

Research on the Optimization Path of Secondary Vocational Civil Aviation Service Etiquette Course from the Perspective of Scenario Simulation Teaching

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Abstract: The civil aviation service etiquette course is a core curriculum for cultivating frontline service personnel in the civil aviation industry at the secondary vocational level. However, it currently faces practical challenges, including a disconnect between course content and the development of smart civil aviation, rigid teaching methods, and an evaluation mechanism that is detached from job practice. Guided by the high-quality development of vocational education and leveraging school-based practical achievements such as the “Civil Aviation Service Etiquette Scenario Script Textbook” developed by our institution, the unique “Five Virtues Dimensions” evaluation system, and student etiquette growth portfolios, this study proposes a three-dimensional optimization path integrating “teaching innovation, industry-education integration, and evaluation feedback.” By incorporating core modules on intelligent services and cross-cultural communication, innovating a scenario simulation teaching model centered on scripts, and constructing a school-enterprise collaborative “Five Virtues Dimensions” multivariate evaluation and feedback mechanism, this approach significantly enhances students’ professional etiquette literacy and job adaptability.

Keywords: Secondary vocational education; Civil aviation service etiquette; Scenario simulation teaching; Industry-education integration; Course optimization

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1. Introduction

The *Report of the 20th CPC National Congress* clearly puts forward the development direction of vocational education, which is to “deepen the integration of industry and education and school-enterprise cooperation.” The *14th Five-Year Plan for the Development of Civil Aviation* has made strategic arrangements for the development of “humanistic airports” and “smart services.” The *14th Five-Year Plan for Vocational Education in Chengdu* also emphasizes the cultivation of technical and skilled personnel suitable for the development of regional industries. Currently, the civil aviation industry is undergoing a profound transformation towards intelligence

and internationalization. Taking Chengdu Shuangliu International Airport and Chengdu Tianfu International Airport as examples, smart service facilities are widely used and international routes continue to expand. The industry's demand for civil aviation service personnel has evolved from traditional norms of appearance and etiquette to a composite capability system encompassing smart device operation etiquette, cross-cultural communication etiquette, and emergency service competencies, setting higher standards for the comprehensive professional qualities of personnel ^[1].

However, the civil aviation service etiquette courses in secondary vocational schools have failed to keep pace with the industry's transformation. The course content lags behind the development requirements of smart civil aviation. The teaching methods still adhere to the traditional model of "teacher demonstration and student imitation," lacking the reproduction of real job scenarios. The evaluation mechanism is also disconnected from enterprise employment standards ^[2]. These issues have left graduates facing the dilemma of "disconnect between learning and application," with a general adaptation period of 3–6 months for their positions. To address this core contradiction, this paper attempts to introduce scenario-based script textbooks into the civil aviation service etiquette course, construct a diversified evaluation system and student etiquette growth records, and explore a course optimization path centered on "scenario simulation teaching," striving to provide feasible solutions for secondary vocational schools to overcome the challenge of the disconnect between talent cultivation and industry demands.

2. Practical diagnosis and triple dilemmas of the etiquette course for civil aviation services in secondary vocational schools

2.1. Outdated course content, severely out of step with future skills required for "Smart Civil Aviation"

The existing content system of the etiquette course for civil aviation services in secondary vocational schools is mostly compiled based on civil aviation industry standards from several years ago and can no longer meet the future skill requirements for talents in the development of smart civil aviation. The core deficiencies are manifested in the absence of two key modules ^[3]. Firstly, the lack of a "Smart Civil Aviation Service Etiquette" module means that the course fails to cover etiquette norms for emerging service scenarios such as self-service check-in guidance, intelligent baggage check-in, in-flight tablet ordering services, and intelligent security check assistance. For example, in traditional courses, teachers only explain the appearance and standard procedural norms during manual check-in, but do not cover language expression, procedural techniques for guiding passengers to use facial recognition for self-service check-in, as well as reassurance etiquette when dealing with passenger operational errors. Secondly, the inadequacy of the "Cross-Cultural Service Etiquette" module makes it difficult to meet the service demands arising from the increasing number of international passengers at Chengdu's aviation hub. The course lacks instruction in basic multilingual service phrases and does not systematically explain etiquette taboos in different countries and regions, leading students to easily cause cultural misunderstandings when serving international passengers. For instance, some students, unaware of dietary restrictions in Islamic culture, recommended in-flight meals containing pork ingredients to Muslim passengers, thereby causing passenger dissatisfaction.

2.2. Rigid teaching methods and the "scenario simulation teaching" lacks depth and realism

The teaching methods in the civil aviation service etiquette course in secondary vocational schools still

primarily rely on “teacher demonstration and student imitation,” with insufficient application of scenario-based practical training and other means. This superficial teaching model fails to cultivate students’ ability to solve practical problems ^[4]. Even if some institutions attempt to implement “scenario simulation” teaching, it often becomes a stereotypical role-playing exercise with simplistic scenario designs. Most simulations only cover simple scenarios such as standard boarding and manual check-in, while complex and high-pressure real-life service scenarios, such as calming passengers after flight delays, accommodating special passengers, and handling in-flight medical emergencies, are rarely incorporated into the teaching. Additionally, the lack of practical training resources limits the effectiveness of scenario simulation teaching. The civil aviation simulation cabins in most secondary vocational schools are outdated, lacking modern equipment such as intelligent service terminals and digital passenger management systems. Furthermore, there are significant disparities between the hardware facilities, such as seats and signage, in some simulation cabins and those in actual civil aviation aircraft, preventing students from having an immersive practical training experience and hindering the effective development of their problem-solving abilities.

2.3. The evaluation mechanism is singular and detached from on-the-job practice and process-oriented growth

The course evaluation still primarily takes the form of simple skill assessments ^[5], placing less emphasis on process-oriented ability evaluations such as service innovation and teamwork. There are clear limitations in both the evaluation dimensions and the evaluation subjects. From the perspective of evaluation dimensions, skill assessments focus solely on basic elements such as appearance, standing posture, and sitting posture, lacking effective evaluation indicators for key professional qualities such as communication, empathy, emergency response capabilities, and teamwork abilities during the service process. Regarding the evaluation subjects, course learning evaluations are primarily conducted by in-house teachers, lacking the professional perspective from civil aviation enterprises. As a result, the evaluation system fails to incorporate job standards and service requirements from the industry. Furthermore, the shortage of “dual-qualified” teachers in secondary vocational schools exacerbates the disconnect between the evaluation mechanism and job practice. Many instructors lack firsthand experience in civil aviation service, making it difficult for them to accurately grasp the latest industry service standards and evaluation requirements. Consequently, they are unable to integrate these elements into teaching and assessment, ultimately leading to a gap between the course’s training outcomes and the industry’s employment needs—often referred to as the “last mile” challenge.

3. The core values of scenario-based simulation teaching in optimizing civil aviation service etiquette courses in secondary vocational schools

Scenario-based simulation teaching is not merely an improvement in teaching methods; it is firmly grounded in constructivist learning theory, situated cognition theory, and experiential learning theory. Constructivism emphasizes the active construction of knowledge, providing a theoretical basis for creating authentic civil aviation service scenarios in scenario-based simulation teaching, where students independently analyze scripts and make service decisions. Situated cognition theory posits that skill acquisition depends on specific contexts, asserting that learners can only master the application logic of professional skills in scenarios closely resembling actual job settings, aligning perfectly with the high-fidelity nature of “scenario replication teaching.” The “experience-reflection-application” cycle in experiential learning theory forms the core logic of the “script performance—feedback review—job practice” teaching loop.

Based on this, the teaching of the course Civil Aviation Service Etiquette must establish a close connection with real-world service work to facilitate the transformation of knowledge into skills. Its core value in course optimization is primarily reflected in the following three aspects:

3.1. Scenario-based simulation teaching enables the effective integration of future skills with job competencies

Future skills refer to the composite capabilities required to adapt to the transformation of smart civil aviation and international service demands, encompassing core elements such as etiquette for operating intelligent devices, cross-cultural communication skills, and emergency response competencies. These skills often exhibit abstract and comprehensive characteristics, making them difficult for students to comprehend and master through traditional theoretical instruction. Scenario-based simulation teaching, however, can transform these abstract skills into concrete, trainable, and assessable behaviors^[6]. For instance, by designing a scenario involving “guiding elderly passengers through facial recognition check-in,” the etiquette for operating intelligent devices can be broken down into specific behavioral points such as “device explanation scripts,” “operational assistance gestures,” and “emotional reassurance techniques.” Similarly, by creating a scenario addressing “handling food culture conflicts with foreign passengers,” cross-cultural communication etiquette can be translated into actionable training points such as “identifying cultural taboos,” “applying multilingual communication scripts,” and “conflict resolution techniques,” allowing students to gradually master future skills through scenario-based exercises.

3.2. Scenario-based simulation teaching can address the persistent issue of “disconnect between learning and application” in industry talent development

Scenario simulation teaching, through the “full-process job embedding” approach, highly replicates the real working environments of civil aviation services such as check-in and security checks, allowing students to hone their professional skills and significantly narrow the psychological and skill gap between classroom instruction and on-the-job practice. In the process of “learning by doing,” students not only become familiar with the procedural norms of civil aviation services but also accumulate experience in handling various emergency situations, thereby building a professional occupational understanding and developing service muscle memory^[7].

3.3. Scenario simulation teaching serves as a natural interface for promoting school-enterprise collaborative education

The content required for scenario simulation teaching, including case studies, scenario design, and evaluation criteria, can be directly sourced from the real service practices of civil aviation enterprises, providing an operable platform for industry experts to participate in teaching and evaluation^[8]. Enterprises can adapt the latest service cases into teaching scripts, transform job service standards into evaluation indicators for scenario drills, and arrange frontline service personnel to serve as training instructors to participate in the evaluation of students’ scenario drills, thereby promoting deep integration of industry and education and ensuring that course instruction remains in sync with industry development.

4. Construction of a “three-dimensional integrated” optimization path for the etiquette course in civil aviation services at secondary vocational schools

Based on the diagnosis of course challenges, an analysis of the core value of scenario simulation teaching, and

incorporating the results of school-based practices, a “three-dimensional integrated” course optimization path of “teaching innovation–industry-education integration–evaluation feedback” is constructed. Teaching innovation serves as the core focus of course optimization, industry-education integration provides the guarantee and support for implementation, and evaluation feedback is the key to continuous improvement in a closed loop. The three aspects collaborate with and build upon one another, forming a complete “three-dimensional integrated” optimization system that drives the transformation of the Civil Aviation Service Etiquette course towards a “future skills-oriented” approach.

4.1. Innovating scenario simulation teaching methods to leverage the core effectiveness of script-based teaching materials

Centered around the school-based “Civil Aviation Service Etiquette Scenario Script Teaching Materials,” three types of scenario simulation teaching methods are designed to break the limitations of traditional teaching models and enhance students’ service capabilities through immersive scenario-based drills.

4.1.1. Script-based scenario simulation teaching

Teachers select corresponding school-based scripts based on the teaching content and divide students into different groups. Students independently analyze the role definitions, service scenarios, and communication points in the scripts, and then perform group-based interpretations. During the performance, teachers and corporate mentors observe the entire process. After the performance, they provide detailed feedback based on civil aviation industry standards, pointing out details that do not meet job requirements in terms of service actions, communication language, and emotional expression. Meanwhile, the students’ performance videos are recorded and stored in their personal etiquette growth archives, facilitating post-class review and reflection for students and providing a basis for subsequent teaching evaluations.

4.1.2. Scene-replication scenario simulation teaching

Leveraging the school’s practical training bases or collaborating with airports, airlines, and other enterprises, full-process immersive drills are conducted in real airport check-in halls, cabins, and other scenarios, covering the entire process from “check-in–security check–boarding–cabin service–arrival guidance.” Incorporate the plots from school-based scripts into every link of the entire process, such as setting up the script plot of “passenger’s identification information does not match” during the check-in process, and the script plot of “passengers are dissatisfied with the meals” during the cabin service process, so as to assess students’ ability to flexibly apply etiquette norms to solve problems in real service routes.

4.1.3. Technology-enabled situational simulation teaching

Leverage VR technology to simulate scenarios that are difficult to replicate in reality, such as boarding services in adverse weather conditions and unexpected airport security incidents, allowing students to experience high-pressure service scenarios in a virtual environment and hone their emergency response capabilities. Utilize multimedia resources, such as documentaries on etiquette and culture from various countries and videos of civil aviation service cases, to analyze etiquette differences across countries and the operational norms of intelligent service equipment, thereby breaking through the limitations of physical training resources and expanding the breadth and depth of situational simulation teaching.

4.2. Deepening the integration mechanism between industry and education to solidify the foundation for course implementation

The implementation of course optimization cannot be achieved without the support of industry-education integration. By adopting three major measures—resource co-construction, faculty co-cultivation, and platform sharing—we can deepen cooperation with civil aviation enterprises and provide solid guarantees for course optimization.

4.2.1. Joint development and updating of etiquette script textbooks by schools and enterprises

In terms of resource co-construction, establish cooperative relationships with civil aviation enterprises to jointly develop and continuously update the “Civil Aviation Service Etiquette Scenario Script Textbook.” Enterprises are responsible for providing the latest service cases, job standards, and industry pain points, while schools adapt these practical contents into scripts suitable for classroom teaching based on teaching objectives, ensuring the authenticity and industry-leading nature of the script textbooks.

4.2.2. Collaborative dual-mode approach to build a dual-qualified teaching team

In terms of joint teacher development, a model combining the teacher enterprise follow-up system with on-campus instruction by enterprise mentors is implemented to cultivate a professional “dual-qualified” teaching team. The school arranges for teachers of the Civil Aviation Service Etiquette course to undergo one-month follow-up learning at partner enterprises each semester, enabling them to gain firsthand experience in frontline civil aviation services and stay updated on the latest service procedures and etiquette standards. Concurrently, frontline service experts and managers from the enterprises are invited to serve as on-campus mentors, delivering monthly lectures to students. These mentors share corporate service standards and practical work experiences, addressing the gap in industry experience among in-house faculty.

4.2.3. Joint construction of training bases by schools and enterprises to facilitate practical application

In terms of platform sharing, off-campus training bases are jointly established with partner enterprises. Based on the operational characteristics of the civil aviation industry, students are arranged to engage in practical training at frontline service positions in airports and airlines during peak passenger transport periods such as the Spring Festival and summer travel seasons. This transition enables students to move from classroom “scenario simulations” to on-the-job “real-world practice,” allowing them to test and apply the etiquette knowledge and skills learned in the classroom within authentic service settings, thereby achieving the transformation from theory to practice.

4.3. Establishing a diverse evaluation and feedback mechanism, leveraging the “Five Positive Dimensions” and growth portfolios to achieve closed-loop curriculum optimization

To ensure the effectiveness of curriculum optimization under scenario simulation teaching, it is necessary to construct an evaluation and feedback closed-loop system based on the “Five Positive Dimensions” and etiquette growth records, achieving a comprehensive evaluation of students’ abilities and continuous improvement of curriculum quality.

4.3.1. “Four-Party (School-Enterprise-Student-Family) × Five Positive Dimensions” multidimensional evaluation system

Combining the requirements for future skill development, the “Five Positive Dimensions” are refined into specific indicators across three layers: knowledge, skills, and qualities. These encompass “Positive Mind” (service empathy and professional responsibility), “Positive Conduct” (standardization of service actions), “Positive Appearance” (standardization of grooming and attire), “Positive Speech” (appropriateness of service language), and “Positive Posture” (overall elegance of demeanor). Each dimension is graded into four levels: “Excellent,” “Good,” “Qualified,” and “Unqualified.” The evaluation is implemented through a combination of student self-assessment and peer assessment, teacher evaluation, enterprise evaluation, and parent evaluation: students reflect on their performance in script enactment using the “Five Positive Dimensions” scoring sheet; groups observe practical training videos for peer assessment and provide optimization suggestions; teachers evaluate students’ theoretical and practical training effectiveness based on teaching objectives achievement and the “Five Positive Dimensions”; enterprise mentors score students based on the “Five Positive Dimensions,” passenger satisfaction, and service standardization, considering their internship performance; parents provide comprehensive scores based on the “Five Positive Dimensions,” assessing students’ behavior habits and interpersonal etiquette during holidays at home, and providing feedback on the effectiveness of their etiquette cultivation and room for growth in family settings; all evaluation results are incorporated into students’ etiquette growth records.

4.3.2. Continuous improvement mechanism supported by “Etiquette Growth Archives”

A digital etiquette growth archive is established for each student, systematically collecting videos from various scenario-based drills, VR operation records, evaluation results based on the “Five Positive Dimensions,” comments from enterprise internships, and self-reflection. This archive not only visually presents the trajectory of individual students’ etiquette enhancement but also provides data support for curriculum optimization: teachers can adjust teaching content by analyzing common weaknesses identified in the archives; schools, based on the overall effectiveness reflected in the archives, can collaborate with enterprises to revise scripts and update evaluation criteria, forming a continuous improvement loop for course quality that encompasses “teaching-evaluation-feedback-optimization.”

5. Conclusion

Overall, the optimization of the “Civil Aviation Service Etiquette” course must closely follow the pace of technological changes in the industry, breaking down abstract future skills into actionable and trainable competency units. It should utilize scenario-based simulation teaching as a bridge to implement a “student-centered” teaching philosophy, emphasizing students’ dominant roles and learning experiences, and enabling them to transform knowledge into vocational skills through immersive “learning by doing.” Additionally, it is essential to integrate school-based innovations with high-quality industry resources to create dynamically evolving course content and teaching models.

In the future, it is essential to further deepen the integration of industry and education, as well as school-enterprise cooperation, aligning course content with job requirements. Additionally, we can rely on big data to analyze the weak links in students’ etiquette growth records and develop personalized scenario-based simulation training modules. By utilizing artificial intelligence technology, we can construct an intelligent evaluation system to provide real-time feedback on the standardization of students’ service language and body language,

thereby further enhancing the precision and efficiency of teaching.

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