

Bilingual Curriculum Evaluation System under the Background of Ideological and Political Theories Teaching in All Curriculums based on BOPPPS Framework

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Abstract

The evaluation of bilingual curriculums is particularly important under the background of ideological and political theories teaching in all curriculums. Based on the framework of BOPPPS, this paper selects six secondary indicators such as evaluation of Bridge-in and 19 tertiary indicators such as ideological and political theories integration, and constructs a bilingual curriculum evaluation index system under the background of the Ideological and political Theories teaching in all curriculums. Ultimately, it was concluded that the evaluation of bilingual curriculums under the background of ideological and political theories teaching in all curriculums requires: (1) The evaluation is based on the 3 stages and 6 dimensions: preparation for the session, interactive participation during the session and feedback after the session. (2) The emphasis on the ideological and political theory innovatively highlights the shaping of moral qualities in the training of students, i.e. the cultivation of morality is more important than the cultivation of talent.

Keywords

BOPPPS; Ideological and Political Theories Teaching in All Curriculums; Bilingual Curriculums; Evaluation System.

1. Introduction

In June 2020, China's Ministry of Education issued the "Guideline for the Construction of Curriculum Civic Politics in Higher Education", which calls for the integration of ideological and political education throughout the talent training system, the comprehensive promotion of the construction of curriculum civic politics in colleges and universities, and the playing of the nurturing role of each curriculum. At present, the academic community generally defines the form of curriculum ideological politics as "integrating ideological and political education elements, including theoretical knowledge, value concept and spiritual pursuit of ideological and political education, into each curriculum to influence students' ideological consciousness and behavior in a subtle way." The integration of ideological and political education elements into the bilingual curriculum system of colleges and universities essentially means to play the leading role of "establishing moral education".

Under the background of the new era, some universities have already integrated the elements of ideological and politics into the bilingual curriculum system of universities and carried out bilingual teaching of professional curriculums. However, in this process, some problems have been exposed. Based on the above-mentioned status quo, under the background of curriculum ideological and politics, constructing a scientific bilingual curriculum evaluation system will be a crucial part of bilingual curriculum construction, which will help improve the teaching quality

of bilingual curriculums, cultivate students' international management ability, enhance students' professional English application ability and shape international talents. Therefore, this paper constructs a bilingual curriculum evaluation system based on bilingual classroom teaching in universities under the framework of BOPPPS, under the background of ideological and political theories teaching in all curriculums, and adopts the hierarchical analysis method (AHP) to assign weights to indicators, so as to establish a more scientific and complete bilingual curriculum evaluation system.

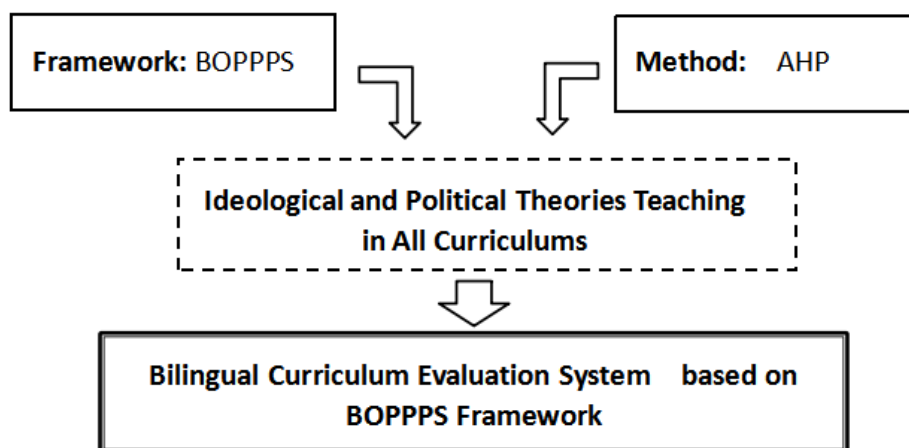


Fig 1. Bilingual curriculum evaluation system based on BOPPPS framework

2. Methods & Results

This paper is based on the framework of Analytic Hierarchy Process, and structured evaluation indicator system at three levels, which are target level, criteria level and programme level. AHP is a systematic analysis method that combines qualitative and quantitative analysis. The indicator weight is a quantitative value of the importance of each indicator item in the overall indicator system, and the sum of the weights of each indicator item in a statistical sense is one. Using AHP can decompose a complex system of problems by dividing them into interrelated levels, and judge the relative importance between elements of the same level, followed by the use of mathematical formulas to determine the relative weight values of indicators at each level. In application, the relative importance of evaluation indicators at the same level is generally determined through expert scoring, and then the scoring results are statistically calculated to establish a judgment matrix between indicators, and finally the weights of each evaluation indicator are calculated and analysed by comparing the matrix at each level. The main steps of the method are as follows:

2.1. Structure the Hierarchy

Structure the hierarchy from the top (the objectives from a decision-maker's viewpoint) through the intermediate levels (criteria on which subsequent levels depend) to the lowest level which usually contains the list of alternatives.

2.2. Construct Matrices

Construct a set of pair-wise comparison matrices (size $n \times n$) for each of the lower levels with one matrix for each element in the level immediately above by using the relative scale measurement shown in Table 1. The pair-wise comparisons are done in terms of which element dominates the other.

Table 1. Pair-wise comparison scale for AHP preferences

Number rating	Verbal judgement of preferences
9	Extremely preferred
8	Very strongly to extremely
7	Very strongly preferred
6	Strongly to very strongly
5	Strongly preferred
4	Moderately to strongly
3	Moderately preferred
2	Equally to moderately
1	Equally preferred

2.3. Determine the Weights of Objects Evaluated

The weights and maximum eigenvalues of the factors involved in the evaluation are derived from the resulting judgement matrix λ_{max} .

Let $w = (w_1, w_2 \dots w_n)^r$ be the weight vector of the judgement matrix.

When the judgment matrix is a consistency matrix, it satisfies $Aw = Nw$. The maximum eigenvalue of the judgment matrix A is N , an eigenvector belonging to eigenvalue N .

For the judgment matrix A is generally inconsistent, but it is a positive matrix, the largest eigenvalue equation of A is λ_{max} . The corresponding eigenvectors satisfy $Aw = \lambda_{max} w$.

2.4. Test Result Consistency

As the AHP method uses the subjectivity of experts to judge the importance of elements, which inevitably lacks objectivity, and given the complexity of things, a consistency check is indispensable to make the conclusions more realistic and objective.

The commonly used metrics for testing matrix consistency are as follows: CR (consistency ratio), CI (consistency index), RI (random consistency index), (maximum eigenvalue of the judgment matrix). CR is the consistency ratio, also known as consistency rate. When $CR=0$, it is said that the matrix judged is a complete consistency matrix; when $CR<0.1$, the judgment matrix is a satisfactory consistency matrix; when $CR>0.1$, the judgment matrix is not consistent, the logic is confusing and the result is invalid.

$$CR = \frac{CI}{RI} \tag{1}$$

$$CI = \frac{\lambda_{max} - n}{n - 1} \tag{2}$$

$$\lambda_{max} = \frac{1}{n} \sum_{i=1}^n \frac{Aw_i}{w_i} \tag{3}$$

λ_{max} refers to the maximum eigenvalue and n is the order, which can be calculated by Matlab.

The value of RI is only related to the order of the matrix and can be obtained by querying the random consistency index table based on the order. RI values for orders 1-10 are shown in Table 2 below.

Table 2. Average random consistency (*RI*)

Size of matrix	1	2	3	4	5	6	7	8	9	10
Random consistency	0.00	0.00	0.58	0.90	1.12	1.24	1.32	1.41	1.45	1.49

2.5. Calculation of Indicator Weights

The mathematical calculation method of AHP is complex. In order to improve the efficiency of the calculation and to avoid errors that may affect the results of the study, the maximum eigenvalue, the maximum eigenvector and the standardized eigenvector can be calculated with the help of Yaahp in order to derive the proportion of weights for each level of evaluation indicators.

3. Results and Discussion

3.1. Indicator Construction

The BOPPPS teaching model is based on constructivist and communicative approaches and is known for its effective instructional design. The BOPPPS framework subdivides the whole process into six basic steps: Bridge-in, Objective, Pre-assessment, Participatory Learning, Post-assessment and Summary-Closure. In this paper, the BOPPPS framework is chosen to analyse and evaluate the six stages of the teaching and learning process in order to gain a clear understanding of the effectiveness of teaching and learning.

Table 3. Hierarchical structure of evaluation of bilingual curriculums based on ideological and political theories teaching in all curriculums

Target level	Guideline level	Indicator layer
Evaluation of Bilingual Curriculums Based on Politics Ideological and political Theories teaching in All Curriculums(A)	Evaluation of Bridge-in (B1)	Diversity of bridge-in methods(C1)
		level of attraction(C2)
		ideological and political theories integration(C3)
	Evaluation of objective setting (B2)	Propriety(C4)
		Clarity(C5)
		Universality(C6)
		ideological and political theories integration(C7)
	Evaluation of Pre - assessment (B3)	Diversity of assessing methods(C8)
		effectiveness of assessing methods(C9)
	Participatory learning assessment (B4)	Curriculum content applicability(C10)
		Curriculum Content Difficulty(C11)
		Curriculum content is international(C12)
		Interactive classroom participation(C13)
		Variety of teaching methods(C14)
	Post-test evaluation (B5)	Degree of integration of ideological elements(C15)
		Diversity of testing methods(C16)
		Validity of test results(C17)
	Summary evaluation (B6)	Curriculum Satisfaction(C18)
		Goal attainment(C19)

Therefore, this paper designs a bilingual curriculum evaluation system based on the BOPPPS framework, as shown in Table 3, in which the index level includes Evaluation of Bridge-in(B1), Evaluation of objective setting(B2), Evaluation of Pre-assessment(B3), Participatory learning evaluation (B4), Post-test evaluation (B5) and Summary evaluation (B6).

Evaluation of Bridge-in(B1) includes Diversity of bridge-in methods(C1), level of attraction(C2) and ideological and political theories integration(C3). Evaluation of objective setting(B2) includes Propriety(C4), Clarity(C5), universality (C6) and ideological and political theories integration (C7). Evaluation of Pre -assessment(B3)encompasses Diversity of assessing methods (C8) and effectiveness of assessing methods(C9). Participatory learning evaluation (B4) includes Curriculum content applicability(C10), Curriculum Content Difficulty(C11), Curriculum content is international (C12), Interactive classroom participation(C13), Variety of teaching methods(C14)and Degree of integration of ideological elements(C15). The post-test evaluation (B5) includes Diversity of testing methods(C16)and Validity of test results(C17). Summary evaluation(B6)contains Curriculum Satisfaction(C18)and Goal attainment(C19).

3.2. Content of Indicators and Evaluation Criteria

The evaluation criteria are determined by the needs of the evaluation subject and the nature of the evaluation object itself. The criteria of the evaluation system of bilingual curriculums under the background of political science should be refined according to the purpose of the evaluation, so that they are operational and measurable The criteria and methods of judgment of the evaluation of bilingual curriculums under the background of political science are shown in Table 4.

Table 4. Criteria and methods for judging indicators

Indicator layer	Judgement criteria	Judgement method
Diversity of bridge-in methods(C1)	Multiple and appropriate bridge-in methods	Expert evaluation
Level of attraction(C2)	Stimulate students' interest and attract their attention	Student evaluation
Ideological and political theories integration(C3)	The bridge-in content covers ideological and political theories and develop the ability of the students to think	Student evaluation
Propriety(C4)	The objectives of the curriculum are in line with the level of running school, the actual level of teaching, and the learning ability of students	Expert evaluation
Clarity(C5)	Curriculum objective is presented clearly.	Expert evaluation
Universality(C6)	Objectives are known to all teachers and students	Student evaluation
Ideological and political theories integration(C7)	Objectives reflect ideological and political theories	Expert evaluation
Diversity of assessing methods(C8)	A variety of assessing methods	Expert evaluation

Effectiveness of assessing methods(C9)	Assessment results reflect the student's current foundation appropriately	Teacher self-evaluation
Applicability(C10)	Curriculum content meets teaching needs	Expert evaluation
Curriculum Content Difficulty(C11)	The content of the curriculum is easy to moderate and at the right level for the students	Expert evaluation
Curriculum content is international(C12)	Curriculum content is up to date and has an international perspective	Expert evaluation
Interactive classroom participation(C13)	High level of interaction and student participation in the classroom	Expert evaluation
Variety of teaching methods(C14)	Teachers are able to use flexible and varied teaching methods and actively and effectively use teaching	Expert evaluation
Degree of integration of ideological elements(C15)	The combination of ideological elements and core professional knowledge deepens students' thinking and urges them to establish a link between their personal growth and the destiny of the nation	Expert evaluation
Diversity of testing methods(C16)	Flexible test methods and formats	Expert evaluation
Validity of test results(C17)	The test results reflect the students' knowledge of the lesson	Teacher self-evaluation
Curriculum Satisfaction(C18)	Overall satisfaction of students and teachers with the design, implementation and effectiveness of bilingual programmes	Student evaluation
Goal attainment(C19)	The extent to which students have mastered the core knowledge of their major, improved their English language skills, understood multiculturalism, and understood the values of Civics	Expert evaluation

Under the three indicators of pre-class introduction (B1), goal setting (B2) and participatory learning (B4), an innovative index of the degree of incorporation of ideological and political elements was established for evaluation. In the pre-class introduction design, teachers are required to appropriately integrate the elements of ideological and politics into the content

introduction stage to stimulate students' thinking and perceptions. In the evaluation stage of goal setting, teachers need to reflect the elements of ideological and politics in the teaching objectives and evaluate the degree of integration of ideological and politics in the goal stage. In the evaluation stage of participatory learning, the integration of ideological and political theory with professional core knowledge deepens students' thinking and urges them to establish the connection between their personal growth and the fate of the nation. Teachers should focus on the integration of ideological and political theory in classroom inquiry activities. The teaching sessions consciously carry out task-driven classroom activities to truly promote the effective integration of curriculum content with Ideological and political theory.

4. Conclusion

(1) The evaluation of bilingual curriculums under the background of ideological and political theories teaching in all curriculums requires a multi-dimensional and comprehensive evaluation of the effectiveness of the curriculums in six different dimensions: evaluation of Bridge-in(B1), Evaluation of objective setting(B2), Evaluation of Pre-assessment(B3), Participatory learning assessment(B4), Post-test evaluation(B5), Summary evaluation(B6). The above-mentioned dimensions include the evaluation of the preparation for the lesson, as well as the interactive participation during the lesson and the feedback after the lesson.

(2) The evaluation of bilingual curriculums based on the ideological and political theories teaching in all curriculums is particularly important to highlight the ideological element. The innovation of the new assessment system is that it breaks away from the traditional curriculum assessment system's one-sided emphasis on the shaping of students' talents in the curriculum, and highlights the shaping of students' moral qualities in the process of cultivating them, and considers the cultivation of morals to be more important than the cultivation of talents.

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