

# RESEARCH ON CURRICULUM SYSTEM EVALUATION FOR CONTINUING EDUCATION BASED ON THE THEORY OF LIFELONG EDUCATION

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## Abstract

The continuing education plays a critical role in enhancing professional personnel's competencies. Curriculum system development is the core of the continuing education. The evaluation of the curriculum system is an effective way to optimize the curriculum system and play an important role in achieving the goal of continuing education. This paper elaborates evaluation on continuing professional education curriculum system, from the rationality of the curriculum structure, curriculum content convergence, etc. Based on the research and practice, the evaluation index of the curriculum system on continuing professional education is developed. The evaluation of curriculum system is beneficial to fill the gap between lifelong learning and the organization development, and improve the staff's job competency effectively.

Keywords: Continuing Education (CE), Curriculum System, Evaluation

## 1 INTRODUCTION

The rapid development in the field of science and technology, professional knowledge and skills, management knowledge and so on are facing a rapid update. The half-life of knowledge has been gradually shortened from the earliest 100 years to the current three years. The rapid updating of knowledge, academic education can't be adapted the needs of staff development. Continuing education has become the important means to improving the competence of staff posts and achieving the goals of organization. According to the survey, more than 50% of the Fortune 500 companies are learning-based enterprises, 80% of the top 25 enterprises are learning-based enterprises in the United States. 100% of the top 10 enterprises are learning-based enterprises in the world.

As an effective means to improving the competency of employees and achieving the goal of organization, system of curriculum is essential for continuing education. The curriculum system can fulfil needs of the development of the organization for long-time. It can provide the knowledge and skills for employees, when his post had change such as induction, transfer and promotion. The curriculum system can link the academic education, post requirements and the needs of organization effectively. Evaluation an important means to optimizing and improving the quality for curriculum system. and judge whether the curriculum system construction can achieve the expected goal.

## **2 CONTINUING EDUCATION CURRICULUM SYSTEM EVALUATION**

### **2.1 Hierarchical evaluation**

The evaluation of continuing education curriculum system can be carried out hierarchically, for example, the composition of curriculum system, the connection between modules and the contents of courses. Due to the different goals of evaluation, we can obtain different conclusions. Carrying out the scientific evaluation, we must make clear the goals of the curriculum system evaluation, and formulate the evaluation index system. The goal of the curriculum system evaluation is to optimize curriculum system. We need to carry out hierarchically. For example, the evaluation of the structure of continuing education course system needs to focus on the link the academic education, post requirements and the needs of organization, and the cohesion, systematicness between modules, and the integrity and independence of module contents. The evaluation of curriculum system content is carried out, focusing on the cohesion, applicability, ease, satisfaction of student, training effects, and so on.

### **2.2 Applicability evaluation**

At present, the evaluation of continuing education curriculum system mainly focuses on the evaluation of course itself, such as the applicability of training contents, the teaching level of teachers, the applicability of textbook, the effect of courses, and so on. The macro level of curriculum system was be less evaluated. That has led to emphasizing the internal evaluation in the curriculum, curriculum evaluation by students, teaching level and methods evaluation of teacher by the steering group. However, the adaptability of the curriculum system is often neglected. Whether or not the system can adapt to the needs of the development of the organization in the macro level. Whether or not it is beneficial to the improvement of the staff post ability. Whether or not it is conducive to the knowledge impartation and skills training, Whether or not it can meet the training needs of students in all stages of their lifelong education. Whether or not it can shape the cyclic system of evaluation, optimization, and improvement.

### **2.3 Diversified Evaluation**

Evaluation of continuing education curriculum system, we need to set the goal of evaluation from different aspects. Continuing education generally takes "hierarchies-classification" training mode, which requires evaluation of curriculum system to apply hierarchical evaluation model. At the same time, the subject of diversification needs to participate in the evaluation of the continuing education curriculum system. Curriculum are evaluated by trainees, including cohesion of course content, whether or not to meet the post requirements and improvement job adaptability, and so on. Curriculum are evaluated by organizations, whether or not to improve level of organizational performance level and professional proficiency. Curriculum are evaluated by organizations by teacher, whether or not to improve the trainees' knowledge and skills.

### 3 THE EVALUATION OF CONTINUING EDUCATION CURRICULUM SYSTEM: AN EMPIRICAL CASE

#### 3.1 Weather forecaster Continuing Education Curriculum System

Currently China Meteorological Administration (CMA) has a total of about 5,000 weather forecasters distributed at four levels meteorological departments (i.e., national, provincial, prefectural, and county). Weather forecasters' job competence is strongly connected with their subjective judgment, decision-making capability, work experience and etc., forecasters' professional development could be divided into several stages throughout their entire career. China Meteorological Administration proposed a new model for continuing education for forecasters of all levels including "entry-level", "mid-level" and "senior-level" forecasters. Such curriculum system for forecasters was developed based on the principle of lifelong education. The competency required for forecasters at different levels is also different and should also be arranged in a hierarchical framework (See table1).

Table 1 Weather forecaster Continuing Education Curriculum System

Level of personnel	Courses	Competence	Teaching Methods
Entry-Level Forecaster	Introductory course	Supplemental Courses on new technologies and methods	Lecture; Hands-on practice;
Mid-Level Forecaster	Intermediate course		Decision-making strategy; Comprehensive analysis & diagnosis method;
Senior-Level Forecaster	Advance workshop		Innovation and research

#### 3.2 Evaluation Index System

The weather forecaster continuing education curriculum system has been formed. Whether the curriculum system achieves the desired goals, we need to conduct an evaluation for continuing education curriculum system. Therefore, CMA has carried out the evaluation of the weather forecaster's continuing training curriculum system and established the evaluation index system of the curriculum system (See table2). The evaluation index system consists of three levels: the overall evaluation of the curriculum system, the evaluation of the quality of the curriculum and the evaluation of the effect of the curriculum.

The overall evaluation index of the curriculum system includes three indicators: the cohesion with undergraduate curriculum, the cohesion with the WMO post requirements and the cohesion between the modules. The evaluation subjects are experts and students. The evaluation results show that there is a good connection between the continuing education curriculum system of China's weather forecaster and the curriculum system of atmospheric science, which is an extension of the courses of atmospheric sciences in the application direction, which is conducive to improving the job competency of trainees. According to the requirements of WMO-1083, the curriculum system of China's atmospheric science covers all BIP-M courses and meets the requirements of meteorologists. At the same time, China weather, MICAPS and SWAN business platforms are set in the course system Courses with the characteristics of China's meteorological services and the weather system; the modules of the

course system have a good logical relationship, and the gradual progress of the difficulty can meet the needs of weather forecasters in different positions.

b)

c)

Table 2 Evaluation Index System And Subject

Level of Evaluation	Evaluation Index	Subject
<b>the overall evaluation</b>	Cohesion with undergraduate courses	expert
	Cohesion with WMO	expert
	Cohesion between modules	expert、trainee
<b>the quality of curriculum</b>	Course Design	trainee
	Course content	trainee
	Degree of difficulty	trainee
	Textbook	trainee
	Teaching	trainee
	Gains	trainee
	Examination results	teacher
<b>the effect of curriculum</b>	Post competency by oneself	trainee
	Post competency	organization