

Research on the Quality Assurance System of Aviation Service Art and Management Professional Courses Based on PDCA Model

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Abstract: With the recovery of civil aviation transportation and the accelerated recovery of consumer demand, the role of civil aviation in the economic system is becoming increasingly evident. In this new economic context, in order to meet the talent demand of the civil aviation industry, the number of aviation service art and management majors offered by applied undergraduate colleges in China is gradually increasing. However, facing the interdisciplinary new disciplines of aviation service, art, and management, various universities are actively exploring and constructing their curriculum systems. The formulation of course objectives, selection of content, and design of links in the aviation service art and management major are directly related to the achievement of talent cultivation goals. Although the aviation service professional course system has been basically established after several years of professional construction, the course quality assurance system is not yet perfect. This article analyzes the problems existing in the aviation service professional courses and constructs a comprehensive aviation service professional course quality assurance system based on the PDCA cycle model.

Keywords: New Economy; Aviation Service Art and Management; PDCA Cycle; Course Quality

1. Introduction

The Aviation Service Art and Management major is a newly established undergraduate major by the Ministry of Education in 2019. The major is based on aviation service, art, and management, and has two types of training attributes: management and art. Students are required to receive comprehensive quality training and aviation professional skills training on the basis of learning the basic

theories of art, management, and aviation service, shaping their professional qualities and employment and entrepreneurship abilities, and enhancing their aviation service art, comprehensive management art, and sustainable development capabilities. Before the aviation service art and management major was officially included in the undergraduate catalog by the Ministry of Education, the curriculum system of flight attendants in China was developing in a diversified way. The course offerings of different flight attendants emphasized the characteristics of their respective majors, resulting in a lack of uniformity, systematicity, universality, and standardization in the curriculum system. The development of aviation service art and management is a major issue related to the sustainable development of civil aviation enterprises. Therefore, in the process of cultivating talents in aviation service art and management, it is very important to build a systematic professional curriculum system and course quality assurance system. Starting from the perspective of the PDCA model, this article applies Total Quality Management to the internal assurance system of course quality, and analyzes the connotation of course quality elements and the internal assurance mechanism of course quality from the aspects of course Plan, Do, Check, and Action. By implementing a comprehensive quality assurance system to standardize and guide the steady improvement of the quality of aviation service courses, we aim to provide higher quality course content for aviation service students in the context of the new economy.

2. Current Status of the Curriculum System for Aviation Service Art and Management

According to the talent cultivation goals and professional teaching needs, the curriculum system of Aviation Service Art and Management includes four parts: general

education platform, subject foundation platform, professional education platform, and centralized practical teaching module. At present, the curriculum system of aviation service art and management majors offered by most universities is based on the previous courses of flight attendants, showing diversified development and emphasizing the characteristics of practicality. However, due to obtaining a Bachelor of Arts degree in Aviation Service Arts and Management after graduation, while the Flight Attendant program is offered under the Tourism Management program, the curriculum system lacks uniformity, systematicity, universality, and standardization. The courses offered in the aviation service direction under the tourism management major include tourism geography and tour guide skills, while the aviation service art and management major under the music

performance major offers courses related to music theory and Chinese music history. However, the setting of core professional courses is basically similar, with courses such as civil aviation safety management, civil aviation cabin safety management, and civil aviation cabin equipment operation management as the main focus, supplemented by courses such as civil aviation security inspection, airport operation management, and civil aviation passenger transportation in airport ground handling, as well as courses such as English, physical training, and etiquette. In terms of credit allocation, general education credits account for 32.7%, subject compulsory courses account for 15.2%, professional education courses account for 23%, and practical teaching accounts for 20.6%. (As shown in Table 1)

Table 1. Course System Structure and Credit/Hour Ratio of Aviation Service Major at a University in Wuhan

			Academic score	Learning hours	theory		practice		% of total credits
					credit	Learning hours	credit	Learning hours	
General Courses Platform	General Education Compulsory Course	Compulsory	46	832	34	616	12	216	27.9
	General elective courses	Elective courses	8	128	8	128	0	0	4.8
Discipline Foundation Platform	Compulsory subject courses	Compulsory	25	400	17	276	8	124	15.2
Professional education platform	Professional compulsory courses	Compulsory	20	320	12.5	200	7.5	120	12.1
	Limited elective courses for majors	Elective courses	18	288	10.5	164	7.5	124	10.9
	Professional elective courses	Elective courses	8	128	4	64	4	64	4.8
Centralized practical teaching module	Professional compulsory courses	Compulsory	34	624	0	0	34	624	20.6
Subtotal			159	In class theoretical teaching Total class hours	1448		Practical teaching Credit proportion		44.2%
Quality Expansion and Innovation and Entrepreneurship Activity Module			6	Experimental teaching Total class hours	648		Innovation and Entrepreneurship Course Total credits		2
Minimum graduation credits: 165									

3. The Problems in the Construction of the Curriculum System for the Aviation Service Art and Management Major

3.1 Insufficient Depth of School Enterprise Cooperation

Currently, most applied universities adopt a management system of "provincial and municipal co construction, with the city as the main body" or "provincial and municipal co

construction, with the province as the main body". From the perspective of the relationship between universities and the government, the phenomenon of government oriented management in applied universities is more prominent [1]. The external environment of government management in Chinese universities is very obvious, such as enrollment relying on planning, finance relying on funding, personnel relying on staffing, and even the approval of master's and

doctoral programs, as well as the application of disciplines and majors, all of which must ultimately be decided by government departments. Most local governments have not truly delegated power in their management systems, and excessive administrative intervention directly affects the effectiveness of curriculum construction. As a newly opened undergraduate major, the aviation service major is still in the experimental stage of "school enterprise cooperation", "industry education integration" and curriculum construction. Although some enterprises have also deeply participated in education and teaching in practice, constructing characteristic courses such as civil aviation cabin services [2]. However, due to the difficulty for enterprises to obtain support from universities when co building courses, despite the development of relevant talent training and course plans, there is a lack of funding and policy support, making it difficult to implement them effectively.

3.2 Difficulties in Constructing Practical Training

In the process of constructing aviation service professional courses, the construction of aviation practical training bases is the most effective way to reflect the transformation effect in practical teaching [3]. Due to the short development history of this major and its relatively weak foundation, it is undoubtedly very difficult to use practical training as a starting point to "turn from weak to strong" and from "weak" to "strong". Firstly, the cooperation between the civil aviation industry and universities is relatively limited, and the overall funds and venues that can be invested in the construction of training bases are also very limited. Secondly, there are relatively few teachers who can engage in practical teaching work [4]. Currently, the aviation service art and management major has developed from the flight attendant profession in different types of educational institutions such as colleges and vocational schools. Many old teachers are accustomed to using an "indoctrination" teaching method, making it difficult to accept new course content and teaching models, let alone actively improve. Finally, the aviation service practice training bases currently constructed by universities have no production and operation functions,

and cannot be operated externally. The investment made by universities, governments, and enterprises is difficult to obtain economic returns in a short period of time. Increasing the cost of practical training is not conducive to students' practical learning [5].

3.3 Lack of Classification Evaluation Standards

As a new major, many of the course systems in aviation services are based on the previous flight attendant majors. The course system is relatively outdated, and the flexibility of the courses is insufficient. There is no dynamic adjustment mode of interactive correction between courses and teaching, as well as evaluation and evaluation. However, the demand for civil aviation talents in society is increasing. The current professional course evaluation system cannot flexibly evolve and change with the changes of the social economy and industry enterprises, nor can it drive the improvement of the aviation service professional course system [6]. In terms of specific course evaluation, the current teaching evaluation in universities mainly relies on "listening and evaluating courses". However, there is a significant difference between practical training courses and traditional classroom teaching. The traditional evaluation model is not suitable for this type of course. The evaluation of practical teaching is carried out through the traditional "written test" method, which can easily lead to unreasonable results and dampen the enthusiasm of students.

4. Exploration of Building a Quality Assurance System for Aviation Service Professional Courses Based on PDCA Model

4.1 Plan

Plan refers to the course objectives. The main task of this stage is to clarify the training objectives of the aviation service profession and determine teaching course resources. In the process of curriculum development, it is necessary to adhere to a people-oriented curriculum concept, clarify curriculum objectives, and prepare relevant resources to achieve high-quality objectives of the curriculum [7]. Firstly, the development of all courses should reflect the cultivation of moral character and the promotion of correct values.

Integrating elements into theoretical courses such as Introduction to Civil Aviation, Civil Aviation Geography, and Civil Aviation Marketing to cultivate students' patriotism. Secondly, when formulating the training plan for aviation service professionals, it is necessary to ensure that the course objectives correspond substantially with the "graduation requirements" indicators in the training plan; Thirdly, all course content that supports the course objectives should be standardized, the knowledge system should be scientific and complete, the course content should be advanced and innovative, reflecting the core theories and achievements of the profession.

4.2 Design

Do refers to designing and implementing teaching activities. The main task of this stage is to take teaching actions to meet the needs of the civil aviation industry. Mainly including curriculum design, curriculum implementation, and curriculum management. At this stage, it is necessary to form a complete and standardized curriculum outline and curriculum system, develop relevant management systems, carry out full process management, ensure the implementation of teaching, and create a good teaching environment [8]. In the context of the new economy, the design and implementation of teaching activities should reflect the following core contents: (1) The design and implementation of teaching activities should be closely related to the course objectives, and the designed teaching activities should be specific, targeted, and implementable. Each teaching activity should have a substantive correspondence with the supported course objectives, highlighting effective support for the course objectives from different levels and perspectives; (2) The design and implementation of teaching activities should reflect diversity and be student-centered. Based on the characteristics of the course content, diverse teaching activities should be designed, such as difficulty analysis, online learning, forum communication, group discussion, group collaborative learning, survey and research, social practice, homework and summary Q&A, etc; (3) The design and implementation of teaching activities should have evaluability, and each teaching activity should have specific evaluation indicators. The knowledge, ability,

and quality reflected by the rating indicators should be consistent with the connotation of the supported curriculum objectives.

4.3 Check

Check refers to course evaluation and information data statistics. The main task of this stage is to inspect the preliminary work, mainly including course evaluation. Based on the basic characteristics of aviation service courses, research and develop evaluation indicators, methods, and content to form a comprehensive quality evaluation system for aviation service courses [9]. In the context of the new economy, curriculum evaluation and information data statistics should reflect the following core content: (1) Conduct curriculum evaluation around the achievement of curriculum goals, design different teaching activities and evaluation methods for different curriculum goals, and comprehensively evaluate the achievement of curriculum goals through multiple evaluation results. (2) Each teaching activity included in the evaluation has evaluable indicators, and each evaluation indicator has corresponding evaluation criteria. All indicators included in the course objective evaluation can have their evaluation results preserved in effective data information and archived. (3) Implement a curriculum evaluation method that focuses on multi-dimensional formative evaluation. After determining the evaluation indicators for the course objectives, collect raw data information and complete the evaluation through specific processes such as formative evaluation matrix and information data statistical analysis.

4.4 Action

A, also known as Action, refers to correcting deviations, standardizing results, summarizing lessons learned and attaching importance to them, while determining new goals and developing the next round of plans. The main task of this stage is to provide feedback and improve based on the evaluation results, in order to achieve continuous improvement in quality, mainly including course improvement [10]. Based on the evaluation results of the aviation service professional courses, identify problems and provide feedback, develop corresponding improvement measures, adjust course objectives, course settings, personnel

arrangements, etc. in a timely manner, in order to achieve continuous improvement in the quality of aviation service related courses. Continuous improvement, including continuous improvement of course objectives, continuous improvement of design and implementation of teaching activities, and continuous improvement of course evaluation, in order to form a closed-loop spiral of course quality improvement. Meanwhile, in the context of the new economy, the continuous improvement of course quality should also be consistent with the continuous improvement of professional construction. The continuous improvement of course quality is an important component of the continuous improvement mechanism for professional construction. The continuous improvement of courses will affect the continuous improvement of the course system, the continuous improvement of graduation requirements, and thus affect the updating and improvement of training objectives and talent training plans. On the contrary, updating and improving the training objectives and talent development plan will promote the adjustment of graduation requirements and curriculum system, and further promote the change and improvement of curriculum objectives, curriculum design, and curriculum evaluation. This cycle will lead to a closed-loop spiral of professional construction and curriculum quality, and continuous improvement.

5. Conclusion

Using the PDCA cycle method, comprehensive quality management of community education courses is carried out from the aspects of course philosophy, course resources, course design, course implementation, course management, course evaluation, and course improvement. The principles of demand first, full participation, and full process are followed to clarify the responsibilities of relevant departments and personnel. A quality assurance system for aviation service professional courses is constructed to effectively promote the continuous improvement of professional course quality and strengthen the construction of the course system. In the context of the new economy, teaching must make significant changes in educational content, models, teaching methods, and learning methods in order to solve the

problem of cultivating talents in the new liberal arts, such as paying more attention to the cultivation of students' creative thinking. The internal guarantee system for curriculum quality based on the PDCA model constructed in this study can promote the effective achievement of curriculum objectives, improve and enhance teaching quality, and provide assistance for the cultivation of high-quality and versatile new liberal arts talents in China.

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