

Research on the Construction of an Evaluation System for Ideological and Political Education in Higher Vocational Pharmacy Curriculum Based on CIPP Model in the Context of Big Data Era

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Abstract. Objective: With the increasing awareness of healthcare and the booming development of the pharmaceutical industry, highly skilled pharmaceutical professionals are becoming increasingly popular in society. In order to cultivate more and better highly skilled pharmaceutical professionals with professional qualities and serve society; At the same time, in order to objectively evaluate the quality of ideological and political education in vocational pharmacy courses; **Methods:** The Big data analysis method, computer technology and Internet technology were used to promote the construction and development of ideological and political education of higher vocational pharmacy courses in the context of the Big data era, and an ideal evaluation index system of ideological and political education of higher vocational pharmacy courses was constructed. **Process:** Through a series of practical studies and computer technology analysis and processing of the research results, we have shown that the evaluation index system of ideological and political education of higher vocational pharmacy courses collected by Big data technology needs to adopt the guiding principles of high reliability, strong applicability, strong flexibility, and combination with the actual work requirements. At the same time, it is necessary to integrate the vocational education concept of combining morality, technology, engineering, and learning, reflecting the characteristics of being guided by career goals, professional skill improvement, and student-centered. Only in this way can it serve as a tool for objectively evaluating the quality of ideological and political education in pharmaceutical courses, promoting the development of pharmaceutical majors and the cultivation of pharmaceutical professionals. **Results:** Through a series of analysis and research on Big data

technology and computer information technology, an ideal evaluation index system of ideological and political education of higher vocational pharmacy curriculum was obtained; **Conclusion:** This set of index system obtained based on Big data technology can well promote the curriculum construction of pharmaceutical specialty in higher vocational colleges. This index system can speed up the cultivation of highly skilled pharmaceutical professionals like craftsmen in large countries, and improve the competitiveness of pharmaceutical professionals

Keywords: Curriculum ideological and political education; Pharmacy major; Indicator system; CIPP model; Big Data Era

1 Introduction

In order to cultivate high-quality and skilled pharmaceutical professionals, it is first necessary to cultivate their good worldview and professional ethics in serving patients for the country. This task falls on the ideological and political teaching of pharmaceutical professional courses. Curriculum ideological and political education is a new concept and model for implementing teaching reform, and a powerful measure to implement the fundamental task of cultivating morality and cultivating people. At present, the reform of curriculum ideological and political education based on professional courses is widely promoted nationwide, mainly involving the core principles, basic characteristics, and implementation paths of curriculum ideological and political education. However, how to evaluate the teaching effectiveness of curriculum ideological and political education has not yet formed a systematic theoretical guidance and practical methods [1-2], which has become a confusion and difficulty for teachers to deeply promote the construction of curriculum ideological and political education. Establishing a scientific and multi-dimensional curriculum ideological and political evaluation system based on the characteristics of the major and curriculum, while implementing detailed assessment and evaluation work, is currently a hot topic in the research of curriculum ideological and political construction. Therefore, based on the CIPP model, this paper uses the Delphi method and the analytic hierarchy process to initially construct the evaluation index system of ideological and political education in higher vocational pharmacy courses, aiming to provide a tool for objectively evaluating the quality of ideological and political education in higher vocational pharmacy courses.

2 Object and Method

2.1 General information of experts

Please refer to Table 1 for the consultation situation and specific information of the consulting experts.

Table 1. Expert Consultation Structure Table

| Letter inquiry time/No. of experts | Selection criteria | Expert location | Expert unit | Gender/age | Academic degree/ Number of inquiries | Title | Field of expertise |
|------------------------------------|---|---|--|---|---|---|--|
| July -August 2021/ 25 | engaged in pharmaceutical teaching, ideological and political teaching, clinical pharmacy, education management for more than 15 years, with the title of deputy high or above, familiar with the ideological and political theme of the course, volunteered to participate in this study | 11 provinces and cities including Guangdong, Jiangsu, Zhejiang, Beijing, Tianjin, Sichuan, Shanghai | university11 pharmaceutical company10, tertiaryfirst-class hospital6 | Male 14 female11 /38-53 years old average age 43.35±4.7 years old | 7 doctors, 17 masters, 1 undergraduate/ | 8 senior professional titles , 17 deputy senior professional titles | ideological and political education 2;pharmaceutical education11, educational management 2, and clinical pharmacy2 |

2.2 Method

2.2.1 Exploring the Connotation and Applicability of the CIPP Evaluation Model

The CIPP evaluation model is based on Taylor's goal oriented model, which is an improved evaluation model that provides services for decision-making. CIPP consists of the first letters of four evaluation activities, namely Context evaluation, Input evaluation, Process evaluation, and Product evaluation [3]. This model evaluates different aspects and stages of the education process, fully demonstrating the diagnostic, formative, and summative nature of the evaluation, which is highly consistent with the overall process of ideological and political education in university courses and the concept of all-round education. Curriculum ideological and political education is a gradual process that runs through the entire education and teaching process, and the CIPP model emphasizes the process and feedback evaluation function, which is suitable for teaching activities such as curriculum ideological and political education that require long-term development and continuous improvement[4].

2.2.2 Develop an evaluation index system

The researchers refer to relevant literature and sort out the requirements and characteristics of vocational education, core competencies in pharmacy, and cognitive and learning characteristics of vocational pharmacy students [5-7]. Referring to the national pharmaceutical teaching standards, the "Guiding Outline for Ideological and Political Construction of Higher Education Curriculum", and the "Implementation Plan for the Reform and Innovation of Ideological and Political Theory Courses in Schools in the New Era", the evaluation index pool is organized and summarized by the researchers . Using the CIPP model as the framework, a preliminary evaluation index system for ideological and political education in higher vocational pharmacy courses has been developed, including 4 first level indicators, 12 second level indicators, and 36 third level indicators, totaling 52 indicators.

2.2.3 Expert inquiry

After soliciting opinions from experts over the phone, we conducted two rounds of correspondence with 25 experts through WeChat and email. The inquiry volume includes four parts: (1) Introduction. Briefly introduce the purpose, content, and filling requirements of this study. (2) The main body of the evaluation index system. The researchers consult the importance level of

each indicator and use Likert's 5-level scoring method, then assign 1-5 points from "very unimportant", "unimportant" to "very important", and fill in the comments on the revised items in the remarks column(which is shown in Table 2 Scoring Table). (3) Basic information. This includes experts' research fields, age, educational background, etc. (4) Expert judgment is based on the questionnaire. After the first round of expert consultation, the research group will collectively discuss and evaluate the opinions of the experts, then modify and improve the indicators, and form the second round of expert consultation volume. At the same time, experts will be asked to rate the weights of each indicator. This study referred to relevant literature [8] and set the screening criteria for indicators with importance assignment mean>4, full score frequency>50%, and coefficient of variation<0.25

Table 2. Scoring Table

| degree of importance | very unimportant | not important | generally important | important | very important |
|----------------------|------------------|---------------|---------------------|-----------|----------------|
| Score | 1 | 2 | 3 | 4 | 5 |

2.2.4 Statistical methods

Using Excel 2019 and SPSS 22.0 software for data processing and analysis, calculating expert positivity coefficients, coordinating systems, etc. Apply SPSS AU software to complete Analytic Hierarchy Process (AHP) and determine indicator weights.

3 Results

3.1 Degree of expert opinion vote approval

In this study, 25 questionnaires were distributed through two rounds of expert consultation, with effective recovery rates of 100%. The expert authority coefficient was distributed between 0.7 and 0.95, with an average of 0.82. In the first round of 52 inquiry indicators, the average assigned value of importance is 4.79 (out of 5). Except for the third level indicator "having a high understanding of the necessity and importance of integrating professional learning into ideological and political courses", the average value is >4. Among the 49 indicators in the second round of inquiry, the average importance assignment increased to 4.84, with 48 indicators having a full score frequency exceeding 50%. The coefficient of variation of each indicator is distributed between 0 and 0.16, all<0.25. The Kendall harmony coefficient W ranges from 0 to 1, and the larger the value, the higher the consistency of experts.

The statistical results of the questionnaire are shown in Table 3; The coordination coefficients of expert opinions for two rounds of expert correspondence are shown in Table 4 and Fig.1

Table 3. Statistical Results of the Questionnaire

| Questionnaire rounds | No. of questionnaires | rate of recovery | Distribution of expert authority coefficients | No. of indicators | Average distribution of importance |
|----------------------|-----------------------|------------------|---|-------------------|---|
| 1 | 25 | 100 % | 0.7~0.95, the average value is 0.82 | 52 | 4.79 (out of 5) Except for the third level indicator "high understanding of the necessity and importance of integrating professional learning into ideological and political courses", the average value is >4. |
| 2 | 25 | 100 % | 0.7~0.95, the average value is 0.82 | 49 | The average importance ≥ 4.84 , and the full score frequency of 48 indicators exceeds 50%. |

Table 4. Coordination coefficient of expert opinions for two rounds of expert correspondence

| Order | Number of indicators | W | X ² | P |
|-------|----------------------|-------|----------------|--------|
| 1 | 52 | 0.345 | 298.761 | < 0.01 |
| 2 | 49 | 0.339 | 294.764 | < 0.01 |

3.2 Expert Consultation Indicator Screening Results

In the first round of expert inquiry, one secondary indicator was revised, changing "learning outcomes" to "core competencies". Experts believe that the evaluation of the learning effectiveness of ideological and political courses starts with changes in learning attitudes and behaviors, and ultimately ends with the improvement of students' core competencies. The more specific and materialistic "learning outcomes" cannot fully cover the content of core competencies. Eight experts believe that the implementation of diversified teaching methods requires certain information technology assistance, and the two cannot be completely separated. The three-level indicators "appropriate use of information technology means" and "flexible use of multiple teaching methods" overlap in content expression, so the two indicators are merged. Fifteen experts believe that it is sometimes difficult to distinguish between multi subject evaluation and multiple forms of evaluation in practical operations, so these two three-level indicators are combined and described. Removed a third level indicator with an importance assignment of less than 4, which states that there is a high understanding of the necessity and importance of integrating professional learning into curriculum ideological and political education, as this indicator can reflect changes in learning attitudes and behaviors, as well as improvements in core competencies. The researchers revised the language descriptions of five tertiary indicators to better align with the characteristics of pharmaceutical majors. In the second round of expert consultation, all experts expressed approval for the revised indicators and their opinions tended to be consistent. The specific content of the indicator system is shown in Table 5.

4 Discussion

Table 5. Expert Consultation Results on the Evaluation Index System of Ideological and Political Education in Higher Vocational Pharmacy Courses

| Indicator | importance ($\bar{x} \pm S$, score) | full score rate (%) | coeffi- cient of variation | weight (%) |
|--|--|------------------------|----------------------------------|---------------|
| 1. Course Background | 5.00±0.00 | 100.00 | 0.00 | 11.025 |
| 1.1 Course positioning | 5.00±0.00 | 100.00 | 0.00 | 4.654 |
| 1.1.1 In line with the requirements of the "Guiding Outline for Ideological and Political Construction of Curriculum in Higher Education Institutions" issued by the Ministry of Education, there are clear development goals for ideological and political construction of curriculum | 4.94±0.24 | 94.12 | 0.05 | 2.880 |
| 1.1.2 Adhere to national teaching standards and pharmaceutical talent training plans, and revise curriculum standards | 5.00±0.00 | 100.00 | 0.00 | 1.773 |
| 1.2 Course Objectives | 5.00±0.00 | 100.00 | 0.00 | 6.371 |
| 1.2.1 The ideological and political goals are specific, accurate, and clearly described, in line with students' cognitive patterns and characteristics | 4.94±0.24 | 94.12 | 0.05 | 2.508 |
| 1.2.2 Ideological and political objectives reflect the characteristics of pharmacy specialty and curriculum, including the cultivation of social responsibility, feelings of medical workers, humanistic quality, craftsmanship, labor attitude, professional identity, clinical pharmacy thinking and other qualities and abilities | 4.88±0.33 | 88.23 | 0.07 | 3.863 |
| 2. Course investment | 5.00±0.00 | 100.00 | 0.00 | 27.076 |
| 2.1 Teacher literacy | 5.00±0.00 | 100.00 | 0.00 | 7.338 |
| 2.1.1 Adhere to the correct political stance and demonstrate the good political literacy and professional ethics of pharmaceutical teachers in vocational colleges in the new era | 5.00±0.00 | 100.00 | 0.00 | 3.004 |
| 2.1.2 Continuously carry out ideological and political education and research in courses, and enhance the awareness and ability of ideological and political construction in courses | 4.17±0.47 | 70.59 | 0.10 | 2.753 |
| 2.1.3 Teaching attitude is serious, rigorous and standardized, and the expression is clear | 4.53±0.51 | 41.18 | 0.14 | 1.580 |
| 2.2 Teaching Resources | 5.00±0.00 | 100.00 | 0.00 | 10.581 |
| 2.2.1 Adhere closely to the course content, deeply explore the ideological and political elements contained in each knowledge and skill point, and accurately extract the ideological and political theme | 4.94±0.24 | 94.12 | 0.05 | 4.548 |
| 2.2.2 Clear structure, rich content, and diverse forms of ideological and political material resource library | 4.71±0.47 | 70.59 | 0.10 | 3.920 |
| 2.2.3 The ideological and political material resource library is up-to-date, updated in a timely manner, and easy to use | 4.53±0.51 | 52.94 | 0.11 | 2.113 |
| 2.3 Teaching Design | 5.00±0.00 | 70.59 | 0.00 | 9.157 |

| | | | | |
|--|-----------|--------|------|--------|
| 2.3.1 The writing of lesson plans is complete and standardized, including ideological and political goals, ideological and political elements, and ideological and political cases | 4.76±0.44 | 76.47 | 0.09 | 2.040 |
| 2.3.2 The design of ideological and political education emphasizes the student-centered approach, and implements the educational requirements of "value and quality, ability cultivation, and knowledge impartation" in one | 4.71±0.47 | 70.59 | 0.10 | 3.992 |
| 2.3.3 The teaching process is designed appropriately, reflecting the vocational education concepts of combining morality and technology, integrating knowledge and action, and integrating the five in one of "job course competition, certificate creation" | 4.53±0.51 | 52.94 | 0.11 | 3.126 |
| 3. Course Implementation | 5.00±0.00 | 100.00 | 0.00 | 40.578 |
| 3.1 Teaching content | 5.00±0.00 | 100.00 | 0.00 | 10.154 |
| 3.1.1 Optimize the supply of ideological and political content in courses around key areas such as political identity, patriotism, medical worker sentiment, and humanistic literacy | 4.94±0.24 | 94.12 | 0.05 | 5.125 |
| 3.1.2 The integration of ideological and political elements with professional knowledge is good and closely integrated | 4.88±0.33 | 88.24 | 0.07 | 3.409 |
| 3.1.3 Setting the proportion of ideological and political content scientifically and reasonably, emphasizing the integration of theory with practice | 4.76±0.44 | 76.47 | 0.09 | 1.620 |
| 3.2 Teaching methods | 5.00±0.00 | 100.00 | 0.00 | 17.823 |
| 3.2.1 Flexible application of various teaching methods, integration of ideological and political education into nature, and realization of implicit ideological and political education that moistens things and is silent | 4.88±0.33 | 88.24 | 0.07 | 6.947 |
| 3.2.2 Create work case scenarios closely related to pharmaceutical professional positions, inspire students' thinking, and cultivate professional literacy and abilities | 4.53±0.51 | 52.94 | 0.11 | 3.911 |
| 3.2.3 Pay attention to students' inner feelings and emotional experiences, and promote in-depth and effective interaction between teachers, students, and students | 4.71±0.47 | 70.59 | 0.10 | 4.821 |
| 3.2.4 Expand the second and third classrooms, enhance social responsibility and comprehensive health service awareness | 4.88±0.33 | 88.24 | 0.07 | 2.145 |
| 3.3 Teaching Evaluation | 5.00±0.00 | 100.00 | 0.00 | 8.936 |
| 3.3.1 Effective combination of ideological and political evaluation and professional evaluation | 4.59±0.62 | 64.71 | 0.13 | 2.790 |
| 3.3.2 Combining process evaluation with outcome evaluation, with a greater emphasis on process evaluation | 4.82±0.39 | 82.35 | 0.08 | 3.394 |
| 3.3.3 Diversified evaluation subjects and diverse forms, exploring value-added evaluation | 4.65±0.61 | 70.59 | 0.13 | 2.752 |
| 3.4 Teaching Reflection | 5.00±0.00 | 100.00 | 0.00 | 3.664 |
| Reflection on the experience and shortcomings in the process of ideological and political education concepts, teaching design, teaching implementation, and teaching evaluation in the curriculum | 4.88±0.33 | 88.24 | 0.07 | 3.664 |
| 4. Course effectiveness | 5.00±0.00 | 100.00 | 0.00 | 21.321 |
| 4.1 Learning behavior | 5.00±0.00 | 100.00 | 0.00 | 8.818 |
| 4.1.1 Improve learning motivation, such as awareness of self-directed learning, classroom leadership, and enthusiasm for participating in teaching activities | 4.88±0.33 | 100.00 | 0.07 | 2.642 |
| 4.1.2 Enhance social practice and service willingness, such as participating in health education, first aid knowledge training, social activity security, etc | 4.76±0.56 | 82.35 | 0.12 | 1.661 |

| | | | | |
|---|-----------|--------|------|-------|
| 4.1.3 Consciously practicing the core socialist values in daily life, possessing firm ideals, beliefs, and patriotic spirit | 4.47±0.72 | 58.82 | 0.16 | 1.015 |
| 4.1.4 Actively demonstrate the spirit of respecting life and saving lives and injuries in professional learning, highlighting humanistic awareness such as respect for patients and benevolence | 4.88±0.33 | 88.24 | 0.07 | 3.500 |
| 4.2 Core competencies | 5.00±0.00 | 100.00 | 0.00 | 9.000 |
| 4.2.1 The professional knowledge and skills of pharmacy have been consolidated and expanded | 4.59±0.62 | 64.71 | 0.13 | 1.708 |
| 4.2.2 The comprehensive abilities of pharmaceutical positions have been exercised and strengthened, such as drug development thinking, communication, teamwork, innovation, and other abilities | 4.82±0.39 | 82.35 | 0.08 | 3.227 |
| 4.2.3 Cultivate and enhance professional ethics in pharmacy, such as a sense of professional honor, dedication, craftsmanship, and standardization awareness | 5.00±0.00 | 100.00 | 0.00 | 4.065 |
| 4.3 Overall effect | 5.00±0.00 | 100.00 | 0.00 | 3.503 |
| 4.3.1 Students have high satisfaction with the curriculum and teachers | 4.71±0.47 | 70.59 | 0.10 | 2.335 |
| 4.3.2 The course has rich achievements in ideological and political education and research, and teaching design and implementation plans can be referenced and promoted | 4.53±0.51 | 52.94 | 0.11 | 1.168 |

4.1 Representative and reliability of experts

The experts involved in the professional teaching of pharmacy, ideological and political teaching, clinical pharmacy, and educational management, all of whom have bachelor's degree or above, deputy senior title or above, 15 years of work experience or above, aged 38 to 53 years, are the backbone of the professional field. The experts are familiar with the ideological and political content of the curriculum, have rich theoretical and practical experience, and are representative. Their views on the ideological and political construction of the curriculum are worthy of reference. Ten experts proposed constructive modification suggestions, indicating their high enthusiasm and authority. The significance of this study has been widely recognized by experts. After two rounds of expert inquiries, the Kendall harmony coefficients W were 0.345 and 0.339, respectively, and the coefficient of variation of all indicators at all levels was less than 0.25, indicating that the opinions of the experts are tending towards consistency.

4.2 The evaluation index system for ideological and political education in higher vocational pharmacy courses has strong applicability

This study draws inspiration from the CIPP model and relies on the analysis framework of the curriculum ideological and political system of "background evaluation input evaluation process evaluation result evaluation" to construct 4 first level indicators, 12 second level indicators, and 33 third level indicators. The entire process and multi-angle evaluation of curriculum ideological and political education shows that the importance average score of the first and second level indicators is full (5 points), indicating that the indicator system architecture has been unanimously recognized by experts and has strong applicability.

4.2.1 Course background is based on the quality of talent cultivation, reflecting goal guidance and professional orientation

The course background is the first level indicator with the lowest weight (11.025%) but the highest average importance score (≥ 4.88 points), including two second level indicators of "course positioning" and "course objectives" and four third level indicators. The Guiding Outline for the Ideological and Political Construction of Curriculum in Higher Education Institutions, as a guiding document, provides direction for the national ideological and political construction of curriculum, and also puts forward clear and specific requirements for various disciplines and majors. Based on the quality of talent cultivation, it is the standard for the ideological and political construction of curriculum in various universities. To scientifically design the ideological and political education system for courses, it is necessary to first revise the talent cultivation plan and curriculum standards (curriculum standards) for pharmaceutical majors, formulate the goals of ideological and political construction for this major, and then formulate the ideological and political goals for each course based on the characteristics of the curriculum and students. Among the three-level indicators, the weight of "ideological and political goals reflecting the characteristics of pharmaceutical majors" is the highest (3.863%). Vocational pharmaceutical courses have teaching characteristics based on subject characteristics, such as closely adhering to pharmaceutical positions and patient needs, emphasizing professional responsibility, communication, care, and integration of theory and practice. Therefore, in addition to common points of pharmaceutical courses such as social responsibility and medical worker sentiment, the ideological and political goals of the curriculum also include humanistic literacy, craftsmanship spirit Labor attitude, professional identity, and clinical medication thinking are in line with the characteristic points of pharmacy majors and courses [9].

4.2.2 Curriculum investment should balance personnel training and resource construction, reflecting the new concept of vocational education

The curriculum investment includes three secondary indicators, namely "teacher literacy", "teaching resources", and "teaching design", as well as nine tertiary indicators. Among them, "teaching resources" has the highest weight (10.581%), and rich ideological and political elements are necessary conditions for effectively carrying out curriculum ideological and political construction. Related studies have shown that^[10-11], the construction of ideological and political resources needs to be combined with the characteristics of the curriculum, professional connotation, and analysis of the learning situation, to deeply explore the ideological and political elements contained in knowledge and skills points, develop ideological and political micro courses, set up pharmaceutical professional job cases, typical figures in the professional industry, news and current affairs through informatization, and construct a diverse, rich, and logically structured ideological and political resource library. In the teaching process, teachers should keep up with the times ,and update timely the resource library. The three-level indicator of "good political literacy and teacher ethics" in "teacher literacy" has the highest score and weight. Teachers are the key to deepen and promote the ideological and political construction of courses. In the process of ideological and political teaching and scientific research, pharmaceutical professional teachers continuously improve their awareness and ability to cultivate high-quality talents for the national health industry. Only by doing so can they better undertake the responsibility of cultivating high-quality talents for the national health industry, and become preaching, imparting, and dispelling doubts Empowered 'Mr. Big'. In teaching design, it is necessary to analyze

the learning situation based on the teaching content, optimize the teaching process, and reflect the concept of vocational education in higher vocational pharmacy, such as the integration of morality and technology, the combination of engineering and learning, the integration of knowledge and action, and the integration of "job course competition, certificate creation".[10-11]

4.2.3 Course implementation highlights innovative teaching methods and sound teaching evaluation, reflecting the student-centered approach

Course implementation is the first level indicator with the highest weight (40.578%), indicating that course implementation is the core content of the evaluation of ideological and political education in courses. This indicator includes four second level indicators, namely "teaching content", "teaching methods", "teaching evaluation", and "teaching reflection", as well as 11 third level indicators. Optimize the ideological and political content of the course by integrating professional spirit, humanistic cultivation, and other elements around the main line of professional ideological and political education. Among the three-level indicators, "flexible application of multiple teaching methods" has the highest weight (6.947%). Each course in the pharmacy major involves different pharmaceutical positions, creating case scenarios based on pharmaceutical professional positions, reasonably utilizing platforms, technologies, and resources to organize classrooms, using various teaching methods such as case analysis, focus debates, group discussions, personal reports, and scenario simulations, organically integrating ideological and political elements into the curriculum, Penetrate the cultivation of professional literacy and abilities, inspire students' thinking, and promote interaction between teachers, students, and students [13-15]. Teachers should continuously carry out teaching diagnosis and evaluation, pay attention to the combination of process evaluation and result evaluation, explore value-added evaluation, improve comprehensive evaluation system, and pay attention to the effectiveness of education[12-14].

4.2.4 Course effectiveness focuses on students' growth and reflects the cultivation of core competencies

The course effectiveness includes three secondary indicators, namely "learning behavior", "core literacy", and "overall effectiveness", and nine tertiary indicators. Curriculum ideological and political education is based on professional implicit ideological and political education, guiding students to establish a positive outlook on life, enhancing professional confidence and pride [15-19]. Teachers should analyze the impact of ideological and political education on students' professional learning attitudes, behaviors, and core competencies through pre-class autonomous learning completion, classroom performance activity, and post class practical participation, as well as professional knowledge and skill assessment scores. The researchers encourage teachers to finish precise analysis of teaching and learning behavior, and personalized evaluation of students' learning and growth changes [15]. Among the 9 three-level indicators, the importance score (5 points) and weight (4.065%) of "cultivating and improving pharmaceutical professional literacy" are the highest. Currently, with the continuous improvement of people's requirements for pharmaceutical services, pharmaceutical majors need to increase the penetration of students' medical humanities, pharmaceutical etiquette and communication, pharmaceutical ethics and regulations, etc., so that students not only have a solid theoretical foundation and exquisite professional skills, but also have excellent pharmaceutical professional qualities such as love for

work, craftsmanship spirit, standardization awareness, and humanistic care, in order to obtain the core competitiveness of corresponding positions^[9-11].

5.Explanation of the effectiveness of the evaluation system for ideological and political education

Over the past two academic years, researchers have evaluated the effectiveness of this set of ideological and political education evaluation system using a control group and a reform experimental group. Through the same grade, five pharmaceutical classes were selected to conduct traditional ideological and political education in pharmaceutical professional courses, and the reform of ideological and political education in pharmaceutical professional courses was carried out using this set of ideological and political education evaluation system as the standard. The specific comparison of the effectiveness is shown in Table 6.

Table 6 Comparison of Traditional Ideological and Political Education in Pharmacy Majors and the Effect of Ideological and Political Reform Adopting this Research System

| Group | No.of beneficiaries | Graduate employment rate | Graduates' professional matching rate | Graduation monthly salary of 5000+% | Proportion of outstanding graduates | Proportion of individuals with good professional ethics |
|-----------|---------------------|--------------------------|---------------------------------------|-------------------------------------|-------------------------------------|---|
| Re-search | 500 | 98% | 95% | 80% | 9% | 80% |
| Control | 500 | 80% | 75% | 60% | 3% | 60% |

From Table 6 and Fig.2, it is not difficult to see that the pharmaceutical graduates in the pharmaceutical major curriculum ideological and political education reform group who adopted the evaluation system of undergraduate ideological and political education as the standard have higher and better pharmaceutical professional literacy. Moreover, the employment rate, professional matching rate, proportion of monthly salary above 5000 yuan, and proportion of excellent graduates in the research group are much higher than those in the control group, Therefore, the ideological and political evaluation system of vocational pharmacy courses obtained from this study is of great significance and has certain promotion value [15-20].

6.Conclusion

This study relies on the CIPP evaluation model framework and adopts the Delphi expert inquiry method to ultimately construct an evaluation index system for ideological and political education in vocational pharmacy courses, including 33 three-level indicators, and determine the weights of each indicator. This indicator system integrates vocational education concepts such as the integration of moral and technical education, and the integration of "on-the-job course competition, certification, and innovation", reflecting characteristics such as goal guidance, professional orientation, and student centeredness. In the later stage, the scientific and operational evaluation system will be further verified in the teaching practice of different courses in pharmacy, and the research results obtained will be applied to the ideological and political teaching of relevant professional courses, benefiting more people.

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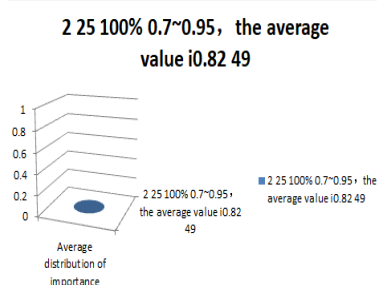


Fig 1: Distribution of Survey Results

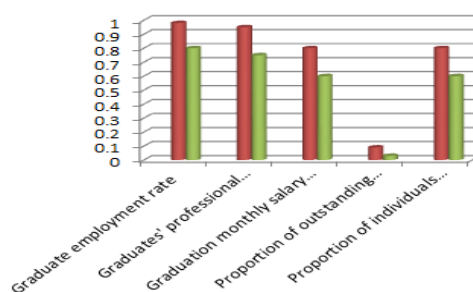


Fig2: Proportion of Graduates at Different Levels in the Research - and Control Groups

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