Analysis on the Construction of Curriculum Ideological and Political Collaborative Innovation Evaluation System

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Abstract. At present, the effect evaluation of curriculum ideology and politics focuses on the teaching process and students' learning effect, and lacks the evaluation of collaborative education. This paper constructs the evaluation index system of curriculum ideological and political collaborative innovation from the perspective of the collaborative education process of the curriculum ideological and political subjects, and uses Entropy weight method to determine the calculation steps of index weight. The research is conducive to realizing the sustainable and high-quality development goal of the curriculum ideological and political construction in colleges and universities.

Keywords: curriculum ideological and political, collaborative innovation, evaluation system.

1 Introduction

The comprehensive promotion of curriculum ideology and politics is a key measure to implement the fundamental task of building moral education and educating people. The construction of curriculum ideology and politics is a systematic project, and the evaluation of curriculum ideology and politics is the key to testing the effectiveness of curriculum ideology and politics. The construction and improvement of curriculum ideology and politics evaluation system is an important link to further promote the construction of curriculum ideology and politics[1]. Since the introduction of curriculum ideology and politics, colleges and universities have carried out fruitful exploration on the connotation of curriculum ideology and politics, the mining and integration, the teaching method, and the relationship between curriculum ideology and politics and ideological and political curriculum[2], but the research on the evaluation system of curriculum ideology and politics innovation still needs further exploration.

2 Research status of curriculum ideological and political evaluation

Sun et al. (2021) constructed a teaching evaluation index system model for ideological and political teachers of science and engineering courses from the three levels of peer evaluation, student evaluation of teaching, and teacher self-evaluation, and refined the second-level indicators under the first-level indicators[2]. Duan (2021) constructed a five-dimensional "curriculum ideology and politics" effect evaluation index system, with the first-level indicators including support and guarantee, textbook selection, teaching design, teacher literacy, and student development[3]. Wang (2022) selected four dimensions of top-level design, course teaching, faculty and student development as first-level indicators to build a curriculum ideological and political evaluation system for colleges of science and engineering[1].Du (2022) constructed a three-dimensional nine-category curriculum ideological and political evaluation index system, with the first-level index including organization and management, teacher evaluation and student effect[4]. Wang (2023) explored the effectiveness evaluation of "ideological and political curriculum" and "ideological and political curriculum" in the same direction from the perspective of scientific and prudent evaluation attitude, systematic evaluation plan, project-type evaluation system and normal feedback mechanism, in order to promote the high-quality development of higher education[5]. Zhang (2023) pointed out that the evaluation of curriculum ideology and politics should focus on the evaluation of the teaching process such as teaching syllabus, teaching content, teaching methods, teaching methods and assessment methods, and the main goal is to promote construction by evaluation and better play the educational function of the curriculum with the help of evaluation[6]. Qi (2020) pointed out that the collaborative innovation of ideological and political education in college has obvious internality of ideological and political education, externality of curriculum education and integrality of collaborative education[7]. The characteristics of curriculum ideological and political collaborative innovation evaluation are embodied in four aspects: evaluation goal, evaluation content, evaluation process and evaluation result. It is necessary to evaluate the whole system of curriculum ideological and political collaborative innovation, and to evaluate the role of each element in the development of curriculum ideological and political collaborative innovation, not only one aspect. To sum up, the evaluation of the effect of curriculum ideology and politics has attracted the attention of experts and scholars, but the current evaluation mainly focuses on the teaching process and the learning effect of students, and lacks the evaluation of the collaborative education in the evaluation system of curriculum ideology and politics. Therefore, this paper intends to construct a curriculum ideological and political effect innovation evaluation system from the perspective of the curriculum ideological and political subjects' collaborative education process.

3 Research status of curriculum ideological and political evaluation

In reality, there are many problems in promoting curriculum ideological and political cooperative education, such as weak awareness of cooperative education, insufficient cooperative education, and insufficient joint efforts. Through a series of measures such as strengthening the awareness of collaboration, promoting cooperation and exchange, innovating cooperation paths, integrating education resources, and constructing and optimizing the curriculum ideological and political collaborative education system, we can

better promote and improve the collaborative education effect of ideological and political courses [8].

In fact, the smooth promotion of curriculum ideology and politics involves many aspects, which requires the cooperation of the propaganda department of the school Party Committee, the Teaching Affairs Office, the Marxism School and other departments to build a collaborative education mechanism. In order to further promote the ideological and political construction of curriculum, some colleges and universities have gradually established and improved the management system and operation mechanism of curriculum ideological and political education reform, but there are still some practical problems. On the one hand, in the course ideological and political construction, some grassroots party organizations in colleges and universities stay in the assignment of tasks, pilot development and supervision and inspection, lack of effective measures to comprehensively strengthen the course ideological and political construction. On the other hand, there is a lack of effective communication and cooperation among various departments and subjects, and the synergy of collaborative education is not strong enough. The synergistic effect of curriculum ideological and political and ideological and political course construction needs to be enhanced, and the mechanism of collaborative education has not been completely constructed, which is the difficult point that must be broken through in curriculum ideological and political construction[9].

4 Construction of evaluation index system of curriculum ideological and political collaborative innovation

University curriculum ideological and political collaborative innovation is a system, in the process of the system from disorder to order, many variables play different roles in different stages, and these variables are regular and optional, with its own specific rules to achieve. Therefore, for promoting the collaborative innovation of ideology and politics in college curriculum, the evaluation of collaborative cooperation is conducive to breaking the barriers between various departments and various elements, and establishing a good exchange mechanism and collaborative mechanism.

The evaluation of the cooperative development strategy plan formulated by the school for each department can clearly define the development goals of each department and increase the cohesion and centripetal force in the collaborative work; The evaluation of the key points in different stages of collaborative innovation can urge all departments to equip themselves with responsive resources and conditions, and then provide organizational, material and personnel support for promoting collaborative innovation. To evaluate the responsibilities of the participants in collaborative innovation can effectively improve the work level of departments and personnel, and clarify the relevant incentives and rewards and punishments. Based on the above analysis, this paper intends to build a four-dimensional curriculum ideological and political collaborative innovation evaluation index system, in which the first-level indicators include teacher level and accomplishment, teaching process, student development and collaborative cooperation, as shown in Table 1.

Table 1. Evaluation index system of curriculum ideological and political collaborative innovation

Primary indicators	Secondary indicators	Evaluation criterion
Teacher level and accomplishment	Ideological and political accomplishment	1. Personal cultivation, ideological morality, professional ethics. 2. Able to dig deeply into the ideological and political elements.
	Moral education consciousness	1. Support the leadership of the Party and adhere to the correct political direction. 2. Consciously carry out ideological and political education in the curriculum.
	Academic level	1. Have the position of lecturer or above. 2. Publish high-quality papers in the field related to the course.
	Teaching ability	1. The language is clear and can attract students' attention. 2. Teaching thinking is active, the point of view is clear.
Teaching process	Teaching objectives	1. Enrich knowledge. 2. Teaching guidance.
	Materials selection	1. Embody the need for value leadership 2. In line with the teaching needs and talent training objectives, the content is scientific and systematic, in line with the actual level of students. 3. Reflect the latest research results, closely related to social reality.
	Teaching material	1. Accurate course content. 2. Timely introduction of academic frontiers into teaching. 3. The teaching schedule is appropriate, and the important and difficult points are prominent.
	Teaching method	1. Lecture with enthusiasm and full of spirit. 2. Use a variety of teaching media, online and offline simultaneous teaching. 3. It can mobilize students' emotions and activate the classroom atmosphere 4. It is enlightening to elaborate the problem from simple to deep.
Students' development	Professional ability	1. Solid professional knowledge. 2. It can effectively combine the ideological and political elements of professional courses with the content of professional courses and impart them to students.
	Social development	1. Have a sense of legal concept, moral quality, social responsibility. 2. Be able to achieve national identity, cultural identity, etc.
	Learning effect	1. The students' academic achievement pass rate and excellent rate are high. 2. The students have a good learning attitude and the classroom atmosphere is active.
	Student satisfaction	1. High course enrolment and attendance rate. 2. Student evaluation results are good.

	Institution-building	1. Set up relevant leading institutions for curriculum ideological and political coordination. 2. Establish a curriculum ideological and political research center, create model courses, train famous teachers, and set up teaching teams.
	Separation of duties	1. Clear division of responsibilities among departments and secondary colleges. 2. Linkage of departments, implementation of departments, orderly progress.
collaboration	Institutional measure	1. Clearly delineate the powers and responsibilities of the curriculum ideological and political management departments 2. It is reflected in the promotion and evaluation system.
	Mechanism construction	1. Set up exchange activities between teachers of specialized courses and teachers of public basic courses, hold multi-school joint exchange meetings, and improve the exchange and learning mechanism of teachers. 2. Regular assessment of ideological and political courseware, teaching plans, results and other content. 3. To reward teachers who are excellent in their ideological and political assessment. 4. Strengthen policies and special funds to support curriculum ideological and political construction.

5 Procedure for calculating weight of evaluation index of curriculum ideological and political collaborative innovation

Jiskani et al.(2021) established a evaluation index based on the entropy weight and grey clustering methods[10]. Alireza and Moayeri (2023) determined the weight of water quality evaluation index by entropy weight method[11]. In this paper, the entropy weight method is used to determine the index weight. According to the calculation principle and rule of entropy weight method, the entropy of evaluation index is inversely proportional to the index weight.

5.1 Construct the index original data matrix

Assuming that there are m indicators and n data for each indicator, an $m*n$ matrix R can be constructed. There are 39 indicators in this study, each indicator has 10 expert evaluation data, and a 39 *10 matrix can be constructed, as shown in formula (1).

$$R = (r_{ij})_{m \times n} = \begin{bmatrix} r_{11} & ... & r_{1n} \\ ... & ... & ... \\ r_{m1} & ... & r_{mn} \end{bmatrix} \tag{1}$$

In the above equation, r_{ij} is the *j-th* value of the *i-th* indicator $(i=1, 2, ..., m ; j=1, 2, ..., n)$.

5.2 Standardized processing of indicator data

Different dimensions will affect the calculation of index weights. In this paper, the extreme value method is adopted to standardize the data, and the information entropy will be affected by the molecule being 0, so this paper adds 1 as a whole on the basis of data standardization processing, and the standardized matrix R^1 is as shown in formula (2) and formula (3):

$$\text{Forward indicator:} \quad r^1_{ij} = \frac{r_{ij} - min\{r_{i1},...,r_{in}\}}{max\{r_{i1},...,r_{in}\} - min\{r_{i1},...,r_{in}\}} + 1 \tag{2}$$

$$\text{Negative indicator:} \quad r^1_{ij} = \frac{max\{r_{i1},...,r_{in}\} - r_{ij}}{max\{r_{i1},...,r_{in}\} - min\{r_{i1},...,r_{in}\}} + 1 \tag{3}$$

5.3 Determination of the entropy value H_i of the i index

As shown in formula (4):

$$H_i = \frac{1}{Lnn} \sum_{j=1}^{n} f_{ij} Ln f_{ij} \tag{4}$$

In the above formula, (n is the number of sample evaluations. There are 10 experts in this paper, and n=10. And suppose that when $f_{ij} = 0$, $f_{ij} Ln f_{ij} = 0$).

5.4 Calculate the weight W_i of the i indicator

As shown in formula (5):

$$\omega_i = \frac{1 - H_i}{m - \sum_{i=1}^{m} H_i} \tag{5}$$

5.5 Calculate index weight

(1) The weight of the third-level indicator= $\omega_i \times c_i$

(2) The weight of the second-level indicator is the sum of the weight of the tertiary indicator.

(3) he weight of the first-level indicator= $\sum_{i=1}^{m} \omega_i \times c_i$ (w_i is the weight of the i-th indicator, and c_i is the standardized value of the i-th indicator)

6 Conclusions

The evaluation system of curriculum ideological and political collaborative innovation is an organic interactive whole composed of evaluation objectives, evaluation subjects, evaluation contents and evaluation methods, which needs to strengthen the cooperation among various subjects to form a strong force of collaborative education. On the one hand, the curriculum ideological and political teaching units should strengthen cooperation with Marxist college. The School of Marxism has a teaching team with firm belief, profound theoretical foundation, outstanding teaching ability and rich ideological and political education resources, which

plays a leading role in the ideological and political construction of the curriculum. The two sides can jointly explore a new education and teaching model of "ideological and political elements + professional courses". At the same time, the School of Marxism can also select excellent ideological and political teachers to go deep into each teaching unit to participate in and guide the course of ideological and political. On the other hand, curriculum ideological and political teachers should strengthen cooperation and exchange, and constantly improve the overall education and teaching ability, so as to continuously enhance the synergistic effect of various courses and ideological and political courses construction, and build a strong force for moral education in colleges and universities.

Curriculum ideological and political construction is a complex systematic project. In terms of system management, it is necessary to improve the system of concept guidance, responsibility implementation, coordination and dynamic evaluation. In terms of organization and management, the vertical dimension needs to stimulate motivation and form consensus at various levels, and the horizontal dimension needs the coordination and mutual support of multiple departments. In terms of resource integration, through the sharing and integration of curriculum ideological and political resources, the construction of an integrated curriculum ideological and political curriculum system is the main channel of through talent training.

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