of Education (2018-2022),”^[2] proposing a comprehensive plan for the popularization of secondary education. The intention behind the massification of secondary education is to meet the diverse needs of societal development and individual growth^[3]. Therefore, the decision of whether junior high school students pursue secondary education, enter general high schools, vocational schools, or choose not to continue their studies should be an individual educational choice. Junior high school students, in this stage of transitioning from childhood to adolescence, face contradictions of self-identity and role confusion, with their self-adjustment abilities still developing^[4]. Confronting the first significant choice in their educational journey, they are influenced by various factors from family, school, and society. How they make these choices will significantly shape their future career development and life trajectory.

Reviewing the literature on the educational choices and influencing factors of junior high school students, existing studies have analyzed factors affecting graduation diversion intentions and educational choices in urban and rural areas from four aspects^[5]: academic performance, gender, family capital, and ethnicity. However, existing literature often lacks targeted approaches, primarily stemming from the development perspective of the educational system. Academic performance is the most critical factor influencing the educational choices of junior high school graduates^[6]. Students with intermediate academic performance often hover around the score lines of general and vocational high schools, referred to as the “sandwiched layer.” Due to the contradiction in the supply of educational resources, the plight of these “sandwiched layer” students is more pronounced in county-level middle schools located between urban and rural areas^[7]. Faced with graduation choices, what are the intentions of the “sandwiched layer” students in county schools? Have they formed clear career plans and self-awareness? Do they make appropriate educational choices based on their career planning? How do national policies and local government supporting policies influence the process of students planning their personal careers and making educational

choices? This paper focuses on the “sandwiched layer” students in county schools, analyzing individual choices regarding secondary education. On one hand, it clarifies the current issues in the supply of secondary education in China from the perspective of educational demand, providing a basis for government policy formulation. On the other hand, by analyzing the factors and mechanisms influencing students’ educational choices, it broadens the application scope of career planning theories, raises awareness of school importance in student career planning education, and further enriches the content and implementation methods of career planning education in schools.

2. RESEARCH HYPOTHESES

Von Neumann and Morgenstern’s Expected Utility Theory posits that rational individuals exhibit different value tendencies when making decisions. These include “risk-averse,” where decisions tend to follow conservative types under deterministic conditions; “risk-loving,” where decisions lean towards uncertain situations; and “risk-neutral,” where decisions are relatively prudent, neither leaning towards conservatism nor aggression^[8-10]. In the context of this study, junior high school graduates, when making choices about further education, carefully weigh the expected benefits and hidden risks of their chosen secondary education. Simultaneously, junior high school is a transitional period of rapid development, where individuals are progressing from immaturity to maturity, dependence to independence, blindness to self-awareness. The inherent inclination for risk-taking during this period is evident^[11]. However, the post-junior high school choice of further education is the first significant decision they face, one that can impact their future development. Therefore, making prudent and rational decisions becomes crucial.

Based on existing research, academic performance is a crucial indicator influencing the choices of junior high school graduates regarding school selection^[12,13]. The “sandwiched layer” students, facing difficulty in making choices for further education, tend to be more risk-averse and seek to avoid risks through various means.

2.1. The impact of individual vocational career planning on further education choices

According to the expected utility theory, diversification is a measure to reduce risk — allocating consumers’ decision-making time and goals among two or more products to share individual energy and eliminate some risks^[14]. In recent years, the country has coordinated the development of general high school education and secondary vocational education, ensuring that the enrollment scale is roughly equal. In areas with a lower proportion of vocational education, the focus is on expanding secondary vocational education resources. At the same time, efforts continue to support the improvement of conditions for general high schools, revising and improving the standards for school building construction and equipment

allocation^[15]. Donald E. Super proposed the theory of career stages, dividing a career into growth stage (0-14 years old), exploration stage (14-25 years old), establishment stage (25-44 years old), maintenance stage (45-65 years old), and decline stage (over 65 years old). At different career stages, individuals have different career development tasks and gradually form clear self-awareness, leading to mature career choices. Around the age of 15, junior high school graduates are in the exploration stage, a period when their career ideals are just forming^[16]. During this stage, students consciously explore potential careers based on their own circumstances and choose education related to their future careers^[17]. Therefore, starting from vocational career planning of “sandwiched layer” students and exploring the relationship between students’ vocational career planning and further education choices is conducive to students selecting suitable types of further education based on their future career aspirations and developing personalized action plans under the guidance of parents, schools, and other stakeholders.

Based on the current status of vocational career planning among “sandwiched layer” students, this study focuses on their anticipated further education choices and proposes the following research hypothesis:

H₁: Vocational career planning among students has a facilitating effect on further education choices.

2.2. The impact of policy perception on further education choices

Diversification is not the sole measure to mitigate decision-making risks. The more information individuals possess, the higher their level of rational decision-making, leading to a decrease in expected risks^[18]. For junior high school graduates, providing more comprehensive information about high school education and reducing the cost of obtaining information can also mitigate the risks associated with educational choices to a certain extent. For example, in 2021, the Ministry of Education’s “*Guidelines for the Implementation of Middle Vocational School Enrollment in 2021*” clearly stated: “Localities should intensify comprehensive publicity efforts, fully utilize powerful policies such as the expansion of enrollment in higher vocational schools, pilot projects for undergraduate-level vocational education, and the expansion of enrollment in regular higher education institutions for upgrading to undergraduate programs, actively guiding students to accept middle vocational education.” At the same time, the country has adopted a series of measures to ensure enrollment in secondary vocational education, including tuition waivers, providing scholarships, and other forms of financial aid. The coverage rate of the policy of free tuition for secondary vocational education exceeds 90%, breaking through the threshold of high fees for vocational education^[19]. The provision of accurate further education information and the establishment of

a financial aid system to a certain extent reduce the risks associated with students' further education choices.

Based on the various preferential policies issued by the government regarding secondary vocational education, this study proposes the following hypotheses regarding the perception of these policies among "sandwiched layer" students:

H₂: Policy perception moderates the relationship between vocational career planning and further education choices. Higher policy perception leads to a more pronounced positive relationship between vocational career planning and further education choices.

H₃: Policy perception guides the outcomes of further education choices.

3. RESEARCH DESIGN

3.1. Analytical framework

This study starts from the observation and reflection on the actual implementation of the policies regarding the division between general and vocational education and the further education choices of junior high school students. It establishes the "sandwiched layer" group of junior high school students in rural towns as the research subjects, utilizing a path analysis model to explore the extent to which vocational career planning among junior high "sandwiched layer" students influences their further education choices, as well as the moderating effect of policy perception between the two. The aim is to clarify the relationship between further education choices of junior high "sandwiched layer" students and their policy perception and vocational career planning. Based on the data results, suggestions and countermeasures are proposed, followed by reflection on the research.

3.2. Data source

Two county-level schools in central and southwestern provinces were selected for the questionnaire survey on the "Current Status of Vocational Career Planning and Further Education Choices among Junior High School Students," referencing Liu Hui's "Questionnaire on Career Maturity of Middle School Students."^[20] The reason for choosing the central and southwestern regions is that the economic industrial structure in these areas tends to lean towards labor-intensive industries, with vocational education development lagging behind that of the southeastern coastal areas. Therefore, the selection of research subjects is representative and typical. The questionnaire survey targeted "sandwiched layer" students in junior high schools. A total of 600 questionnaires were distributed, with 598 returned, and 588 were deemed valid. Among the respondents, there were 267 male students, accounting for 45.4%, and 321 female students, accounting for 54.6%. The questionnaire's effective rate was 98%.

3.3. Research variable

The independent variable is the current status of vocational career planning among junior high

"sandwiched layer" students. The questionnaire measures students' understanding of careers and self-awareness by asking about their interests, understanding of the entry requirements for future careers (such as education level, gender, appearance, abilities, etc.), and understanding of the career development prospects (salary increase, promotion, self-realization, etc.) with seven questions.

The dependent variable is the further education choices of junior high "sandwiched layer" students, including the direction of choices and the level of initiative in making choices.

The moderating variable is the policy perception of junior high "sandwiched layer" students, measured by asking about their understanding of the policies related to the high school entrance examination.

Considering that there are many factors influencing students' further education choices, such as family capital, parents' education level, household registration distribution, etc., five variables were selected as control variables: gender, household registration type, parents' education level, annual income, and whether they are only children. This helps to analyze the relationship between students' personal vocational career planning, policy perception, and further education choices more accurately. The specific variables are shown in Table 1.

Table 1 Basic information

Variate	Options	Frequency	Percent
Gender	Male	267	45.40
	Female	321	54.60
Registration	Urban	129	21.94
	Rural	459	78.06
The only child	Yes	36	6.12
	No	552	93.88
Education level of father	Junior high school and below	357	60.71
	High school (including technical secondary school)	201	34.18
	University and above	30	5.10
Education level of mother	Junior high school and below	423	71.94
	High school (including technical secondary school)	141	23.98
	University and above	24	4.08
Annual income	Below ten thousand	147	25.00
	Ten to thirty thousand	264	44.90
	More than fifty thousand	177	30.10
Sum		588	100.0

Among the students who completed the questionnaire, the proportion of females was relatively high at 54%, while males accounted for 46%. Due to the focus of this survey on junior high schools at the county level, the proportion of students with rural household registration was much higher than those with urban household registration, approximately in an 8:2 ratio. The large number of rural household registrations also explains the high proportion of non-only children, reaching 93% among the surveyed students. Furthermore, the educational level of fathers was mostly at or below junior high school, accounting for

60.17%, followed by high school at 34.18%, and the least with a college degree or above, accounting for only 5.1%. Similarly, the educational level of mothers also showed a similar trend, with the majority having education at or below junior high school level, accounting for 71.94%, followed by high school at 23.98%, and college or above at the lowest proportion of 4.08%. Family annual income was mainly concentrated in the range of 10,000 to 30,000 RMB, accounting for 44.9%, followed by over 50,000 RMB, accounting for 30.1%, while the lowest proportion was for annual income below 10,000 RMB, at 25%.

Based on these results, it can be inferred that the parents of the surveyed students have lower educational levels, and their family income is also relatively moderate to low. Additionally, with a large proportion of non-only children, it can be speculated that if a student's scores in the junior high school entrance examination are slightly below the admission cutoff for regular high schools, families of this kind may be more inclined to choose vocational schools.

3.4. The reliability and validity test

In the attitude questions of this questionnaire, the most commonly used Cronbach's alpha coefficient method was employed to calculate the internal consistency of the questionnaire. A higher alpha coefficient indicates greater reliability of the scores obtained. The results, as shown in Table 2, indicate that the overall alpha reliability coefficient of the questionnaire is 0.907, which is greater than 0.8, indicating excellent overall reliability of the scale. The consistency coefficients of the three-dimensional component scales are all greater than 0.7, indicating acceptable reliability for each component scale.

Table 2 The Cronbach's alpha values for the questionnaire and each subscale

Questionnaire	Perception of policies	choices in higher education	career planning
0.907	0.871	0.787	0.925

The validity of the questionnaire was verified using the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test. From Table 3, it can be observed that the KMO value is 0.907, which is greater than 0.8. This indicates that the research data is highly suitable for information extraction.

Table 3 Questionnaire validity

KMO		0.907
Bartlett's test	Approximate chi-square value.	6862.775
	<i>df</i>	105
	<i>p</i>	0.000

4. RESEARCH FINDINGS

4.1. Career planning and educational choices

4.1.1 Overview of career planning and educational choices

The average score for the vocational career planning status among junior high "sandwiched layer" students

is 3.75, slightly higher than the moderate intensity score of 3. The specific scores for each item are shown in Table 4.

Table 4. Details of career planning subtopics

Question	Sample	Mean	Standard Deviation
I have a clear understanding of my interests and know what suits me best	588	3.724	1.039
I understand my existing knowledge and abilities, and know what I can do	588	3.750	0.993
I understand the entry requirements for the future careers I am considering (such as education level, gender, appearance, and abilities)	588	3.628	1.021
I understand the career development prospects for the professions I intend to pursue (such as salary increase, promotion opportunities, and self-fulfillment)	588	3.597	1.029
I have already planned my short-term career goals	588	3.383	1.188
I have developed a study plan based on my career goals	588	3.520	1.177
I have already planned my long-term career goals	588	3.388	1.197

As shown in Table 4, the item "I understand my existing knowledge and abilities and know what I can do" scored the highest with an average of 3.75, while the item "I have already planned my short-term career goals" scored the lowest with an average of 3.52. This indicates that the surveyed students have a relatively clear self-awareness and can clearly recognize their knowledge and abilities. However, clear self-awareness does not necessarily lead to clear short-term career planning. The same situation is reflected in the results for long-term career planning, with only a slight difference of 0.05 between the two. This suggests that the surveyed students have a relatively low level of career planning and lack clear and definite plans.

As shown in Table 5, in terms of further education choices, the overall average score is 3.8, which is higher than the moderate intensity score of 3. Looking at specific items, "I have a clear choice for future further education" scored the highest with an average of 3.96, and "The school I chose is my own choice, in line with my plans and interests" had a similar average score, at 3.95. From these two options, it can be seen that, unlike career planning, the surveyed students have clearer expectations for their future further education choices, and most choices are based on their own plans and interests. Due to the instability of academic performance among junior high "sandwiched layer" students and the scarcity of high school education resources in county-level areas, the questionnaire included an item "If my grades are not ideal, I would actively choose a vocational school instead of paying a high price to enter a regular high school." The purpose was to investigate preferences for regular high schools or vocational schools. The specific results, as shown in Figure 1, indicate that 50% of students still have a

strong preference for vocational schools. Only 22% of students are more willing to choose expensive regular high schools instead of vocational schools if their grades are not ideal. These students are more confident and determined about their grades and plans. However, the influence of factors such as parental expectations and income levels cannot be ruled out, and these factors will be analyzed as control variables in subsequent regression analysis.

Table 5 Details of subtopics related to educational choices

Question	Sample	Mean	Standard Deviation
I have a clear choice for future further education	588	3.969	0.909
The school I chose is my own choice, in line with my plans and interests	588	3.954	1.104
The school I have chosen is based on my current academic performance	588	3.857	0.975
If my grades are not ideal, I would actively choose a vocational school instead of paying a high price to enter a regular high school	588	3.423	1.341

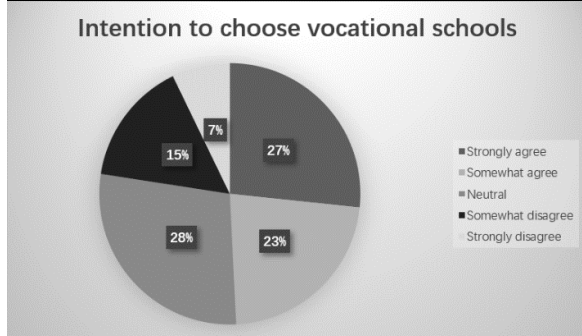


Figure 1 Intention to choose vocational schools

4.1.2 The facilitating role of career planning on educational choices

The results of the variable correlation analysis, as shown in Table 6, indicate a significant correlation between vocational career planning and further education choices ($\beta=0.659$, $p<0.01$), with a correlation coefficient of 0.659, demonstrating significance at the 0.01 level. This provides preliminary validation for hypothesis H₁.

Regression analysis was conducted on the sub-items of vocational career planning and the dependent variable further education choices to verify the extent of the impact of vocational career planning on further education choices. From Table 7, the model's R-squared value is 0.380. Analyzing specific options reveals that the regression coefficient for "I understand my interests and hobbies, and know what I am suitable for" is 0.200 ($t=2.194$, $p=0.029<0.05$), indicating a significant positive impact on further education choices. The regression coefficient for "I have already formulated a study plan based on my career goals" is 0.186 ($t=2.008$, $p=0.046<0.05$), suggesting a significant positive impact on further education choices. Similarly, the regression coefficient for "I

understand the future career development direction (salary increase, promotion, self-realization, etc.)" is 0.222 ($t=2.181$, $p=0.030<0.05$), indicating a significant positive impact on further education choices. The specific model is illustrated in Figure 2.

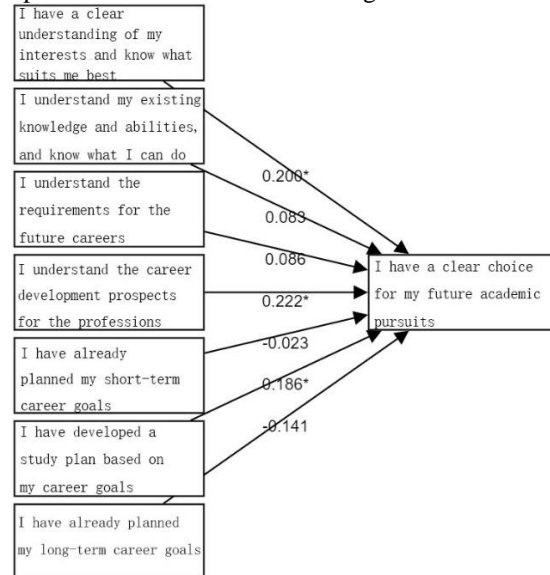


Figure 2 The relationship between career planning and educational choices

Table 6 The correlation between career planning and educational choices

		Pearson
Career planning	Correlation coefficient.	0.659**
	<i>p</i>	0.000

* $p<0.05$ ** $p<0.01$

Table 7 Results of linear regression analysis

Educational choices	Regression coefficients.	95% CI	VIF
I have a clear understanding of my interests and know what suits me best	0.200* (2.194)	0.021 ~ 0.378	3.278
I understand my existing knowledge and abilities, and know what I can do	0.083 (0.823)	-0.114 ~ 0.279	3.626
I understand the entry requirements for the future careers I am considering (such as education level, gender, appearance, and abilities)	0.086 (0.925)	-0.096 ~ 0.268	3.303
I understand the career development prospects for the professions I intend to pursue (such as salary increase, promotion opportunities, and self-fulfillment)	0.222* (2.181)	0.023 ~ 0.422	4.028
I have already planned my short-term career goals	-0.023 (-0.261)	-0.197 ~ 0.150	4.054
I have developed a study plan based on my career goals	0.186* (2.008)	0.004 ~ 0.367	4.333
I have already planned my long-term career goals	-0.141 (-1.350)	-0.347 ~ 0.064	5.761
Sample	588		
R^2		0.380	
Adjusted R^2		0.357	
F		$F(7,188)=16.441$ $p=0.000$	

* $p<0.05$ ** $p<0.01$

4.2. The moderating effect of policy perception

4.2.1 The moderating role of policy perception in the relationship between career planning and educational choices

This study employed a hierarchical regression method to verify the moderating effect of policy perception on the relationship between vocational career planning and further education choices. Model F₁ tested the influence of control variables on further education choices, Model F₂ verified whether the direct effect of vocational career planning on further education choices existed, and Models F₃ and F₄ were used to examine whether the moderating effect of policy perception was significant. To ensure the robustness of the results, the independent variable vocational career planning, the moderating variable policy perception, and their interaction terms were sequentially added to the model to test the significance of the interaction term regression coefficients, thereby determining whether policy perception played a moderating role in the relationship.

Model F₁ was used to test the influence of control variables on the dependent variable. As shown in Table 8, the gender, household registration, parents' education level, family income, and whether they are only children had non-significant effects on further education choices among junior high "sandwiched layer" students.

Table 8 Results of stratified regression analysis for moderating effects

Variables		Educational choices			
		F ₁	F ₂	F ₃	F ₄
Control Variables	Gender	-0.015	0.080	0.045	0.081
	Registration	-0.146	-0.063	0.040	0.031
	Whether the participant is an only child.	0.084	-0.008	0.022	-0.019
	Education level of father	-0.088	-0.109	-0.083	-0.079
	Education level of mother	0.154	0.070	0.091	0.036
	Annual income	0.104	0.035	-0.001	-0.023
Independent Variable	Career Planning		0.569**	0.326**	0.315**
Moderating Variable	policy perception			0.339**	0.439**
Interaction Term	Career Planning * policy perception				0.121**
R ²		0.024	0.442	0.518	0.574
Adjusted R ²		-0.007	0.421	0.498	0.553
F		0.784 <i>p</i> =0.583	21.273 <i>p</i> =0.000	25.159 <i>p</i> =0.000	27.804, <i>p</i> =0.000
ΔR ²		0.024	0.418	0.076	0.055

Model F₂ results indicated that vocational career planning significantly positively promoted further

education choices ($\beta=0.569$, $p<0.01$), further confirming hypothesis H₁.

In Model F₃, the moderating variable was introduced on the basis of Model F₂. The results showed that the relationship between policy perception and further education choices was significant ($\beta=0.339$, $p>0.05$).

Furthermore, Model F₄ introduced the interaction term. The results revealed that policy perception had a significant positive moderating effect on the relationship between vocational career planning and further education choices ($\beta=0.121$, $p<0.01$), indicating that policy perception strengthened the positive relationship between vocational career planning and further education choices, thereby confirming hypothesis H₂.

4.2.2 The relationship between policy perception and educational choices

The results of the variable correlation analysis, as shown in Table 9, indicate a significant correlation between further education choices and policy perception ($\beta=0.665$, $p<0.01$), with a correlation coefficient of 0.665, demonstrating significance at the 0.01 level. Regression analysis was conducted on the sub-items of policy perception and the dependent variable vocational career planning to verify the extent of the impact of policy perception on vocational career planning, as shown in Table 10. Upon specific analysis, the model's R-squared value is 0.48. Examining specific items reveals that the regression coefficient for "I understand the current policies regarding the high school entrance examination and know what choices are available" is 0.352 ($t=6.008$, $p=0.000<0.01$), indicating a significant positive impact on further education choices. Similarly, the regression coefficient for "I support the state's incentive policies for vocational schools" is 0.161 ($t=2.807$, $p=0.006<0.01$), suggesting a significant positive impact on further education choices. Hypothesis H₃ is thus validated.

Table 9 Correlation analysis of policy perception and educational choices

Pearson		
		Educational Choices
Policy Perception	Correlation coefficient.	0.665**
	<i>p</i>	0.000

* $p<0.05$ ** $p<0.01$

Based on the data analysis results, it can be inferred that junior high "sandwiched layer" students are well-informed about the policies regarding the high school entrance examination and supportive of the state's incentives for vocational schools. Furthermore, the support for policies regarding vocational schools can explain why 50% of the surveyed students would actively choose vocational schools when their academic performance is not ideal, further confirming hypothesis H₃.

Table 10 Results of linear regression analysis

Educational Choices	Regression coefficients	95% CI	VIF
I understand the current policies regarding the high school entrance examination and know what choices are available	0.352** (6.008)	0.237 ~ 0.466	1.771
I understand the differences between regular high schools and vocational schools, and I have already made my decision	0.079 (1.482)	-0.026 ~ 0.184	2.155
I understand the relevant policies and support measures provided by the government for vocational school	0.031 (0.513)	-0.088 ~ 0.151	2.938
I support the state's incentive policies for vocational schools	0.161** (2.807)	0.049 ~ 0.274	2.574
Sample	588		
R^2		0.480	
Adjusted R^2		0.470	
F		$F(4,191)=44.157$ $p=0.000$	

D-W: 2.099, * $p < 0.05$ ** $p < 0.01$

5. CONCLUSION

Currently, China is undergoing a crucial phase in the universalization of high school education. The significance of this educational stage lies not only in providing qualified candidates for higher education but also in the direct impact on the overall coherence and integrity of talent cultivation through the differentiation of students between academic and vocational paths during compulsory education. Against this backdrop, this study starts from the practical observation and contemplation of the universal and vocational education differentiation policies and the choices made by junior high school students. Utilizing survey data from questionnaires on "Junior High School Students' Career Planning and Academic Choices" in the third grade of junior high schools in two county-level schools, one in the central region and the other in the southwest region, the study employs path analysis models to explore the extent to which career planning among junior high "sandwich layer" students influences their academic choices, as well as the moderating effect of policy perception between the two. The main conclusions drawn are as follows:

Firstly, there is a contradiction between the positive role of career planning and the lack of education. According to the research findings, there is a significant correlation between career planning and academic choices. Based on the regression verification of specific options and combined with the overall situation, career planning plays a certain promoting role in the academic choices of junior high "sandwich layer" students in county-level schools. When students engage in career planning, they typically consider their own interests and knowledge abilities, and then adjust their study plans and academic arrangements to enhance their competitiveness for further education. However, the survey results also indicate that students have not established comprehensive and clear career plans, and their planning for the short and long term is relatively vague.

Career planning education in China began to emerge in

the early 20th century under the influence of Western countries, but due to the economic system and the level of productivity development since the founding of the country, career planning in China has mainly focused on college students and young adults, with little attention given to junior high school students^[21]. From the perspective of junior high school students themselves, they lack basic knowledge of career planning and their understanding of professions is superficial, limited to impressions of salary and benefits without knowledge of the intrinsic requirements such as responsibility, core competencies, leadership, and management skills needed for employment^[22]. Additionally, career planning education at the junior high school level in China is almost universally lacking, with no specific requirements in educational goals and no systematic training programs in educational content^[23]. It is speculated that the lack of career planning education may be related to the economic backwardness of rural areas, incomplete student and family career awareness, and inadequate career education in schools.

Secondly, there is a contradiction between the positive role of policy perception and the negative image of vocational education. According to the research findings, policy perception strengthens the positive relationship between career planning and academic choices. However, when considering the questionnaire data, options such as "I understand the differences between regular high schools and vocational schools, and have made my choice clear" and "I understand the relevant policies and support measures for vocational schools by the government" did not significantly affect academic choices. It is speculated that this may be related to the negative image of vocational schools in society. Graduates of vocational schools often have lower socioeconomic status and slower career advancement, leading parents to perceive vocational education as "education for underachievers," "education for the common people," or "last-resort education."^[24] "This perception to some extent influences the final academic choices of "sandwich

layer” students.

Thirdly, there is a contradiction between parental authority and student autonomy in planning. From the analysis of the data, it is evident that policy perception guides academic choices. However, students’ understanding of the supportive policies for regular high schools and vocational education did not influence their final academic choices. In the current educational system, students at the basic education level rely on their parents and teachers for guidance in daily life and academic decisions, making it difficult for them to develop an independent personality. Parents often impose their own subjective desires on their children and use their authoritative status to forcibly choose and plan their children’s future paths^[25]. Although some students have developed clear career planning paths and are aware of government policies regarding vocational education, they still ultimately choose the paths and directions planned by their parents.

6. PRACTICAL IMPLICATION

When facing choices, people often encounter uncertainty, and the same is true for post-secondary school decisions after the high school entrance examination. For the “sandwiched” students whose grades hover around the cutoff scores for regular high schools and vocational schools, they typically exhibit a tendency to avoid risks. Therefore, when making choices, they must carefully weigh various factors, including expected benefits and potential risks. To mitigate the risks associated with this uncertainty, the expected utility theory proposes three measures: diversification of choices, obtaining more decision-making information, and considering insurance mechanisms^[26]. Based on the above theory, the following recommendations can be summarized:

Establish and Enhance a Comprehensive Career Planning Curriculum: Schools should develop and refine a comprehensive curriculum dedicated to career planning. This curriculum should include detailed teaching guidelines and seamlessly integrate career planning knowledge with traditional academic subjects. By incorporating career planning education into the core learning experience, students will be better equipped to understand the intricacies of their future career paths. Moreover, fostering a sense of ownership over their career planning will empower students to engage in self-assessment and gain valuable insights into their future career environments. Ultimately, this approach will help students cultivate a clear understanding of their desired career trajectories and develop a strong set of values aligned with their professional aspirations.

Strengthen Awareness of Educational Policies and Local Support Initiatives: To facilitate better decision-making in career planning and academic choices, schools should prioritize disseminating information about relevant educational policies. This can be achieved through various means such as organizing

lectures and distributing notices to students. These initiatives should aim to provide students with a comprehensive understanding of the advantages, disadvantages, conditions, and requirements associated with different academic pathways. By fostering clear awareness and understanding of various educational options, students can be guided to select learning paths that align with their interests, abilities, and future career aspirations. Additionally, schools should emphasize the implementation of local support initiatives to offer students more choices and assistance. For instance, within career planning courses, schools can integrate information about local industry developments to guide students in selecting study directions relevant to regional industries. This approach enables students to grasp local industry demands and trends, ultimately enhancing their competitiveness in the job market.

Establish a Comprehensive Career Planning Education System: A holistic career planning education system spanning from primary to higher education levels should be developed. This system should begin with early career enlightenment in elementary school, fostering students’ awareness of various professions and cultivating their interests. At the middle and high school levels, systematic career planning courses should be introduced, incorporating case studies and field trips to deepen students’ understanding of different occupational fields. Advocating for practical opportunities and internship programs, collaboration with businesses should be encouraged to allow students to experience real-world work environments firsthand. Furthermore, the establishment of a mentorship program with experienced professionals serving as mentors can provide students with personalized career guidance. Emphasizing cooperation between schools and families, relevant training should be provided to parents to deepen their understanding of the importance of career planning and better support and guide their children in academic and career decision-making. These recommendations aim to establish a comprehensive career planning education system, enabling students to gain a comprehensive understanding of themselves, comprehend career choices, and lay a solid foundation for future career development throughout their academic journey.

ACKNOWLEDGMENT

This work was supported by Chongqing Postgraduate Scientific Research Innovation Project in 2023 (CYS23586).

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Innovation and Development of Ideological and Political Education for College Students in the Mobile Learning Environment

Hongwei Ji, Dongjin Mao, Shougang Zang
Nantong Teachers College, Nantong, China

Abstract: With the continuous improvement of China's technological level, the impact on various industries is more prominent, especially in the integration of mobile learning environment in the current ideological and political education work for college students. The original ideological and political education module has been innovated, breaking the limitations of time and space, and creating a good educational carrier for efficient learning and innovation for students. Therefore, relevant universities need to strengthen their in-depth understanding of the mobile learning environment, gradually optimize the current education model, build a new education ecosystem, and lay a solid foundation for the improvement of students' comprehensive abilities. The article first discusses the characteristics and goals of innovation in ideological and political education for college students in the mobile learning environment, analyzes the impact and existing problems of the mobile learning environment on innovation in ideological and political education for college students, and finally proposes strategies for innovation in ideological and political education for college students, which has certain reference significance for improving the effectiveness of ideological and political education for college students.

Keywords: Mobile learning environment; College students; Ideological and political education; Innovate

1. INTRODUCTION

The modern human way of production and life has undergone significant changes with the continuous progress of science and mobile communication technology, particularly in the closer relationship between daily life learning and mobile intelligent devices. This new change is particularly evident among the young group of college students. At the same time, some new phenomena, problems, and contradictions have also emerged in the process of ideological and political education for college students. Faced with new problems, ideological and political education work must have the responsibility of self innovation in the era. How to further innovate the mode of ideological and political education for college students, explore effective paths for

ideological and political education for college students, and combine contemporary ideological and political education with mobile learning has become one of the areas that we urgently need to study. When innovating ideological and political education for college students in the context of mobile learning environment, schools should integrate internet technology and mobile learning platforms into various aspects of ideological and political education, broaden the connotation and channels of ideological and political education, further achieve the strengthening effect of online ideological and political education, highlight modern educational ideas, and achieve the update and upgrade of traditional ideological and political education models.

2. THE CHARACTERISTICS AND OBJECTIVES OF INNOVATION IN IDEOLOGICAL AND POLITICAL EDUCATION FOR COLLEGE STUDENTS IN THE MOBILE LEARNING ENVIRONMENT

2.1. Characteristics

Firstly, innovative education has introduced advanced technological means. The ideological and political education of college students in the mobile learning environment can be learned and communicated through mobile devices such as mobile phones and tablets, providing students with more diverse and diverse learning methods. By utilizing online learning platforms, teachers can develop personalized learning plans based on students' learning characteristics and provide differentiated education for different students [1]. At the same time, online social platforms can also be used to promote communication and interaction among students, improving their participation and effectiveness in learning.

Secondly, innovative education focuses on cultivating students' practical abilities. In the mobile learning environment, ideological and political education for college students emphasizes a practical orientation and focuses on cultivating students' practical abilities [2]. By designing various practical activities, students can gain a deeper understanding and mastery of social reality and political situations through practice, strengthen the effectiveness of ideological and political education, and promote the cultivation of students' exploratory spirit and innovative consciousness.

Finally, innovative education advocates personalized development. In the mobile learning environment, ideological and political education for college students promotes innovative education through personalized development. Teachers can use internet technology to timely understand students' interests, characteristics, and needs, customize learning plans for students, encourage students to choose courses independently, unleash their personal potential, cultivate students' development consciousness and autonomy, and thus achieve the goal of better promoting students' ideological and political education.

The innovation of ideological and political education for college students in the mobile learning environment has fully utilized the advantages of the digital era, emphasized practice, advocated personalized development, and formed unique educational characteristics [3]. These characteristics provide a new approach and practical path for the innovation of ideological and political education for college students, and also provide important insights for the development of future education.

2.2. Goal

Firstly, innovation is inevitably one of the important goals of ideological and political education for college students. In the past educational models, many teachers focused on theoretical concepts during the teaching process, neglecting practicality and innovation. This education method is no longer able to meet the needs of today's college students, and students need more practice and innovation in order to better adapt to future social development.

Secondly, diversification is also the goal of innovation in ideological and political education for college students. College students come from different regions, with varying backgrounds, cultures, and ideas. Therefore, in the education process, students' personalities and differences should also be fully considered. In the past education process, teachers often only imparted their own viewpoints, while neglecting students' thoughts and perspectives. But today, the collision and exchange of different ideas have become an essential part. One of the goals of innovation in ideological and political education for college students is to respect their ideas and perspectives in a diverse environment, and stimulate their creativity and imagination.

Finally, personalization is also an important goal of innovation in today's ideological and political education for college students. In the past, some educators may have believed that the main purpose of education was to enable students to master knowledge, while neglecting their true needs. However, in today's education process, personalization has become an important keyword. One of the goals of innovation in ideological and political education for college students is to establish a personalized education system, providing a suitable

educational environment and creativity for every student's growth.

3. THE IMPACT OF MOBILE LEARNING ENVIRONMENT ON THE INNOVATION OF IDEOLOGICAL AND POLITICAL EDUCATION FOR COLLEGE STUDENTS

3.1. Opening up a brand new space for ideological and political education

In today's era, the emergence of mobile learning environments has greatly promoted the development of ideological and political education for college students. Previously, students could only receive ideological and political education in a fixed campus environment. However, now, the development of mobile learning environments has opened up a new space for ideological and political education, making it more convenient for students to receive education. This not only provides more diversified and comprehensive educational methods for ideological and political education of college students, but also brings unprecedented opportunities for innovation in ideological and political education. Mobile learning environment is a learning environment based on mobile internet technology, which promotes the development of ideological and political education for college students, enabling them to engage in autonomous learning in a more flexible environment. In this environment, students can access relevant information anytime and anywhere through mobile devices for autonomous learning. This learning method not only saves time, but also improves students' learning efficiency. In addition, the mobile learning environment also provides an innovative and brand new ideological and political education model, namely the "student-centered, teacher guided, interactive communication, and diverse evaluation" education model [4]. This model can better stimulate students' learning interest, cultivate their independent thinking and innovation abilities, and improve their ideological quality.

In the mobile learning environment, there are also more diverse and comprehensive educational methods for ideological and political education of college students. Previously, ideological and political education could only be conducted through traditional classroom teaching methods, while in mobile learning environments, educators could teach through various methods, including text, audio, video, and other forms. This diversified teaching model not only caters to students' interests, but also benefits their ideological development and cultivates their diverse qualities. More importantly, the mobile learning environment has opened up a new space for ideological and political education, which has made ideological and political education more smooth and free. In the past, college students conducting ideological and political courses on campus were sometimes limited by factors such as departments and schools, and the emergence of mobile learning

environments has broken this limitation. In this space, students can freely communicate, learn, and develop their own ideas. This freedom is a guarantee for the diverse development of ideas and also an affirmation of the free growth of college students.

3.2. Enriched ideological and political education resources

With the continuous progress and development of society, modern people's way of life has become increasingly convenient. Especially with the rapid development of information technology, mobile learning environments have become a popular form of entertainment and a way to enrich ideological and political education resources for college students [5]. In this mobile learning environment, college students can use handheld devices such as smartphones and tablets to access rich and colorful ideological and political education resources anytime, anywhere, for self-learning and insights, allowing their thoughts to be more deeply sublimated. For college students, ideological and political education is a very important course, its significance is to enable them not only to understand social customs and cultural traditions, but also to understand the political and social situation of the country, thereby cultivating higher civic qualities and a sense of social responsibility. Under this premise, the mobile learning environment has attracted more and more college students to join this "ocean of knowledge", further enriching and expanding the resources of ideological and political education. In a mobile learning environment, college students can engage in ideological and political education by browsing various forms of resources such as videos and literature. With the continuous increase in the number of college students and the continuous updating of educational resources, the mobile learning environment is also constantly updated and improved, allowing students to enjoy a rich and colorful world of ideological and political education resources. In addition, as the core digital technology of mobile learning environment, it also provides more convenient and flexible access to educational resources for college students. For example, college students can obtain rich and colorful ideological and political education resources through WeChat official account, Zhihu and other platforms, and can also interact with educational institutions and various academic groups through social media to improve their learning ability and sense of social responsibility.

4. THE INNOVATION OF IDEOLOGICAL AND POLITICAL EDUCATION FOR COLLEGE STUDENTS IN THE MOBILE LEARNING ENVIRONMENT

4.1. Lack of experience

In recent years, with the continuous popularization and development of mobile learning technology, more and more universities have begun to apply mobile learning to innovation in ideological and

political education. However, due to lack of experience, many college students face some problems in ideological and political education in mobile learning environments. Firstly, with the development of society and technology, the mobile learning environment has brought new challenges and opportunities to the ideological and political education of college students. School educators need to conduct in-depth research and understanding of new technologies, media, and forms in order to better serve the ideological and political education of college students. However, most school educators still lack sufficient understanding and understanding of the innovation of ideological and political education for college students in the mobile learning environment, resulting in students being unable to truly adapt to the new situation and meet the diverse needs of college students.

Secondly, the lack of experience of school educators in ideological and political education for college students is also an important factor that restricts innovation. Although ideological and political education for college students has become an important component of school education, the professional knowledge and experience of most school educators are relatively limited, making it difficult to meet the diverse, personalized, and professional needs of college students [6]. I often feel at a loss and helpless about how to stimulate students' interest in learning, how to establish good educational relationships with students, and how to apply various educational methods and technologies.

Finally, the outdated teaching concepts and methods of school educators are also a factor contributing to the lack of experience. With the development of society and the changes of the times, education also needs to constantly innovate and develop. However, some school educators still stay in the past in terms of educational concepts and methods, adhering to traditional educational models and teaching methods, resulting in a lack of in-depth understanding and grasp of ideological and political education for college students, and unable to effectively promote the innovative development of ideological and political education for college students.

4.2. Lack of scientific planning

The mobile learning environment has brought many conveniences to education, especially in the ideological and political education of college students. However, educational innovation requires systematic planning in order to truly achieve educational goals. Unfortunately, many schools lack scientific planning when carrying out educational innovation, which makes it difficult to achieve the expected results in improving the quality of education.

Firstly, the lack of scientific planning will lead to the arbitrariness of educational innovation. Many schools often rush to launch educational innovation projects when facing the challenge of mobile learning, but

lack scientific planning and design. Doing so often leads to inadequate systematic design of educational innovation projects, which cannot fully meet the needs of students, and cannot bring about ideal educational outcomes [7].

Secondly, the lack of scientific planning will lead to the singularity of educational innovation. Many schools only focus on one aspect when carrying out educational innovation, such as launching a mobile learning app or offering an online course. However, such educational innovation projects often only start from one perspective and do not implement comprehensive educational concepts. Such educational innovation projects often fail to meet the diverse needs of students and fail to achieve the comprehensiveness of educational innovation.

Finally, the lack of scientific planning will lead to the blindness of educational innovation. Educational innovation projects without scientific planning often lack a feedback mechanism, which often leads to blindness in educational innovation and makes it difficult to accurately grasp the progress and effectiveness of educational innovation. This will waste a large amount of educational resources, leading to the failure of educational innovation projects.

5. Strategies for Innovation in Ideological and Political Education for College Students in a Mobile Learning Environment

5.1. Building a team of high-quality teachers

In the mobile learning environment, innovation in ideological and political education for college students has become a hot topic in the current education industry. Building a high-quality teacher team is an important link in this innovative process. This article will explore how to create a high-quality team of teachers in this process.

Firstly, a high-quality teaching team needs excellent leaders. These leaders should have rich teaching experience and be able to demonstrate good teaching results in teaching practice. At the same time, students should also have a broad and in-depth academic research background, and be able to continuously update and improve their teaching methods and textbooks. In this way, students can lead teams and achieve better teaching outcomes.

Secondly, communication and collaboration among members of the teacher team are also important aspects of building a high-quality teacher team. In a mobile learning environment, teachers can communicate and share their teaching experiences with each other through online video conferences, online discussions, and other means. In such communication, team members can learn from each other and explore the optimization of teaching methods together, thereby continuously improving their teaching level. In addition, developing a scientific and reasonable teaching management system is also an important link in building a high-

quality teacher team. These systems should include teaching quality standards, teaching task allocation, teaching evaluation, and ensure that teachers comply with these systems [8]. This can better ensure the quality of teaching, improve teaching efficiency, and make the entire team more coordinated.

Finally, we should encourage the teaching team to conduct academic research and teaching practice. During this process, teachers can participate in teaching seminars, academic conferences, etc. for academic exchange and collaborative research to improve their academic level. At the same time, it is also possible to actively explore teaching methods, carry out teaching practices, and continuously guide students to engage in innovative thinking, thereby expanding teaching ideas and improving teaching quality.

5.2. The construction of ideological and political education theme websites and web pages

In today's information age, mobile learning environment has become one of the main ways for college students to learn. In this environment, how to innovate ideological and political education has become a very important issue. The construction of educational themed websites and web pages has become a very effective method. The construction of educational themed websites can be said to be a very complex process, and there are many factors that need to be considered. Firstly, it is necessary to consider the functionality and structure of the website. In the ideological and political education of college students, the website needs to have multiple functions such as course publishing, learning resource sharing, and learning information publishing. At the same time, the structure of the website needs to be simple, clear, and easy to operate. Only in this way can students conveniently learn and communicate, and then need to consider the content and form of the website. In response to the special needs of ideological and political education for college students, the content of the website needs to be targeted and practical. In terms of form, attention should be paid to aesthetics and flexibility, as this can not only enhance students' interest in learning, but also facilitate maintenance and updates by operators. In addition, it is also necessary to consider the promotion and operation of the website. After building a website, it is necessary to conduct extensive promotion and operation in order to allow more students to understand the existence and value of the website [9]. At the same time, timely updates and improvements based on student feedback can ensure the long-term stability and effectiveness of the website. In addition to educational themed websites, there is also the construction of web pages. Compared to websites, the construction of web pages is more flexible and suitable for publishing temporary learning materials and communication content. When building a webpage, it is necessary to pay attention to

the unity of format and richness of content. At the same time, the webpage also needs to facilitate students' communication and interaction, and can set up functions such as comment and discussion areas.

Secondly, building educational themed websites requires clear thinking and clear goals. Clarify the goals of ideological and political education for college students, such as cultivating their ideological and moral qualities, improving their political literacy, and so on. At the same time, it is necessary to clarify the target group for building educational themed websites, namely college students. On this basis, teachers can develop specific construction plans. To build a successful educational themed website, teachers need to carefully design the framework and content of the website. In terms of framework, we need to consider the design of the navigation bar, home page, content page, etc. of the website. In terms of content, it is necessary to develop rich and diverse content, including course content, activity information, and so on [10]. At the same time, we should pay attention to the legibility and usability of the website, so that college students can easily browse and use the website. In order to enhance the influence and visibility of educational themed websites, teachers need to adopt various promotional methods, such as posting posters on university campuses, distributing promotional brochures, promoting on social media platforms, and so on. Through these promotional methods, college students can increase their awareness and usage of educational themed websites, thereby improving the effectiveness of ideological and political education.

5.3. Reforming the content and methods of traditional ideological and political education

In the current era of the Internet, mobile learning environments have become an inevitable trend, especially in the field of university education where applications are becoming increasingly widespread. However, for the traditional discipline of ideological and political education, how to achieve content and method reform in a mobile learning environment has become an urgent problem to be solved. Traditional ideological and political education always gives people a dull and dull feeling. Teachers instill various theoretical knowledge in the classroom, but rarely pay attention to students' personalities and ideological consciousness [11]. In the context of mobile learning, ideological and political education in universities should pay more attention to developing students' thinking abilities, cultivating their creative thinking, and enabling them to actively think about their own lives, interpersonal relationships, and social issues during learning. Therefore, the reform of educational content and methods is crucial.

Firstly, teachers must clarify the needs of ideological and political education in the new era. In a mobile learning environment, teachers need to build a more open, collaborative, and interactive educational

model. This requires teachers to draw on diverse educational concepts and make education more focused on students' subjectivity and creativity. Therefore, in terms of educational content, teachers should focus on studying multicultural ideas, allowing students to absorb different nutrients in the exchange of ideas. By introducing new educational resources and innovative educational methods, students' ability to actively think and enhance their autonomous learning ability is stimulated.

Secondly, in terms of educational methods, teachers should also adopt more flexible and diverse educational models. In a mobile learning environment, education can be more comprehensive and targeted, and through the popularization of mobile devices and networks, it is more convenient for students to learn. At the same time, how to leverage online tools to play a greater role in students' growth is also a question that teachers need to consider. For example, teachers can provide students with more practical learning resources through online classes, WeChat official account and other platforms. At the same time, teachers can also use tools such as social media to interact with students, understand their real needs, and provide more appropriate educational content and methods for students.

5.4. Close interaction and communication with students

In modern society, mobile learning has become a very important learning mode, especially for college students. Mobile learning has become an important way for students to learn. In such a learning environment, how to innovate and interact better with students in ideological and political education for college students is a topic that teachers need to delve into today. In the mobile learning environment, the learning methods of college students have undergone significant changes. Students pay more attention to flexibility and individuation, and more emphasis on independent learning and cooperative learning. Under such learning mode, ideological and political education also needs to pay more attention to interaction, and more emphasis on close interaction with students [12].

Firstly, teachers need to establish a good interactive platform. In a mobile learning environment, teachers can establish an interactive platform between students and teachers through the school's online platform, such as WeChat groups, QQ groups, etc. Such a platform can enable fast and convenient communication between students and teachers during the learning process, which can more effectively achieve close interaction between teachers and students.

Secondly, teachers need to pay more attention to the personalized needs of students. In the context of mobile learning, college students pay more attention to personalized learning needs. Therefore, in ideological and political education, teachers also need

to pay more attention to students' personalized needs. Teachers can conduct online tests, surveys, and other activities to understand the characteristics and needs of each student, and then develop targeted teaching plans. In addition, teachers can also stimulate students' interest in learning through interactive means. For example, organizing group discussions, publishing learning outcomes, and holding interactive classroom activities can all help students actively participate in learning, thereby improving their learning outcomes.

Finally, teachers also need to combine classroom teaching with online learning. In ideological and political education, teachers can combine classroom teaching with online learning, for example, by providing learning materials through online teaching videos, courseware, and other means, and engaging in interaction and discussion in the classroom, thereby more closely interacting with students [13].

5.5. The construction of network culture

In the mobile learning environment, ideological and political education for college students is facing new opportunities and challenges. With the continuous progress and popularization of network technology, network culture, as a new cultural form, has become an important component of ideological and political education for college students. How to build a good online culture in this new educational environment has become a problem that teachers need to think about and explore. Firstly, teachers need to strengthen the guidance and supervision of college students' online behavior with the goal of promoting the construction of online culture. On the internet, college students' behavior is often subject to certain indulgence and temptation, and they are easily disturbed by bad information, and may even engage in some bad behavior. Therefore, teachers need to formulate relevant rules and regulations, and carry out publicity and education through various channels to guide college students to consciously abide by online behavioral norms, enhance their awareness of online self-discipline, and create a good online cultural atmosphere. In addition, teachers also need to leverage the advantages of online education resources and use online platforms to carry out diverse ideological and political education activities [14]. In the mobile learning environment, college students can access educational resources anytime and anywhere through various mobile devices, which provides an important guarantee for the innovation of ideological and political education. Teachers can establish an online learning platform to carry out various activities such as interactive discussions, online question answering, and courseware sharing, to stimulate college students' interest in learning and improve learning outcomes. The construction of online culture not only requires active guidance, but also requires the active participation and contribution of college students. Teachers can set up corresponding

innovation platforms to encourage college students to unleash their creativity and imagination, design and produce various applications, games, animations, and other products that meet the needs of online cultural construction. This not only cultivates the innovative ability of college students, but also allows them to participate in the construction of online culture and enhance their sense of social responsibility.

Secondly, teachers need to approach the diversity and changes of online culture with an open and inclusive attitude. Network culture is a diverse and constantly changing cultural system, and teachers need to timely understand and pay attention to the development trends of network culture, actively consider and explore the innovative development of network culture. At the same time, teachers also need to respect and tolerate different voices and perspectives in online culture, promote cultural exchange and integration, and promote the healthy development of online culture.

Finally, in the process of innovating ideological and political education for college students, the methods of constructing network culture also need to be continuously explored and improved. On the one hand, teachers can establish online cultural platforms to encourage students to participate in online cultural creation, such as promoting students to write excellent online novels, poetry, microfilms, and so on. This not only enhances students' cultural awareness and innovation ability, but also provides them with a platform for self presentation and communication. On the other hand, in order to promote the development of online culture construction, teachers can also establish publicity platforms to enhance students' understanding and understanding of online culture. For example, teachers can publish news, articles, videos, and more related to online culture on campus networks for promotion and promotion. In this way, students can have a deeper understanding of the significance and role of online culture, and then actively participate in the construction of online culture.

6. CONCLUSION

In the mobile learning environment, there are many opportunities for ideological and political education for college students. Therefore, relevant schools need to gradually update their existing ideological and political education models according to the development characteristics of the new era, achieve optimization and adjustment of educational methods and content, and adapt to the physical and mental development characteristics of students. Enable each student to actively cooperate with the teacher with a fuller emotional state to complete the learning of ideological and political knowledge, connect with life, find the correct problem-solving methods, and truly reflect the advantages of ideological and political education for college students.

ACKNOWLEDGMENT

The third level training object support project of the sixth “333 high-level talent training project” (2022).

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A Study on the Evaluation System of College English Teaching Quality in Blended Learning

Ying Zhao¹, Qingyu Wu², Hui Wang^{3,*}

¹The School of Foreign Languages Department, Shandong First Medical University

²The School of Foreign Languages Department, Shandong First Medical University

*Corresponding Author.

Abstract: With the integration of “Internet + education” blended learning has become the main teaching method which combines the advantages of traditional teaching and online one to make the two complement each other. This paper analyzes the evaluation system of teaching quality in blended learning, and points out the existing problems and shortcomings. It also tries to design evaluation scales used respectively by students, experts and peers, and teachers for self-evaluation, based on the investigation conducted among students and teachers, together with the characteristics in language teaching, with the purpose of making teaching evaluation more scientific, reasonable and comprehensive so as to improve teachers’ development and teaching quality. And preliminary screening the blended teaching evaluation index. A questionnaire survey was conducted to collect students’ opinions, and after factor analysis of the data, a blended teaching evaluation index system was established. This paper aims to combine formative assessment with summative assessment when assess learning outcome, and clarify the subject, content and index for evaluation.

Keywords: Blended learning; Teaching quality; Teaching evaluation; Evaluation index system

1. INTRODUCTION

Recently, the blended learning, which combines the traditional classroom teaching and online learning, has developed by leaps and bounds. As the most important teaching form in universities at present, blended learning has advantages that cannot be replaced by other forms and is the basis of teaching assignment in various universities. As the executors of teaching, teachers play a vital role in blended learning. The majority of teachers take online learning as supplement and assistance of the classroom teaching. The online learning is characterized of multi-tasks, with listening and writing being the most frequently practiced tasks. Teachers adopt a combination of formative and summative assessment forms, with classroom activities participation, written assignment and final exam as the most frequently used forms. Therefore, the quality evaluation of blended learning has become one of the important means for universities to improve teaching quality. In the broad category of educational evaluation, the quality evaluation of

blended learning is the most important component. As a compulsory course in universities, college English has always been valued by society and schools. Since the Ministry of Education listed the reform of college English teaching as a “quality construction project”, it has received positive responses. Universities have stepped up their efforts to reform college English teaching and achieved remarkable results. The blended learning arouses the reform of teaching methods in addition to teaching content, so quality evaluation system cannot be ignored. Foreign research on teachers’ classroom evaluation emphasizes “practicality and purpose, and pays less attention to the research on evaluation indicators”[1]. Domestic research on the assessment of blended learning quality started late. Most of them explore the significance of assessment implementation, current problems, various aspects of assessment and methods of data analysis and statistics, etc., but insufficient attention is paid to the most important aspect of assessment - the research on assessment indicators. At the same time, many studies have also mentioned the research on the evaluation system of college English blended learning quality. Jiang Xiujuan believed that “the evaluation of college English blended learning quality is an effective way to assess teaching quality and promote the professional growth of English teachers”[2]; Liu Jie believed that “the characteristics of college English courses should be combined with quantitative and fixed methods and develop appropriate evaluation indicators”[3]. Huang Weiping mentions that College English blended learning has constructed a set of student evaluations indicator system. Liu Xiu studies the quality supervision of blended learning control indicator system of college English.

From the perspective of students, this study carried out the research on the construction of blended teaching evaluation index, with blended teaching as the evaluation object and the purpose of building a blended teaching evaluation indicator system to help teachers implement high quality blended teaching. In this study, a combination of qualitative and quantitative research methods is used to complement the literature review and survey to build a blended teaching evaluation index system.

2. MAIN PROBLEMS EXISTING IN THE CURRENT EVALUATION SYSTEM

Evaluation indicators do not reflect the characteristics of the course at present. Most domestic universities tend to use the unified blended learning evaluation indicators which lacks specificity of course design evaluation metrics. On the other hand, evaluation criteria “put more emphasis on teachers’ knowledge”[4]. The questions include whether the purpose of teaching is clear, the basic concepts are accurate and the teaching content is correct or appropriate, and whether the key points and difficulties are highlighted, etc. The purpose of learning English is emphasizing language application and communicative skills training while blended learning evaluation standards ignore the interaction between teachers and students.

(1) Single evaluation subject

The main body for evaluating the quality of blended learning in most universities is composed of students and experts, which is a lack of peer evaluation and teachers’ self-evaluation. On the one hand, students are undoubtedly the most important evaluation subjects in teaching evaluation. After all, students are participants in the entire blended learning process and are the only objects of blended learning. Their evaluation of teachers’ blended learning quality has the most consulting value. But on the other hand, students’ evaluation of teaching will be affected to a certain extent by certain factors, such as understanding of the meaning of teaching evaluation and evaluation indicators, and the grasp of teaching objectives, etc. It is difficult to ensure the accuracy and objectivity of teaching evaluation. Therefore, students can only evaluate teaching with the aid of experts’ evaluation and teachers’ self-evaluation. Only by combining them can the quality of the blended learning be reflected more comprehensively.

(2) Single evaluation method

The blended learning evaluation methods adopted by universities are simplified. This is a school-wide unified standards and all courses use the same evaluation scale, consisting of specific evaluation of student groups and scoring, and then conduct statistical analysis to obtain evaluation results. In doing so, although the evaluation method is convenient for statistics, it is over objective and mechanical. The blended learning evaluation should be based on a personalized index system that is full of individual characteristics.

This study is based on the survey and analyzes the current situation of student evaluation of teaching in target universities. The design of English blended learning quality evaluation indicators is based on extensive research and discussion, and the traditional blended learning evaluation model is reformed to build a blended learning quality evaluation index system that is more in line with the characteristics of college English blended learning.

3. PRINCIPLES FOR CONSTRUCTING A QUALITY EVALUATION SYSTEM FOR COLLEGE ENGLISH BLENDED LEARNING

(1) Guiding principle

The purpose of evaluating the quality of college English blended learning is to standardize blended learning and ultimately improve the quality of teaching. The indicator system for blended learning evaluation should become the standard for teachers to improve teaching and the guidelines for teachers to improve teaching quality. The goal of college English teaching is to cultivate students’ comprehensive language application ability. Therefore, teaching evaluation indicators should take the goal into full consideration, thereby effectively guiding teachers to carry out reforms in teaching content and teaching methods to improve the efficiency in blended learning.

(2) Principle of feasibility

Feasibility mainly means the convenience in the operation of teaching quality evaluation system, with concise indicator levels, appropriate quantities, and practical quantification. In the specific evaluation process, clear conclusion can be drawn with the evaluation of each specific indicator through actual observation and measurement. Among them, more emphasis is supposed to be put on the design of the student evaluation index system to make it easier for students’ comprehension and avoid stating obscure content that exceeds students’ evaluation capabilities.

(3) Principle of diversity

The principle of diversity refers to the diversity of assessment subjects and the diversity of assessment methods. The evaluation index system should organically combine students’ evaluation, experts’ evaluation, peer evaluation and teachers’ self-evaluation. At the same time, the evaluation indicators of different evaluation entities need to be diversified. Students’ evaluations focus more on teaching methods, teaching attitudes and other aspects that are easy for students to grasp. Expert and peer evaluations should mainly focus on the artistry of blended learning, the systematization, diversity and classroom effects of knowledge acquisition, while teachers’ self-evaluations should focus on the implementation of the teaching process, teacher-student relationship and teaching reflections. In addition to using scales, open-ended questions, interviews and other forms of evaluation methods should also be used to make the evaluation of blended learning quality more scientific, comprehensive and objective.

4. THE ESTABLISHMENT OF THE INDICATOR SYSTEM

In the process of constructing the university blended teaching evaluation index system, it is necessary to consider from various aspects in order to evaluate the blended teaching comprehensively. First of all, by analyzing and collating existing related literature, the

main directions and research contents of blended teaching evaluation are clarified, and the four directions of teaching support, interactive feedback, teaching effect and student satisfaction are determined to construct a blended teaching evaluation index system. And preliminary screening the blended teaching evaluation index. A questionnaire survey was conducted to collect students' opinions, and after factor analysis of the data, a blended teaching evaluation index system was established. The index system includes 4 first-level evaluation indexes, 10 second-level evaluation indexes, and 28 third-level evaluation indexes. Finally, AHP is used to give weight to each index, and the final blended teaching evaluation index system is constructed, which provides a scientific and standard evaluation tool for teachers to optimize the blended teaching.

The indicator system should conform to the characteristics of the subject. The new indicator system needs to take the characteristics and teaching objectives of college English courses into full consideration. The "Teaching Requirements for College English Courses" officially promulgated by the Ministry of Education clearly states, "The evaluation of college English teaching should also include the evaluation of teachers, teachers' attitudes, teaching methods, teaching content, teaching organization and teaching effectiveness"[5].

In addition to teaching attitude, teaching methods, teaching content, and teaching level, the evaluation index system for college English blended learning is a useful tool to monitor the quality. The evaluation index system should also include the body language, attaching great importance to whether the teachers' oral English is clear, fluent, and standardized, and whether the intonation is authentic. In terms of teaching methods, special attention should be paid to the practice of cultivating students' comprehensive language application ability in each teaching section.

The evaluation content should be different depending on the evaluation subjects. The evaluation index system of English blended learning quality should reflect diversified evaluation subjects. Compared with previous student evaluations, it should also include the evaluations from peers and experts and teachers' self-evaluations. So separate evaluation scales should be designed.

In this study, given that experts and peers have roughly the same perspective of the blended learning evaluation, the same scale is designed. In addition to common or similar indicators, the evaluations from experts and peers are mainly to evaluate teachers' teaching attitude, professional ability and teaching level, which constitutes teaching organization, teaching content, teaching skills and methods, as well as teaching attitude and teaching effect. In terms of teaching content, the focus is on the knowledge of the course, that is to say, whether new achievements and new ideas in the subject can be properly absorbed and

introduced; whether the teaching is accurate and consistent with the syllabus in terms of teaching methods. Focus should be put on the stimulation and motivation of students' interest, the cultivation of practical skills and cross-cultural communication skills.

Students' evaluations of teachers' attitude are mainly based on the teaching level. In terms of teaching attitude, focus is put on whether the teachers communicate with students frequently and whether the lectures are contagious; in terms of teaching methods, emphasis is put on whether the language is vivid, whether the classroom atmosphere is active, and whether the lectures are focused and concise; in terms of teaching effects, focus is supposed to be put on whether students' Cultivation of language application ability is valued.

Teachers' self-evaluation mainly focuses on evaluating their own teaching activities, including course design, teaching content, teaching process, teacher-student relationship, teaching reflection, etc. It focuses on whether the design of teaching objectives is conducive to the cultivation of students' language ability and whether the design is flexible according to the content. The indicators of the evaluation scale should be expressed as concise, clear and easy to the greatest extent. In order to truly manifest the concept of "life-oriented", overly complex evaluation scales should be avoided so as to reduce students' burden. Try to be as close to the students as possible, and the language should be simple and clear. The numbers at the end of the scale are all incorporated questions to fully reflect the characteristics of the teaching process, so that teaching evaluation can be more effective.

The evaluation indicator system should adopt a combination of quantitative and qualitative evaluation. For language courses, some factors in the teaching process can be quantified while others cannot, such as the emotions and attitudes of teachers and students. At the same time, it should also be combined with various interviews, such as teacher-student symposiums. This combination enables acquisition of comprehensive information to help teachers assess the quality of their blended learning. Such evaluation data has greater guiding significance for teachers to further improve teaching and teaching quality.

5. CONCLUSION

Based on the analysis of previous researches on blended learning quality, especially the evaluation, this study points out that the evaluation system of college English blended learning quality should fully consider the characteristics of college English courses, and based on the guiding principle, the feasibility principles and diversity principle, it tries to design reasonable questionnaires for students, experts and peers to evaluate the quality of college English blended learning. This study shows that this

multi-element evaluation system can not only take pedagogical ideologies of both language acquisition and moral education into consideration, but also balance both quantitative and qualitative evaluation methods. In this way, it can highly increase teaching productivity, stimulate students' participation during the teaching process and improve teaching evaluation's validity reliability.

ACKNOWLEDGMENTS

The authors wish to thank Shandong Provincial Institute of Education Science, Shandong First Medical University, Chinese Medical Academy and Taian Scientific Bureau. This work was supported in part by a grant from Shandong Provincial Institute of Education Science (A Study on the Evaluation System of College English Teaching Quality in Blended Leaching, 2020WBZC006); Shandong First Medical University Research Project (XM2022089); Chinese Medical Academy (2016B- YY016) and Taian Scientific Bureau (2021ZC485).

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