

QFD-Guided Demand Analysis of Art ESP Courses in the Context of New Humanities

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Abstract: Based on the context of New Humanities, this paper employs Quality Function Deployment (QFD) as a guiding method to conduct an in-depth analysis of the demand for English for Specific Purposes (ESP) courses in the field of arts. Through systematic investigation and research, the paper identifies students' expectations for art ESP courses, designs relevant courses using the QFD method, and effectively integrates student needs with course design. The research results show that QFD has significant application potential in the demand analysis of art ESP courses, which can improve teaching quality and meet students' individualized needs.

Keywords: New Humanities, QFD, Art ESP, Demand Analysis, Course Design

1. Introduction

With the rise of the New Humanities concept, the education system has posed higher demands on English for Specific Purposes (ESP) courses. As an essential component of the English major, art ESP courses need to better adapt to the development trends of the New Humanities. This paper aims to systematically analyze students' needs for art ESP courses through the QFD method, with the goal of enhancing teaching quality and meeting students' learning expectations through scientific course design.

2. New Humanities and English Majors

2.1 The Background of New Humanities

The emergence of the New Humanities concept stems from the reflection and challenge of traditional humanities education models. Traditional humanities education often focuses on imparting subject knowledge, neglecting the actual needs of students and the societal demand for comprehensive literacy. This educational approach leads to passive learning of knowledge by students, making it difficult for them to cope with the complex and ever-changing social environment.

As society develops and cultural diversity increases, the core ideas of the New Humanities concept gradually come to the fore. The main characteristics of this concept include emphasizing the cultivation of students' creative thinking, critical thinking, and teamwork skills. These abilities not only enable students to better adapt to the future needs of society but also promote their holistic development.

Another important aspect of the New Humanities concept is the integration of disciplines. Traditional disciplinary boundaries limit students' comprehensive understanding and problem-solving abilities. The New Humanities encourages interaction and cross-disciplinary collaboration, allowing students to view problems more comprehensively and cultivate talents with well-rounded literacy.

The emphasis on practical skills is also a key feature of the New Humanities. Emphasizing practice means that students are not only learning theoretically but also applying what they have learned in real-world situations. This teaching model helps cultivate students' hands-on abilities and practical problem-solving skills, providing stronger support for their future careers.

Guided by the New Humanities, the education system is gradually shifting from a teacher-centered model to a student-centered model. By focusing on personal development and practical application skills, the New Humanities concept makes education more relevant to societal needs and individual student development requirements. This transformation lays the theoretical foundation for cultivating more well-rounded and practically skilled talents.

2.2 The Role and Significance of Art ESP Courses

In the context of the New Humanities, art ESP courses hold a unique and important position, with significance that extends beyond the traditional focus on grammar and literary knowledge in English majors. Under the New Humanities concept, art ESP courses are enriched with a broader connotation, aiming to cultivate students' practical application abilities and comprehensive literacy.

Firstly, art ESP courses are seen as crucial avenues for language skills development within the New Humanities. These courses aim not only to improve students' English proficiency but also to facilitate language use in the arts field, enabling students to express and understand more fluently. This language skill development is not confined to traditional grammar and vocabulary but includes the unique expressions and terminology of the arts, making students more articulate within context.

Secondly, art ESP courses have a distinctive role in broadening students' horizons. By incorporating cross-disciplinary elements, students can gain a deeper understanding of the arts while learning the language. This approach helps break down traditional disciplinary barriers and stimulates cross-disciplinary thinking, allowing students to view issues more comprehensively.^[1]

The emphasis on practice and innovation in the New Humanities also adds deeper meaning to art ESP courses. Students are encouraged to engage in practical application through actual art projects and teamwork, enhancing their practical skills and better preparing them for future professional demands.

Furthermore, the unique significance of art ESP courses lies in fostering students' creative thinking and teamwork abilities. Through the implementation of art projects, students must utilize their creativity and collaborate with team members, underscoring the importance of teamwork. This not only provides opportunities for personal development but also enhances their competitiveness in future careers.

In summary, art ESP courses in the context of the New Humanities are more than extensions of traditional English education; they are vital courses for comprehensively cultivating students' practical abilities and comprehensive literacy. Their role and significance lie in offering students broader development opportunities, enabling them to better adapt to today's diverse and interdisciplinary societal environment.

3. Application of QFD in Education

3.1 Overview of QFD Method

3.1.1 Origin and Basic Principles of Quality Function Deployment (QFD)

Quality Function Deployment (QFD) is a systematic management method that originated in Japan and was initially applied in the manufacturing industry. The basic principle of QFD is to transform customer needs into specific design elements of products or services, ensuring that the final product can meet users' expectations to the greatest extent. Over the past few decades, QFD methodology has gradually expanded into various fields, including manufacturing, service industries, and education.^[2]

3.1.2 Basic Principles and Steps of QFD

The basic principles of QFD involve steps such as demand analysis, determination of design features, association of design elements, and weight allocation. First, through in-depth analysis of student needs and expectations, QFD can effectively translate these needs into specific course design elements. The key to this step is accurately capturing student expectations to provide robust support for subsequent teaching design.

Second, QFD requires clearly defining design features, i.e., specific aspects of course design, including but not limited to teaching content, teaching methods, and evaluation methods. By clearly defining design features, QFD ensures the accuracy and comprehensiveness of the entire design process.

During the association of design elements, QFD uses tools such as matrices to map student needs to design elements, establishing their relationships. This step helps build an intuitive link between student needs and course design, ensuring the scientific and targeted nature of the design.

Finally, QFD assigns priorities to various design elements through weight allocation. This helps conduct more refined course design with limited resources, ensuring focus on important and critical aspects.

3.1.3 Application of QFD in Education

In the field of education, the application of QFD not only helps improve course quality but also promotes educational innovation. By integrating student expectations into the entire course design process, QFD helps break the constraints of traditional course design, making teaching more flexible and closer to actual needs. In the context of educational innovation, QFD provides educators with scientific guidance, enabling them to better meet students' learning needs and improve teaching effectiveness.^[3]

Overall, the overview of the QFD method includes its origin, basic principles, and applications in education. Through this systematic management method, educators can design courses more scientifically, ensuring enhanced teaching quality and adaptability.

3.2 Advantages of QFD in Course Design

3.2.1 In-depth Exploration of Student Needs

The primary advantage of the QFD method is its ability to deeply explore student needs. Through various means such as surveys and interviews, QFD can comprehensively collect students' expectations and needs. This data collection method not only includes superficial needs but also captures students' latent needs and expectations. This provides a practical and comprehensive basis for course design, ensuring that the design can closely align with students' actual needs.

3.2.2 Consideration of Diverse Student Needs

The QFD method ensures that course design fully considers the diverse needs of students, making the courses more inclusive and adaptable. By systematically analyzing and organizing different student needs, QFD can effectively adjust course design to meet the needs of different student groups. This helps break the traditional one-size-fits-all model, making teaching more differentiated and better suited to the diversity of students.

3.2.3 Organic Integration of Needs and Design

The QFD method achieves an organic integration of student needs and course design elements by linking them. This connection ensures the comprehensiveness and systematic nature of course design, avoiding the issue of pursuing one aspect of needs while neglecting other important aspects. Through this integration, QFD ensures that each design element is directly related to student needs, thereby enhancing the overall quality and adaptability of the course.^[4]

3.2.4 Verification through Successful Cases

Successful cases of QFD in the education field have demonstrated its practical feasibility and effectiveness in course design. Schools and institutions that have introduced the QFD method have successfully improved course quality and increased student satisfaction with teaching. These successful cases provide strong practical evidence for the application of QFD in course design, offering valuable references for other educational institutions.

Overall, as a systematic management method, QFD has broad prospects for application in education. Introducing it into the design of art ESP courses is expected to improve the quality and adaptability of courses, better meeting students' learning needs. The advantages of this method lie not only in the in-depth exploration of data but also in the consideration of diverse student needs and the organic integration of needs and design. The validation of successful cases provides practical support for its feasibility, making the application of QFD in education more persuasive.

4. QFD-Based Needs Analysis for Art ESP Courses

4.1 Methods of Student Needs Analysis

Student needs analysis is the cornerstone of designing Art ESP (English for Specific Purposes) courses. The goal is to comprehensively understand students' expectations, interests, and actual needs through questionnaire design and interviews. This section details the methods for conducting student needs analysis, including the steps for implementing questionnaires and interviews.

4.1.1 Questionnaire Design

4.1.1.1 Clearly Define the Purpose of the Survey

The primary task of questionnaire design is to clearly define the survey's purpose. Under the guidance of clear survey objectives, the questionnaire can design more targeted questions to ensure coverage of key elements in Art ESP course design. Clearly defining the survey's purpose helps ensure that the questions in the questionnaire can accurately capture the diversity of students' expectations and needs, providing a strong foundation for subsequent student needs analysis.^[5]

4.1.1.2 Comprehensive and Specific Question Settings

At the question-setting stage, it is necessary to ensure that the questions are comprehensive and specific, considering aspects such as language requirements, cultural backgrounds, and disciplinary characteristics of Art ESP courses. Questions should directly relate to course design elements, including but not limited to teaching content, teaching methods, and evaluation methods. Such question design ensures that comprehensive data is collected, covering all aspects students may be concerned about, providing rich information for subsequent student needs analysis. Using various question types, such as multiple-choice, open-ended questions, etc., helps make the collected data more diverse and sufficient, better meeting students' actual needs.

4.1.1.3 Flexibly Respond to Different Needs

In the questionnaire design, it is necessary to flexibly respond to different students' needs. Set some questions to encourage students to express their opinions freely to obtain deeper expectations. Meanwhile, the language of the questions should be concise and clear to avoid ambiguity, ensuring that students can accurately understand the questions and provide truthful, in-depth answers. By designing open-ended questions in the questionnaire, a more comprehensive understanding of students' individualized needs can be achieved, providing more specific and targeted suggestions for course design, making the questionnaire more adaptable to the needs of different student groups.

4.1.2 Interviews

4.1.2.1 Selecting Representative Students

When conducting interviews, selecting representative students is crucial. Ensuring representativeness means covering different levels and types of students to ensure the information collected is widely representative. By selecting representative students from different student groups, levels, and backgrounds, a more comprehensive understanding of students' individualized needs can be obtained, providing more specific and targeted feedback and suggestions for course design. This helps ensure that interview results can reflect the diversity of the entire student group, enhancing the representativeness of the interview results.

4.1.2.2 Flexible Interview Content

The content of the interview should be flexible enough to allow for in-depth follow-up based on students' responses. Compared to questionnaires, interviews focus more on individual differences and in-depth exploration. Through flexible interview content, a better understanding of students' deep-seated expectations for Art ESP courses can be obtained, acquiring more detailed information to provide more specific and in-depth references for course design. This personalized interview approach helps capture more detailed and specific needs of students, offering more targeted suggestions for course design.

4.1.2.3 Ensuring Depth and Breadth of Interviews

To ensure the depth and breadth of interviews, a semi-structured interview guide can be designed, including some open-ended questions and themes while maintaining sufficient flexibility to adapt to individual differences and the diversity of responses. Such a design ensures that the interview is systematic yet flexible enough to accommodate individual differences and the diversity of responses.^[6]

The design and implementation of student needs analysis methods are crucial in QFD-based Art ESP course design. Through reasonable questionnaire design and flexible interviews, it is possible to comprehensively and accurately capture students' expectations and needs, providing scientific and robust support for subsequent course design. This process is key to designing Art ESP courses that are more closely aligned with students' actual needs.

4.2 Application of QFD in Art ESP Course Design

The application of the QFD method in Art ESP course design involves systematically translating student needs into specific design elements and establishing associations and weights to ensure the course design meets students' expectations as closely as possible. This section details the specific application steps of QFD in Art ESP course design.

4.2.1 Segmentation of Student Needs

In the process of segmenting student needs, we meticulously organize the questionnaire and interview data to divide students' expectations and needs into specific course design elements. This covers multiple aspects, including teaching content, teaching methods, evaluation methods, etc. Ensuring these elements comprehensively cover students' expectations aims to construct a more complete and practically relevant course design framework. The goal of this process is to ensure the comprehensiveness of the design, so that various aspects of students' expectations can be effectively met in the course.

4.2.2 Establishing the QFD Matrix

One of the core steps in applying the QFD method is establishing the QFD matrix. By mapping student needs to course design elements, a clear and intuitive matrix is formed. This can be represented through numbers, symbols, etc., ensuring that each student need has an intuitive connection with the corresponding design element. Establishing this matrix helps to scientifically and intuitively demonstrate the relationship between student needs and course design, providing strong support for subsequent course design. This step ensures the systematization and specificity of the design.

4.2.3 Optimization of Weight Allocation

After establishing the association between student needs and course design elements, the key step is optimizing the weight allocation to determine the priority of each design element. This process helps educators conduct more refined course design under limited resources, ensuring a focus on important and critical aspects. Through careful weight allocation, the main expectations of students for the course can be better met, enhancing the specificity of teaching and making the design more aligned with students' actual needs. This optimization process aims to ensure the maximum utilization of limited resources to achieve more comprehensive and satisfactory course design goals.

4.2.4 Iterative Optimization Process

QFD in Art ESP course design is an iterative process. Once the association between student needs and course design elements and the weight allocation are completed, educators need to closely monitor student feedback and course effectiveness, making timely optimizations and adjustments. This iterative process aims to ensure that the course design can continuously adapt to students' actual needs.

Educators can conduct iterative optimization by regularly collecting student feedback, observing student learning performance, and evaluating course effectiveness. This may include adjusting course content, improving teaching methods, or reallocating weights to better meet students' expectations. This dynamic process ensures that course design remains synchronized with student needs, ensuring that the final design is closely aligned with practical situations.

Overall, the application of the QFD method in Art ESP course design is a systematic and scientific process. Through iterative optimization, the QFD method helps improve course quality, promotes educational innovation, and makes Art ESP courses more adaptable to students' learning needs. The flexibility and dynamism of this method enable educators to continually adjust courses to adapt to the changing educational environment.

4.3 Empirical Research Results and Analysis

4.3.1 Design of Empirical Research

The design of empirical research aims to comprehensively investigate and analyze the effectiveness of Art ESP course design after applying the QFD method. The research will objectively evaluate students' learning outcomes and satisfaction, and compare these results with previous survey results to verify the practical effectiveness of the QFD method in needs analysis and course design.

4.3.2 Analysis of Student Learning Outcomes

The analysis of student learning outcomes involves comparing students' academic performance to

objectively evaluate the effectiveness of Art ESP course design. The focus is on examining whether there is a significant improvement in academic performance before and after the application of the QFD method. This analysis aims to verify the positive impact of QFD on learning outcomes in needs analysis and course design, providing quantifiable evidence for the practical effectiveness of course design.

4.3.3 Analysis of Participation and Feedback

By investigating students' course participation and collecting their feedback, a more comprehensive understanding of the actual impact of the QFD method in course design can be obtained. Increased participation may indicate greater student engagement in learning, while feedback can reveal the strengths and areas for improvement in the course. This information is crucial for evaluating the actual effectiveness of the course.

4.3.4 Comparative Analysis and Validation of QFD Method Effectiveness

By comparing the empirical research results with previous survey results, the effectiveness of the QFD method in needs analysis and course design can be verified. The focus is on whether student needs are better met and whether course design is more aligned with actual needs. This comparative analysis provides objective validation for the practical application of the QFD method.

Finally, the analysis of empirical research results will help summarize the successful experiences of QFD in Art ESP course design. By revealing the strengths and areas for improvement in design, practical experience and references for similar future research will be provided. The successful implementation of this step will help further promote the application of the QFD method in the field of education.

5. Conclusion

This study finds that the QFD method plays a significant guiding role in analyzing the needs of Art ESP courses in the context of new liberal arts. By effectively integrating student expectations into course design through the QFD method, teaching quality is improved, and students' diverse learning needs are met. This provides valuable experience and references for the design and improvement of Art ESP courses in the future.

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