The Implementation Status of Art Courses for the Aviation Service Art and Management Major at Wuhan Business University

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Abstract

Background and Aims: As the aviation industry evolves toward personalized and culturally enriched services, the demand for professionals with both technical skills and artistic literacy is rising. In response, Wuhan Business University introduced the Aviation Service Art and Management major to integrate art education into aviation service training. However, the effectiveness and alignment of the art courses with professional standards remain uncertain. This study aims to (1) assess the current implementation status of art courses within the Aviation Service Art and Management major and (2) propose strategies to enhance their educational effectiveness.

Methodology: A mixed-methods approach was employed, combining quantitative data from 163 valid student questionnaires with qualitative data from field observations and interviews. Structural Equation Modeling (SEM) was used to examine the influence of course design, content, teaching methods, faculty, and resources on course effectiveness.

Results: The SEM analysis confirmed that all five factors—curriculum design, course content, teaching methods, faculty quality, and resources—significantly and positively affect course effectiveness ($p < 0.05$). Descriptive statistics revealed areas needing improvement, especially in course content relevance, innovation in teaching, and resource adequacy.

Conclusion: The findings validate the proposed model and emphasize the critical role of structured curricula, engaging content, qualified instructors, and sufficient resources in delivering effective art education in applied disciplines. Practical recommendations were developed to inform curriculum reform and instructional improvement in similar interdisciplinary programs.

Keywords: Arts Curriculum; Current Status of Implementation; Air Service Arts and Management Programme

Introduction

As the aviation industry rapidly evolves, competition in the service sector has shifted from infrastructure to the personalization and refinement of service experiences. Passengers today expect not only safety and efficiency but also culturally enriched and aesthetically pleasing service encounters. This has raised the bar for aviation professionals, who must combine technical proficiency with artistic sensibility and cultural communication skills to meet modern service demands. In response, the Aviation Service Art and Management major was introduced at Wuhan Business University in 2019 to cultivate well-rounded professionals with "technical skills + artistic literacy + management thinking." Despite establishing an interdisciplinary curriculum framework, the integration of art education into professional training remains a challenge, particularly in aligning course content, teaching methods, and faculty expertise with industry standards.

Across China, aviation service education is still in its formative stage. Many programs are attached to tourism or art disciplines, leading to fragmented curricula that fail to fully integrate aviation-specific skills with artistic training. Therefore, a targeted investigation into the implementation of art courses within this major is essential to identify existing gaps and propose strategies that enhance both the professional and humanistic dimensions of talent development.

Objectives

1. To assess the current status of the implementation of the arts programme in the arts and management of aviation services.

2. To recommend targeted strategies to improve the implementation of art courses.

Literature review

Foreign Research

The curriculum of the aviation service art and management major in foreign countries has evolved to focus on the requirements of aviation employment opportunities, while also including art courses (such as physical training and makeup). Courses that pertain to aviation, including service English, cabin safety, and service, are seamlessly integrated with art courses (Ye & Zhang, 2024).

Chinese Research

In China, while the aviation service art and management major is increasingly offered, research specifically targeting art courses within this curriculum remains limited. Most existing studies focus on curriculum system construction and optimization, including rational class-hour distribution, the blending of artistic and professional subjects, and curriculum adjustment to better meet the industry's demand for aesthetic qualities in service personnel (Wang & Cui, 2023; Ma et al, 2024; Zhang et al, 2020). A few case-based studies highlight the practical value of art education. For example, Nanchang Hangkong University's "Body and Dance" course aims to improve posture, physical expression, and personal demeanor—skills directly applicable to professional image cultivation in aviation services (Gong, 2023). Other studies emphasize the role of art courses in enhancing communication, cultural awareness, and teamwork skills, thus fostering the kind of cross-cultural competence needed in international air travel (Cui & Cui, 2018). They not only cultivate students' aesthetic abilities to provide higher-quality service experiences for passengers but also enhance their communication and teamwork skills。 However, these findings have not yet been widely applied to aviation service education.

A few scholars have conducted in-depth studies on student satisfaction with art courses. Liu Jia's research on student satisfaction with environmental art curriculum development in vocational Universities constructed a model and empirically analyzed it, finding that student expectations, perceived quality, and curriculum maturity significantly influence satisfaction (Liu, 2014). ผิดพลาด! ไม่พบแหล่งการอ้างอิงLi Lingli et al.'s study on the relationship between art course experiences and satisfaction among pre-service teachers in pre-college education found that good teaching, core artistic literacy, and appropriate tasks can significantly predict their satisfaction with art courses (Li et al, 2023). ผิดพลาด! ไม่พบแหล่งการอ้างอิงIn terms of student satisfaction, relevant research in other disciplines has begun exploring how factors like teaching quality, curriculum expectations, resource availability, and aesthetic experience influence learners' engagement and satisfaction with art-related content (Tang, 2021).

Gap Identification

Despite growing recognition of the importance of artistic literacy, most Chinese studies remain theoretical and descriptive, lacking empirical exploration of students' actual learning experiences and satisfaction with art courses. There is limited research that constructs or tests models of influencing factors using student-based data in aviation-related disciplines. Database searches (e.g., CNKI) confirm this scarcity: only two studies directly address art courses under the "aviation service art and management" keyword, both focusing narrowly on literacy development. More comprehensive investigations—particularly those incorporating quantitative data and employer perspectives—are still missing.

In summary, foreign models provide useful insights into curriculum integration, while domestic research highlights the theoretical importance of art education but lacks empirical depth. To address this gap, the present study proposes to construct a conceptual model of the influencing factors affecting the effectiveness of art courses in aviation service education. By examining dimensions such as curriculum design, teaching strategies, faculty quality, and resources, alongside student satisfaction, this study aims to provide data-driven recommendations for curriculum reform.

Conceptual Framework

A structural equation modeling (SEM) framework was employed to analyse the relationships between key factors influencing art course implementation. Table 1:
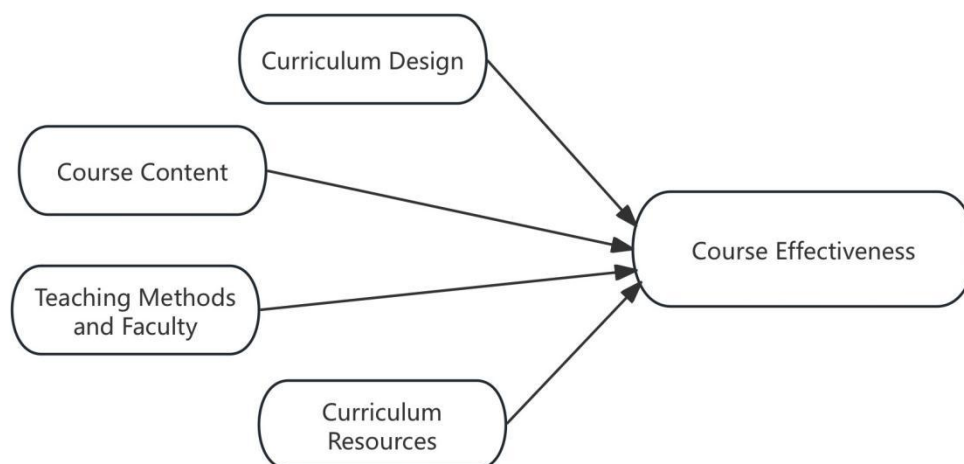
Figure 1 Conceptual Framework

1. Independent Variables:

Curriculum Design: Includes course structure, alignment with professional goals, and balance between theoretical and practical sessions.

Course Content: Focuses on the timeliness of theoretical content.

Teaching Methods and Faculty: Encompass teaching approaches.

Curriculum Resources: Includes teaching facilities, textbooks, and industry partnerships.

2. Dependent Variable:

Course Effectiveness: Measured by student satisfaction, knowledge acquisition, and practical application abilities.

3. Hypotheses:

H1: Curriculum design positively impacts course effectiveness.

H2: Relevant and updated course content enhances course effectiveness.

H3: Innovative teaching methods and qualified faculty improve course effectiveness.

H4: Sufficient curriculum resources (e.g., modern facilities, industry connections) boost course effectiveness.

Methodology

1. Literature research method

This study conducted a comprehensive and systematic review and sorting of the literature related to the implementation of the professional curriculum of aviation service art and management and the teaching of art courses at home and abroad through the literature research method and searched through academic libraries such as China Knowledge, Web of WebofScience, etc., to understand the results of the previous research, to make clear the current status of the research and its shortcomings, to lay the theoretical foundation and research ideas for this study, and to help the research framework and research hypotheses.

2. Questionnaire method

In the research process, the author created a questionnaire to gather information about the curriculum, course content, course format, course resources, and course effectiveness. They surveyed 2nd, 3rd, and 4th-year students at Wuhan Business University who are studying aviation services, distributed 200 questionnaires, and received 163 back(with a recovery rate of 81.5%) to understand how satisfied the students are with the art courses and to collect data for further analysis.

3. Field Research Method

The field interview method was used to examine the classroom of the aviation service art and management programme at Wuhan Business University. Visiting the teaching site of the art course in person and observing the teaching activities and the teacher-student interaction process. Interviews with course teachers, students, and teaching administrators were conducted to gain insight into the course's implementation process and the perspectives of various stakeholders. Additionally, information from practical classroom activities was gathered to provide realistic supporting evidence for the study, ensuring its comprehensiveness and scope.

4. Methods and Data Collection

Mixed Methods: Combining quantitative (questionnaires) and qualitative (field observations, interviews) approaches.

Questionnaire Survey: 163 valid responses from students at Wuhan Business University, with a recovery rate of 81.5%, assessing satisfaction with curriculum design, content, teaching methods, resources, and course outcomes.

Structural Equation Modeling (SEM): Using AMOS software to validate the hypothesized model, confirming significant positive relationships between all independent variables and course effectiveness ($p < 0.05$). In this study, Structural Equation Modeling (SEM) was selected as the primary data analysis method for the following reasons: First, the research model involves multiple latent variables—such as curriculum design, teaching methods, and curriculum resources—that influence course effectiveness, measured in terms of student satisfaction, knowledge acquisition, and practical skills. These latent variables cannot be directly observed and must be constructed through multiple measurement indicators. SEM is well-suited for handling such latent constructs and for modeling complex multidimensional causal relationships. Second, SEM integrates both the measurement model (to validate the reliability and validity of the scales) and the structural model (to examine the relationships among variables), enabling control over measurement errors while testing the hypothesized paths. This enhances the scientific rigor and explanatory power of the research. Moreover, using AMOS software allows for visual modeling and fit index evaluation, which facilitates a clear presentation of the research logic and empirical findings.

Results

1. Survey design

This study looks at how art courses are doing in the aviation service art and management majors at Wuhan Business University, focusing on specific areas like the setup, content, teaching methods, resources, and outcomes of these art courses. In the setting of art courses, it is mainly about the overall arrangement of art courses, the connection between art courses and professional knowledge, the arrangement of each subject, and the arrangement of theoretical and practical training hours. For example, 'How satisfied are you with the degree to which the art courses of this speciality are closely connected with professional knowledge and in line with the professional cultivation objectives?

This question is investigated in the research questionnaire. In terms of the content of art courses, it is mainly the teaching quality, difficulty, and contemporaneity of art course content. For example, the question of 'the degree of satisfaction with the degree to which you think the content of current art courses reflects the modernity and advancement' was investigated in the questionnaire. In terms of the teaching methods of art classes, it is mainly about the teachers' teaching level, attitude, and the status of teaching methods, such as teacher-student interaction. In terms of art course resources, it mainly covers the investigation and understanding of teachers, teaching materials, environment, and practical training resources. For example, the question of 'your evaluation of the teaching of teachers in this speciality' is investigated in the research questionnaire. In terms of the effect of art courses, it is mainly about the satisfaction of students' knowledge, their ability to improve, and the development of comprehensive quality.

The questionnaire is designed with multiple-choice questions, which are conducive to quickly deriving quantitative feedback information from students, and a small number of subjective fill-in-the-blank

questions are set to collect students' opinions on the courses that have left a deep impression on them and to further improve the courses. The survey was distributed to 200 questionnaires among the students of Wuhan Business University who were offered this course in grades 2-4 of the Aviation Service Art and Management program; 163 questionnaires were recovered, with a recovery rate of 81.5%, and the students of Aviation Service Art and Management at the author's institution were selected as the target of data collection. The target was selected based on these considerations: The author works in a higher education institution and has the foundation of research work and research conditions in the field of education and teaching in colleges and universities. At the same time, the author has a robust theoretical foundation in art education and other aspects under the guidance of her supervisor. The author has enough time and energy to engage in research work on the subject while completing her work.

2. Data collection and sample characteristics

In February 2025, a total of 200 questionnaires were distributed for the second to fourth year students of Wuhan Business University majoring in Aviation Service Art and Management by using a combination of online questionnaire platform and classroom on-site distribution, obtaining 163 validly recovered questionnaires, with an effective recovery rate of 81.5%.

Table 1 The descriptive statistics of the sample characteristics are shown in Picture 1.2 below:

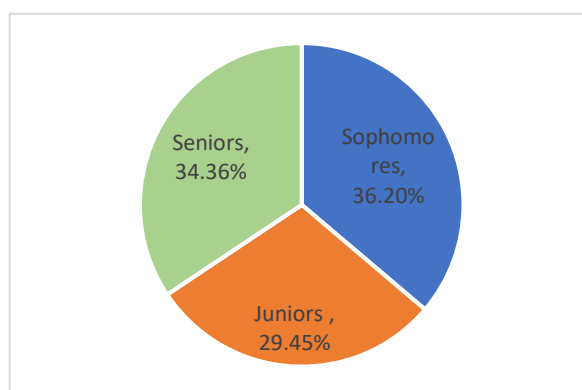| Category	Option	Number	Percentage
Gender	Male	81	49.69%
Gender	Female	82	50.31%

Figure 2 Descriptive statistics of the sample characteristics

In terms of grade, the number of students in different grades participating in the survey is relatively average, with sophomores participating the most, accounting for 36.2%, juniors and seniors accounted for 29.45% and 34.36%, respectively; in line with the statistics of the students' views on art courses. In terms of gender, the number of male and female students participating in the survey is relatively average; men and women are 82persons and 81persons, basically in the same situation, avoiding the impact of different genders on the survey. Overall, this survey sample has a reasonable distribution in terms of grade and gender, which also provides a good basis for this study to conduct further research on the implementation of the programme.

3. Descriptive statistical analysis

The 163 valid questionnaires recovered were analysed by descriptive statistics, and the results are shown in Table 2 and the pictures below:

Table 2 Descriptive Statistics

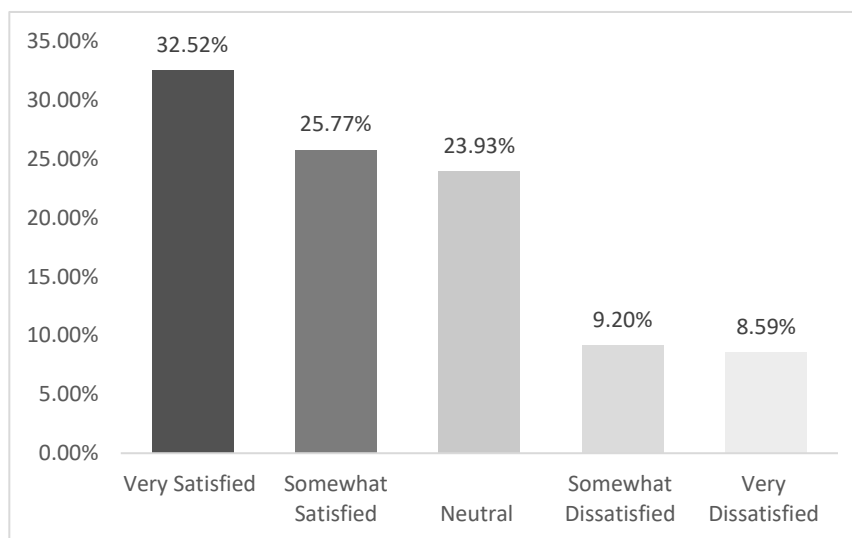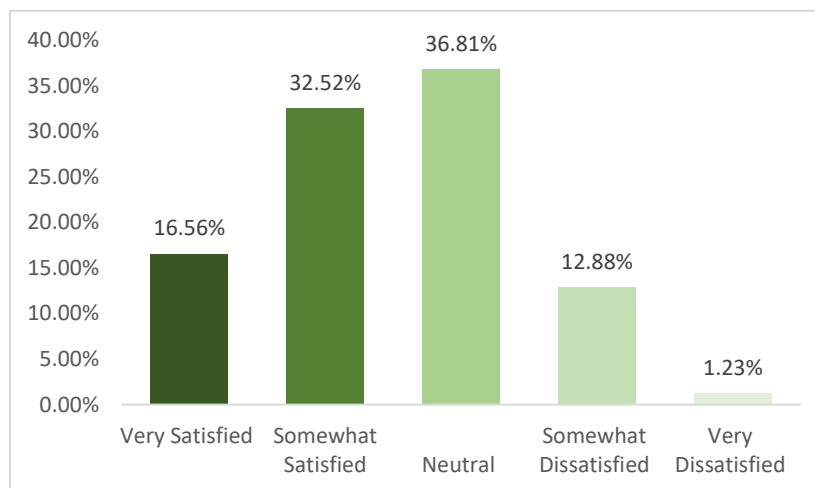| Dimension	Very Satisfied	Somewhat Satisfied	Neutral	Somewhat Dissatisfied	Very Dissatisfied
Curriculum Design	32.52%	25.77%	23.93%	9.20%	8.59%
Course Content	16.56%	32.52%	36.81%	12.88%	1.23%
Teaching Methods & Faculty	20.25%	31.90%	34.97%	11.66%	1.23%
Course Resources	15.34%	33.74%	36.81%	12.88%	1.23%
Course Effectiveness	22.09%	31.90%	31.29%	12.27%	2.45%

Figure 3 Curriculum Design
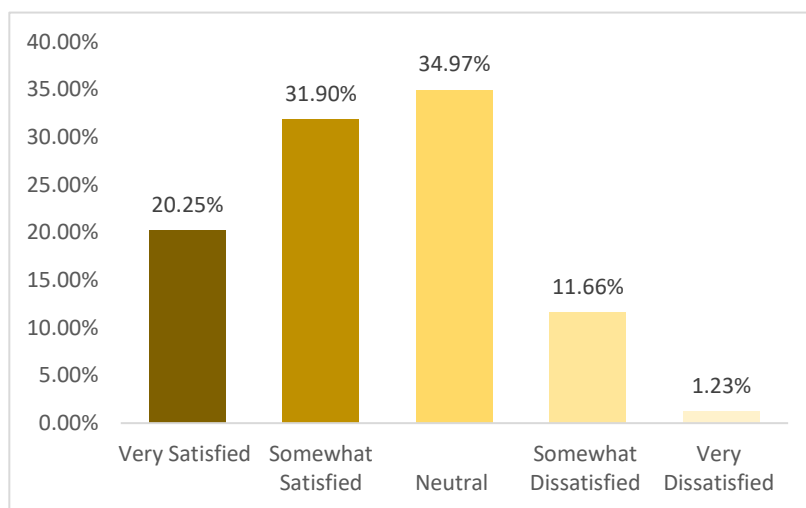

Figure 4 Course Content

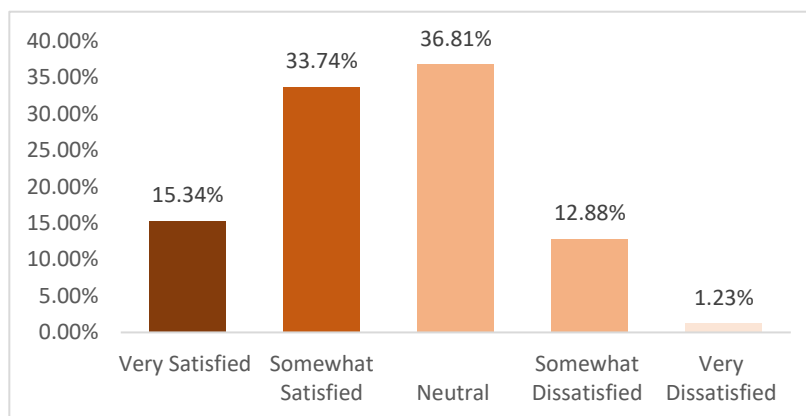**Figure 5** Teaching Methods & Faculty
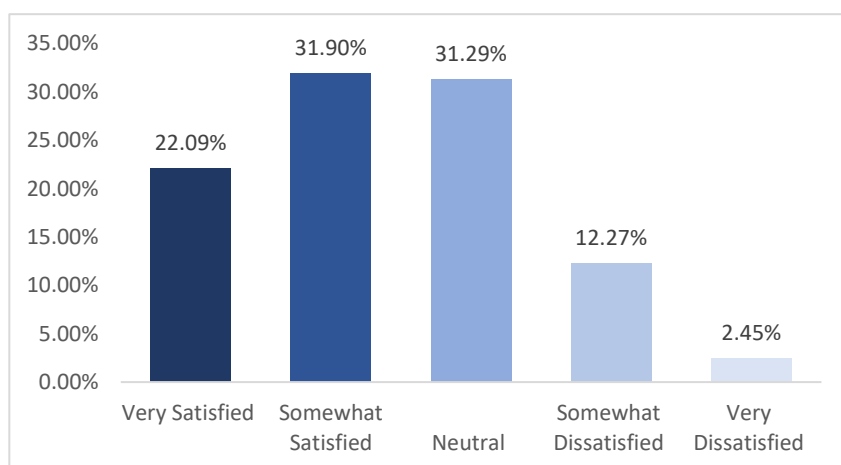

Figure 6 Course Resources

Figure 7 Course Effectiveness

In terms of the specific curriculum, 32.52 per cent of the students considered it very and relatively satisfactory, more than 35 per cent (very satisfactory) and 30 per cent (relatively satisfactory); the

proportion of students who considered it average and unsatisfactory was 39 per cent and 28 per cent, respectively. In terms of course content, only 16.56% were very satisfied, and more than 39% of the students were average and dissatisfied. In terms of teaching methods and teachers, half of the students who were satisfied and more satisfied accounted for 34%, and more than 38% of the students were dissatisfied in general, which is still a lot of problems. In terms of course resources, only 15.34% of the students are very satisfied, and more than 40% are dissatisfied in general. In terms of course effectiveness, 22.09% and 31.9% of the students are very satisfied and quite satisfied, respectively, and there is still room for improvement. Problems in all dimensions are present, which indicates that there is still much room for exploring and improving the course.

Based on the data presented in the charts and the corresponding analysis, the following conclusions can be drawn:

1. Optimisation Needs in Course Design Structure

The survey results indicate that 58.29% of students expressed satisfaction with the course design (including both "very satisfied" and "quite satisfied"), suggesting that the current curriculum framework initially aligns with students' learning expectations. However, nearly 18% of respondents reported dissatisfaction, highlighting the necessity to further refine the course structure in terms of content organisation and instructional pacing to enhance its relevance and adaptability.

2. Insufficiencies in Course Content Relevance and Appeal

While approximately half of the students provided a positive evaluation of the course content, a significant proportion expressed neutral (36.81%) or negative (14.11%) views. This indicates potential gaps in the depth, coherence, and contextual relevance of the curriculum. It is therefore essential to diversify course offerings, enrich content themes, and ensure better alignment with students' academic backgrounds and future career trajectories.

3. Limited Innovation in Teaching Strategies

A satisfaction rate of 52.15% about teaching methods and teacher performance reflects a foundational level of recognition for pedagogical competency. However, the notable proportion of neutral responses (34.97%) reveals that the current instructional approaches may lack innovation and interactivity. There is a pressing need to explore more engaging and student-centred teaching strategies that foster active participation and enhance the overall vitality of classroom learning.

4. Inadequate Support from Teaching Resources

Although 49.08% of students acknowledged the availability of teaching resources, the remaining responses suggest notable deficiencies in this area. The inadequacy of instructional materials, practical training tools, and supplementary learning resources impedes the ability to fully meet the increasingly diverse and applied learning needs of students. Targeted investment in these areas is therefore necessary to support high-quality, experiential learning.

5. Partial Effectiveness in Educational Outcomes

While a majority of students held a positive view of the course's effectiveness, 14.72% perceived the learning outcomes as unsatisfactory. This points to the need for further enhancement in fostering students' aesthetic sensibility and comprehensive cultural literacy. Optimising the alignment between instructional goals, curriculum content, and evaluation mechanisms will be crucial for improving the holistic educational value of the courses.

4. Structural equation modelling analysis and hypothesis testing

In this study, structural equation modelling (SEM) was used to conduct an in-depth analysis and exploration of the endogenous relationships among the factors in the current status of the implementation of the art course in the aviation service art and management major of Wuhan Business University (Li, 2024). Based on the questionnaire, a preliminary hypothesis model was constructed based on course curriculum, course content and tasks, teaching methods and teachers, and course resources as independent variables, and course effects as dependent variables.

The data from 163 valid questionnaires were analysed by AMOS software, and the results are shown in Table 3 below:

Table 3 Structural equation modelling analysis and hypothesis testing

Hypotheses	Pathway	Standardized Coefficient	Standard Error	Critical Ratio	P-value	Result
H1	Curriculum Design—Course Effectiveness	0.25	0.08	3.13	0.002	Supported
H2	Course Content—Course Effectiveness	0.3	0.09	3.33	<0.001	Supported
H3	Teaching Methods & Faculty—Course Effectiveness	0.28	0.08	3.5	<0.001	Supported
H4	Course Resources—Course Effectiveness	0.2	0.07	2.86	0.004	Supported

It can be concluded that the standardised coefficients of all paths are positive, and the P-values corresponding to the C.R. values are all less than 0.05, indicating that there is a significant positive influence of curriculum setting, curriculum content, teaching methods, and teachers, and curriculum resources on curriculum effectiveness, and the hypothetical model constructed is supported by the data. That is to say, optimising the curriculum, perfecting the curriculum content, improving the teaching methods, strengthening the teachers' quality, and enriching the curriculum resources can effectively improve the curriculum effect, which provides a strong foundation for further proposing specific curriculum implementation strategies.

Problems in the Implementation of the Artistic Curriculum of the Aviation Service Art and Management Major at Wuhan Business University

1. Problems with the curriculum

Analysing the responses to the questionnaire, there are shortcomings in some aspects of the curriculum. In terms of the connection between the curriculum and its professional knowledge and its fit with the training objectives, 17.18 per cent of the students were very satisfied, 34.36 per cent were quite satisfied, and 13.5 per cent were quite dissatisfied. This indicates that there is room for improvement in terms of the linkage between the curriculum and its professional knowledge and its fit with the training objectives. Further analysis of the questionnaire shows that there is still room for optimising the curriculum in three key dimensions:

1.1 Insufficient fit between curriculum and professional goals

Firstly, in the aspect of 'satisfaction with the relationship between the curriculum and professional knowledge and the fit with the training objectives', only 17.18% of the students indicated that they were very satisfied, while 13.5% indicated that they were dissatisfied. This shows that there is not enough linkage between the course content and the professional direction, and the music course is not effectively embedded in the practical scenarios, such as arts management, resulting in the weakening of its practical significance in the eyes of the students.

1.2 Lack of science in the sequencing of courses

Secondly, in terms of 'satisfaction with the sequence of course subjects', only 13.5% of the students considered the sequence of course offerings very reasonable, while 9.2% were dissatisfied. This shows that there is a lack of logical connection in the scheduling of some of the courses. For example, the

introduction of professional courses without receiving education in music and art may prevent students from internalising their aesthetic sense as an internal drive, thus affecting the effectiveness of teaching.

1.3 Disproportion between theory and practice

Thirdly, regarding 'satisfaction with the ratio of theory to practical training hours', although 19.63% of the students indicated that they were very satisfied, 12.27% were still dissatisfied. This indicates that there is an imbalance in the ratio between practice and theory, with some courses favouring theoretical lectures and lacking support for practical training content, while other courses have practice but weak theoretical support, which affects the breadth and depth of students' application of knowledge.

2. Problems with the content of the curriculum

In the data analysis, the study found that there are still some outstanding problems in the music course content dimension of the programme, which need to be optimised.

2.1 The content is outdated and lacks professional relevance

First of all, in terms of satisfaction with the theoretical learning content, the data showed that 41.1% of the students indicated that they were 'generally satisfied', and another 11.04% indicated that they were 'not very satisfied'. From the feedback, it can be seen that the theoretical course content fails to effectively match the current development trend of art education and industry dynamics. For example, the content of some courses, such as Music Appreciation, is relatively old and lacks the support of artistic aesthetic qualities and contextual art applications required by the aviation service profession, which leads to the students not feeling the intrinsic connection between the courses and their future career development.

In addition, only 32.52% of the students gave an evaluation of 'average satisfaction' in the correlation between theoretical courses and practical training courses, and 6.75% of the students explicitly expressed their dissatisfaction. This shows that there is a 'disconnection between theory and practice' in the current course structure. The course fails to form an effective system of back-and-forth support or mutual supplementation, and students lack the opportunity to apply the basic knowledge of art in concrete practice, which affects their learning enthusiasm and the practicality of learning results.

2.2 Lack of realism and diversity in the practical training content of the courses

Secondly, regarding the satisfaction with the practical training content, the survey results show that 34.36% of the students expressed 'average satisfaction', and 13.5% of the students expressed 'not very satisfied'. This shows that there are some limitations in the practical training programmes of the courses. Taking the music practical course as an example, if the practical activities are limited only to individual practice or contextual simulation without close contextual reproduction, it will weaken the students' sense of practical participation and teamwork ability, and it is difficult to achieve the vocational skills cultivation requirements set out in the objectives of the course.

To sum up, there is still much room for improvement in the overall design, content updating, course articulation, and theory-practice integration of the art course content of the aviation service art and management programme of Wuhan Business School.

3. Problems with teaching methods and teachers

In terms of overall student satisfaction with course instruction, only 20.25% of students reported being "very satisfied," while 34.97% considered the experience "average," and 11.66% expressed dissatisfaction. Some instructors continue to rely on outdated teaching methods, primarily adopting traditional lecture-based approaches that lack innovation. For instance, in appreciation courses, instruction is often limited to playing musical pieces followed by explanation, resulting in passive learning with limited student engagement.

An analysis of the teaching implementation reveals notable issues in teaching methods, instructor attitudes, and the effectiveness of interaction, all of which have negatively impacted the quality of course delivery and students' overall learning experience.

3.1 Teaching methods are single and not innovative enough.

Firstly, regarding "satisfaction with teaching methods," more than one-third of students expressed either dissatisfaction or a neutral stance, indicating that traditional lecture-based instruction remains

dominant. This approach is characterized by limited interactivity and innovation, with outdated pedagogical techniques that fail to stimulate students' interest and enthusiasm. Given the increasingly diverse educational needs and the rising aesthetic expectations of students, such monolithic teaching models no longer meet the demands of a diversified classroom.

3.2 Imbalance in teachers' quality and ability

Secondly, in terms of "teaching proficiency" and "teaching attitude," although the overall evaluations were at a moderate level, 11.66% of students rated their teachers' instructional capabilities as "dissatisfactory." Deficiencies were observed in subject knowledge, instructional clarity, and classroom pacing. Particularly, teachers demonstrated weaknesses in integrating theory with practice and extending knowledge across disciplines. Moreover, approximately one-third of students gave only an "average" evaluation of their instructors' teaching attitudes, citing inadequate preparation, limited classroom interaction, and issues such as unclear explanations and disorganized lecture structure. These problems directly compromised the rigor of classroom teaching and reduced students' sense of academic engagement.

3.3 Weak teacher-student interaction and poor learning atmosphere

Thirdly, survey results revealed low satisfaction with teacher–student interaction: 33.74% of students rated it as "average," while 9.82% found it "unsatisfactory." This reflects a lack of awareness and ability among instructors to organize effective classroom interaction. It also suggests that the curriculum itself lacks content and structure designed to foster interaction, thereby failing to provide students with sufficient opportunities for expression, presentation, and discussion. Such a "spoon-feeding" instructional atmosphere not only diminishes student participation but also suppresses the development of creative thinking and humanistic literacy.

4. Problems with curriculum resources

At the level of course resources, the survey data reveal that students' overall satisfaction is relatively low, with multiple specific dimensions highlighting a significant misalignment between resource allocation and actual teaching needs.

4.1 Insufficient Textbook and Resource Support

Firstly, regarding the overall situation of course resources, only 15.34% of students expressed being "very satisfied" with the resources for their program, while over one-third (36.81%) rated them as "average," and another 12.88% expressed dissatisfaction. This indicates that the current course resources, in terms of quantity, update frequency, and relevance, have not effectively met students' learning needs, particularly in the integration of resources closely related to the aviation service arts and management program. There remains substantial room for improvement in this area.

Secondly, in terms of the teaching faculty, student satisfaction is also low. The data shows that 39.26% of students rated the teaching staff as "average," and 8.59% expressed dissatisfaction. The key issue lies in the limited number of specialized faculty members, with some courses being taught by interdisciplinary faculty members on a part-time basis. This leads to a lack of consistency in teaching quality and insufficient professional expertise. This is particularly evident in music and art courses, where some instructors lack industry practice experience or advanced studies in the arts, thus struggling to support high-quality classroom teaching and the cultivation of artistic expression skills.

Regarding textbook resources, the survey reveals that 30.06% of students gave an "average" rating, and 12.27% were "dissatisfied." Some textbooks contain outdated content and theoretical gaps, disconnected from current trends in civil aviation services, international arts exchange, and other industry developments. This makes it difficult to provide students with learning materials that are forward-looking and of practical value. The lag in textbook content not only weakens the relevance of course materials but also limits students' ability to expand their professional knowledge.

4.2 Delayed Development of the Overall Course Resource System

In addition, there are also issues reflected in the course implementation environment. Regarding the satisfaction with the learning environment (including classroom hardware, equipment, etc.), 33.13% of students rated it as "average," while 14.72% expressed dissatisfaction. The survey found that some

classroom facilities are outdated, with multimedia equipment that is either aging or frequently malfunctioning, directly affecting the continuity of teaching and the atmosphere in the classroom.

A more prominent issue arises in the allocation of on-campus and off-campus practical training resources. The data shows that 30.67% of students rated the practical training resources as "average," while 12.27% were dissatisfied. The primary reason for this is the limited number of on-campus training facilities, which cannot meet the demands for large-scale, tiered practical teaching. Additionally, there is insufficient depth in off-campus training base cooperation, with students having few opportunities to engage in real-world industry-based learning, thereby limiting the authenticity and effectiveness of the practical training.

Discussion

1. Introducing Courses Related to Digital Services

With the increasing digitalisation and intelligent development of the aviation service industry, higher requirements are being placed on the digital literacy of service personnel. In response to this trend, universities can introduce courses focusing on digital applications in aviation services into their curriculum systems. At the same time, the content of certain existing courses should be adjusted to incorporate instruction on digital service tools. This approach ensures that the curriculum remains aligned with industry developments and lays a solid foundation for students' future career advancement.

1.1 Scientifically Sequencing Art Courses. The sequencing of courses should strictly follow the logical structure of knowledge and the cognitive patterns of learners. At the beginning of the curriculum, foundational courses such as art history should be offered. These courses help students trace the development of art and understand its evolution from a historical perspective, thus laying a solid groundwork for subsequent learning. Based on this foundation, theoretical courses such as Introduction to Art Studies, Appreciation of Chinese and Foreign Art, and Music Appreciation should be introduced. These courses guide students in transforming fragmented knowledge into a systematic understanding and in constructing a coherent knowledge framework. Through such curriculum sequencing, students can acquire knowledge progressively, thereby enhancing the overall effectiveness of their learning.

1.2 Rational Allocation of Theoretical and Practical Course Proportions. When determining the proportion of theoretical and practical course hours, it is essential to conduct market research and gather extensive student feedback to ensure a scientifically sound balance between the two. For example, courses such as Cabin Crew Etiquette and Posture Training and Folk and Ethnic Dance are highly practical, requiring strict attention to the precision of physical movements and a high degree of team coordination. Therefore, the number of practical training hours can be appropriately increased to give students sufficient time to refine their movements, enhance teamwork capabilities, and ultimately achieve harmony and artistic beauty in both individual performance and group presentation.

2. Improvement of course content

2.1 Regularly Updating Theoretical Teaching Content. The continuous innovation and systematic enrichment of course content constitute a fundamental guarantee for the achievement of educational objectives. In the domain of theoretical instruction, teachers should establish a normalized mechanism for knowledge renewal, continuously tracking the latest developments in both the industry and the arts, and integrating cutting-edge research findings into classroom teaching. Taking the "Introduction to Art Studies" course as an example, it is necessary to systematically incorporate emerging art forms such as new media art and digital art. By employing case study methods and academic paper discussions, students' intellectual horizons can be broadened, and their understanding of current artistic trends can be deepened. For instance, when introducing new media art, instructors may draw upon successful cases such as an airline using immersive new media installations to enhance the waiting area experience. Such examples allow for in-depth analysis of the application value and innovative pathways of new media art within aviation service contexts, enabling students to gain an intuitive understanding of the integration between art and industry.

2.2 Strengthening the Integration of Curriculum and Professional Knowledge. The effectiveness of curriculum design should be improved from multiple perspectives, one of which is enhancing the integration between course content and professional knowledge. It is essential to align course content closely with the training objectives of the university's academic programmes. Professional instructors should return to the original intention of curriculum design, and industry experts should be invited to participate in constructing the curriculum system, helping to revise the curriculum structure based on industry needs. For example, the curriculum should ensure a deep integration between course content and the core knowledge of the Aviation Service Art and Management programme, always adhering to the professional training goals of the institution.

Taking Wuhan Business University as an example, when designing new art-related courses, it is necessary to incorporate the occupational scenarios and professional characteristics of aviation service. In the Music Appreciation course, for instance, instructional content related to the application of music in airline cabin service can be added to help students understand how different styles of music contribute to easing passenger emotions and creating a pleasant cabin atmosphere. In physical training courses, elements such as standard standing, sitting, and walking postures required in aviation service can be integrated into the curriculum. This enables students to recognise the significance of physical training in shaping a professional artistic image aligned with their field of study.

2.3 Promoting the Synergy Between Theory and Practice. To strengthen the synergy between theoretical and practical training courses, teachers should clarify the application paths of theoretical knowledge in real-world work scenarios during classroom instruction. In the practical sessions, students should be guided to revisit relevant theories and engage in post-practice reflection and review. For appreciation-based courses, it is recommended to combine theory with practice. After introducing various artworks or case studies in art appreciation, instructors can provide real-life examples to encourage students to reflect on how art can be applied in aviation service or how to interpret artistic service behaviours in aviation and everyday aesthetic experiences. Through in-depth reflection and case comparisons, students can gain a deeper understanding of the principles and strategies behind the integration of art into aviation service, thereby facilitating the effective transformation of theoretical knowledge into practical competence.

3. Improving teaching methods and enriching curriculum resources

3.1 Diversification of Teaching Methods. In terms of pedagogical innovation, instructors should actively implement diversified teaching methods, selecting appropriate strategies based on the nature of the course and the instructional objectives. For example, in group dance classes, teachers may adopt a group-based teaching approach by dividing students into teams and guiding them to choreograph original dance pieces. This process not only enhances students' dance skills but also cultivates their teamwork and creative abilities, thus achieving an organic integration of course instruction and the development of students' comprehensive competencies. In the teaching of courses such as Introduction to Art Studies, educators may employ case-based teaching methods, selecting artworks or art events familiar to students as case studies. By contextualising abstract theoretical knowledge, this approach facilitates a deeper understanding of the theoretical framework of art studies and enhances learning outcomes.

3.2 Strengthen Teacher–Student Interaction and Individualised Guidance. To improve interaction and learning guidance, teachers should foster an open and interactive classroom atmosphere and place importance on communication with students. By organising targeted activities such as classroom discussions and group debates, instructors can stimulate students' interest in learning and encourage active class participation. In addition, online teaching platforms should be fully utilised to conduct post-class discussions, providing students with extended channels for extracurricular learning and communication. These platforms can be used to share study methods and learning techniques, thereby expanding students' learning space and supporting the deepening of knowledge and the enhancement of skills.

3.3 Strengthen Investment in Practical Training Classrooms. Efforts should be made to improve classroom infrastructure and maintain multimedia equipment to ensure a solid material foundation for teaching activities. On the one hand, the construction of on-campus practical training bases should be

enhanced by increasing the availability of training equipment and facilities, thereby meeting students' practical learning needs, fostering a strong artistic atmosphere, and creating a high-quality learning environment. On the other hand, school–enterprise collaboration should be deepened through the establishment of long-term and stable partnerships with airlines and airports. These partnerships can provide students with more internships and hands-on training opportunities, enabling them to improve their professional competencies through real-world practice. Through these multidimensional initiatives, universities can effectively enrich curriculum resources, enhance overall teaching quality, offer students a more robust educational experience, and cultivate high-calibre professionals who meet the evolving needs of the aviation service industry.

3.4 Introduce High-Quality External Resources. At the practical training and instructional levels, institutions should actively establish in-depth collaborations with local airports, airlines, and other industry entities to build realistic and position-oriented training platforms. The types and levels of practical training projects should be further diversified and expanded, including simulations of flight reception, emergency incident response, and other scenarios closely aligned with actual job settings. For instance, collaborative training programmes conducted jointly by Universities and airports allow students to engage in real-world flight reception activities within airport environments. This not only helps them become familiar with service procedures but also enables them to handle situations such as flight delays and passenger disputes. In doing so, students develop critical skills in emergency response, communication, and coordination—ultimately enhancing their practical problem-solving abilities and service competence.

4. Optimising Teacher Structure and Enhancing Teacher Quality

4.1 Enhancement of Teachers' Comprehensive Quality. Regular teaching and research activities should be organised to comprehensively evaluate the teaching performance of instructors and the effectiveness of art courses. Teachers are encouraged to actively participate in scientific research initiatives as well as teaching research and reform projects, and to explore innovative approaches to art programmes within their respective disciplines. Additionally, teachers should be sent to professional art institutions for training and further education, allowing them to engage with cutting-edge educational concepts and research outcomes, continuously update their knowledge systems, and enhance their overall professional competence.

4.2 Build a Teacher Development Platform. Universities should prioritise the professional development of their faculty by establishing a structured platform for ongoing teacher training and academic exchange. Through the regular organisation of specialised teaching workshops, academic seminars, and related activities, institutions can support the timely renewal and expansion of professional knowledge. These initiatives not only stimulate teachers' enthusiasm for pedagogical research but also encourage the exploration of teaching models suited to the specific characteristics of aviation service art and management programmes. Moreover, the establishment of a scientific and well-structured teaching evaluation system is essential for improving instructional quality. A comprehensive evaluation mechanism that incorporates student feedback, peer reviews, and assessments of teaching effectiveness can offer a multi-dimensional appraisal of teaching performance. This holistic evaluation encourages faculty to refine their teaching practices, adjust their attitudes toward instruction, and place greater emphasis on the overall quality of course delivery.

4.3 Optimise the Teaching Team. To enhance the overall quality of art-related courses in aviation service and management, institutions should prioritise the recruitment of qualified teaching staff. Preference should be given to candidates with both professional backgrounds in aviation service art and management and substantial teaching experience. These professionals, with their deep subject knowledge and practical insights, are well-positioned to ensure strong alignment between course content and industry demands.

In parallel, it is essential to strengthen the competencies of the existing faculty. Universities should encourage teachers to pursue relevant professional certifications, engage in ongoing professional development, and continuously enhance their pedagogical and subject-matter expertise.

Within the domain of art and aesthetic education, universities should conduct comprehensive internal evaluations to identify educators who possess strong musical proficiency, a passion for teaching, and innovative educational philosophies. Through structured training programmes, institutions can cultivate a team of full-time art instructors who will serve as a stable and dedicated core force for curriculum delivery. Moreover, x should expand cooperation with external entities by adopting models such as university–enterprise partnerships and inter-institutional collaborations. Renowned professors, artists, and industry professionals from outside the institution should be invited to deliver lectures or co-teach courses. Their practical experience and diverse perspectives will enrich the curriculum and effectively complement the work of in-house faculty, ultimately contributing to the development of a high-quality teaching team that blends full-time and part-time expertise.

In addition, institutions should actively involve industry experts in the construction and evaluation of the curriculum. These experts, with their first-hand experience and deep understanding of evolving industry requirements, can provide valuable insights. Regular academic–industry seminars should be held to facilitate dialogue between educators and practitioners, enabling joint analysis of emerging trends in the aviation service sector and allowing timely curriculum adjustments to align with real-world demands.

Conclusion

This study investigated the implementation status and improvement strategies of art courses in the Aviation Service Art and Management major, with Wuhan Business University as the case institution. Using structural equation modelling (SEM), a theoretical model was constructed to examine how curriculum design, course content and tasks, teaching methods, faculty, and curriculum resources affect course effectiveness. A total of 163 valid student questionnaires were analysed using AMOS software, and the results confirmed that all four factors had a significant positive impact on course effectiveness, validating the proposed model.

Based on the empirical findings, the study proposed targeted strategies for improving teaching effectiveness and developed a curriculum model tailored to the needs of art course delivery in this interdisciplinary major. These results provide both theoretical insight and practical guidance for the curriculum reform of similar programs, especially in optimizing course design, enriching teaching methods, and improving resource allocation to better serve the goal of training aviation professionals with strong artistic and cultural literacy.

Future research should consider expanding to multiple institutions to enhance the model's generalizability and examine regional variations. In addition, longitudinal studies tracking student outcomes over time post-curriculum reform could offer deeper insights into the sustained impact of art course improvements.

Recommendation

Based on relevant literature and theoretical foundations, this study designed a questionnaire targeting both teachers and students in the Aviation Service Art and Management major. By collecting data from 163 valid student responses and conducting interviews, we gained insights into students' evaluations of curriculum design, teaching quality, and perceived learning outcomes. These data supported the analysis of interrelationships among influencing factors in the proposed theoretical model, offering a clearer understanding of the current implementation of art courses in this major.

However, several limitations remain. First, while existing literature on teaching effectiveness provides a solid foundation, this study's integration of such theories with art education lacks deeper innovation and expansion into interdisciplinary domains. Second, the research is limited to a single institution—Wuhan Business University in Hubei Province—and the sample size constrains broader generalization.

Future research should address these issues by expanding the scope of the study across multiple institutions and increasing the sample size for more robust empirical validation. In addition, longitudinal

tracking of students' learning outcomes and satisfaction following curriculum reforms will be essential to assess the sustained effectiveness of art courses and refine the model of influencing factors over time.

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