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Student demand survey for entrepreneurship education in art and design universities: A kano model approach

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Abstract

This study aims to apply the Kano model to conduct an in-depth analysis of the demand characteristics of art and design university students for entrepreneurship education functions and services, providing scientific evidence for optimizing entrepreneurship education systems. Using a questionnaire survey method, 205 art and design students were selected as research subjects, and a Kano model questionnaire containing 15 entrepreneurship education functions was constructed. Through positive and negative item design, student demand attribute classifications were identified. SPSS was used for reliability and validity testing and data analysis. The study found that digital platform skills training, international entrepreneurship exchange resources, dedicated entrepreneurship offices, and professional entrepreneurship courses were classified as must-be attributes; student artwork commercialization platforms, industry mentor guidance, funding application training, university-enterprise cooperation projects, psychological counseling mechanisms, and entrepreneurship competitions belong to attractive attributes; entrepreneurship achievement exhibitions, legal knowledge courses, and business model content are one-dimensional attributes; portfolio guidance and interdisciplinary team platforms are indifferent attributes. Art and design universities should prioritize the construction of must-be attribute functions, focus on developing attractive attribute projects, and reasonably allocate one-dimensional attribute resources to improve entrepreneurship education quality and student satisfaction. This research provides empirical support for constructing entrepreneurship education systems that align with the characteristics of art and design disciplines.

Keywords: Art and design, Entrepreneurship education, Higher education, Kano model, Student demand.

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1. Introduction

1.1. Research Background

Against the backdrop of rapid global development of the creative economy, the cultivation of entrepreneurial capabilities among art and design students has received increasing attention. According to UNCTAD data, the creative economy's annual output has exceeded $2.25 trillion, becoming an important driving force for global economic growth [1]. The Chinese government highly values the development of cultural and creative industries, with "Several Opinions on Promoting the Integration and Development of Cultural Creativity and Design Services with Related Industries" clearly proposing to cultivate the innovation and entrepreneurship capabilities of creative design talents.

Art and design universities, as important bases for cultivating creative talents, directly influence students' employment competitiveness and industry development levels through their entrepreneurship education quality. However, current entrepreneurship education in art and design disciplines faces problems such as incomplete curriculum systems, monotonous teaching methods, and disconnection from industry needs [2]. How to accurately identify student needs and construct scientific and effective entrepreneurship education systems has become an urgent issue to be addressed.

1.2. Research Significance

Theoretical Significance: This study introduces the Kano model into the demand analysis of art and design entrepreneurship education, enriching the theoretical research methods of entrepreneurship education and providing a new analytical framework for subsequent related research.

Practical Significance: Through scientific identification of students' demand levels for different entrepreneurship education functions, this study provides empirical evidence for universities to optimize resource allocation and improve teaching quality, thereby helping to enhance the targeting and effectiveness of entrepreneurship education.

1.3. Research Objectives

- Apply the Kano model to analyze the demand characteristics of art and design students for entrepreneurship education functions
- Identify attribute classifications and priority rankings of different entrepreneurship education services
- Provide decision support for optimizing university entrepreneurship education systems

2. Literature Review

2.1. Theoretical Foundation of Entrepreneurship Education

Entrepreneurship education, as an important pathway for cultivating students' innovative spirit and entrepreneurial capabilities, has theoretical foundations mainly including effectuation theory, opportunity recognition theory, and entrepreneurial thinking theory. Sarasvathy's [3] effectuation theory emphasizes achieving entrepreneurial goals through experimentation and iteration in uncertain environments, providing theoretical support for experiential entrepreneurship education. Shane and Venkataraman [4] Opportunity recognition theory focuses on entrepreneurs' cognitive processes in discovering and evaluating business opportunities, guiding entrepreneurship education to emphasize cultivating students' opportunity sensitivity.

Regarding entrepreneurship education classification, [5] divided entrepreneurship education methods into cognitive, action-based, and experiential types. Cognitive methods focus on theoretical knowledge transmission, action-based methods emphasize practical skill cultivation, and experiential methods provide immersive learning experiences through real entrepreneurial environments. Different methods vary in their effectiveness in cultivating students' entrepreneurial intentions and capabilities.

2.2. Characteristics of Art and Design Entrepreneurship Education

Entrepreneurship education in art and design disciplines has distinct disciplinary characteristics. Bridgstock [6] pointed out that art students often resist the "commercialization" of creation, believing that commercial considerations damage artistic integrity. This conceptual conflict is a unique challenge faced by art entrepreneurship education.

Regarding educational models, traditional business plan-oriented education models fail to meet the needs of art and design disciplines. Beckman [7] argued that art entrepreneurship education should focus more on cultivating students' creative thinking, brand building, and intellectual property protection capabilities. In recent years, some institutions have begun exploring interdisciplinary cooperation models, such as Stanford University's d.school, organizing art, design, engineering, and business students together for innovative projects [8].

2.3. Research on Entrepreneurship Education Demand Analysis

Student demand analysis is an important prerequisite for optimizing entrepreneurship education. Existing research mainly uses questionnaire surveys and interviews to understand students' expectations and evaluations of entrepreneurship education. Duval-Couetil and Long [9] compared the effects of traditional courses and experiential projects on art and design students' entrepreneurial self-efficacy, finding that experiential methods were more effective.

However, existing research mostly focuses on student satisfaction and learning outcomes, with less analysis of the importance of different educational functions from a demand hierarchy perspective. The Kano model, as an effective user demand analysis tool, can identify different types of functional attributes, providing scientific evidence for resource allocation decisions.

2.4. Kano Model Application Research

The Kano model was proposed by Japanese scholar Kano et al. [10] analyzing the nonlinear relationship between product functions and user satisfaction, classifying user needs into five categories: must-be attributes, one-dimensional attributes, attractive attributes, indifferent attributes, and reverse attributes [10]. This model is widely applied in product development, service design, and educational quality evaluation.

In the education field, international scholars have begun applying the Kano model to course design and teaching quality improvement. Tan and Shen [11] used the Kano model to analyze higher education service quality elements, providing references for school management decisions. Domestic scholars have also gradually introduced the Kano model into educational research, but applications in entrepreneurship education remain limited.

3. Research Methodology

3.1. Research Design

This study adopts a cross-sectional survey design, using the Kano model to analyze the demand characteristics of art and design university students for entrepreneurship education functions. The research process includes four stages: questionnaire design, data collection, reliability and validity testing, and results analysis.

3.2. Kano Model Method

3.2.1. Theoretical Foundation

The Kano model is based on the asymmetric theory of user satisfaction, believing that there is a nonlinear relationship between product functions and user satisfaction. The model classifies user needs into five attributes:

- Must-be attributes (M): Basic functions that users consider products must have; their presence does not improve satisfaction, but their absence significantly reduces satisfaction.
- One-dimensional attributes (O): Functions that users clearly expect; their presence enhances satisfaction, while their absence diminishes it.
- Attractive attributes (A): Functions that exceed user expectations; their presence greatly improves satisfaction, while their absence does not affect satisfaction.
- Indifferent attributes (I): Functions toward which users have no clear attitude; their presence or absence does not affect satisfaction.
- Reverse attributes (R): Functions that users do not want; presence actually reduces satisfaction.

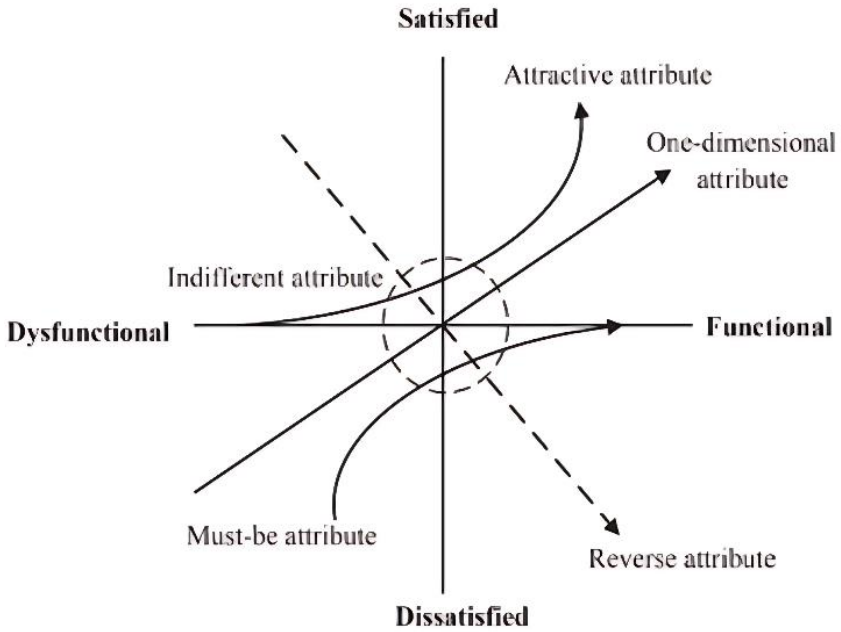

Figure 1.
KANO Model Quality Attribute Classification Diagram.
Source: Xie et al. [12].

3.2.2. Questionnaire Design

Based on literature research and expert interviews, 15 art and design entrepreneurship education functions were identified as research subjects. Using the standard Kano model questionnaire format, positive and negative questions were designed for each function, totaling 30 items, with a 5-point Likert scale (1: Dislike; 2: Tolerable; 3: Neutral; 4: Must have; 5: Like).

Table 1.
Questionnaire Items.

Code	Item Description
Positive Items	
A1	School provides specialized entrepreneurship courses for art and design (e.g., creative branding, IP design)
A2	Provides a commercial transformation platform for student artworks (e.g., online art sales, mini-program stores)
A3	Invites industry mentors (e.g., gallery owners, independent designers) for regular entrepreneurship project guidance
A4	Organizes entrepreneurship achievement exhibitions (e.g., designer markets, art entrepreneurship exhibitions)
A5	Provides portfolio building and brand packaging guidance (e.g., VI systems, social media promotion)
A6	Provides training or support for creative project applications and funding assistance
A7	Offers art industry legal and copyright foundation courses
A8	Provides an interdisciplinary entrepreneurship team formation platform (e.g., connecting with business/engineering/computer science students)
A9	Provides real entrepreneurship training projects and university-enterprise cooperation
A10	Provides psychological counseling and re-entrepreneurship opportunity mechanisms after failure
A11	Includes design economics and business model content in courses
A12	Provides digital platform skills training (e.g., short video operations, e-commerce live streaming, AI image tools)
A13	Provides international art entrepreneurship exchange or overseas incubation resources
A14	Regularly organizes campus entrepreneurship competitions with support or rewards for winners
A15	The school has a dedicated office or a project incubation room for art and design entrepreneurship guidance
Negative Items	
B1-B15	[Corresponding negative formulations of A1-A15]

3.3. Sampling and Data Collection

3.3.1. Sample Selection

The stratified sampling method was adopted, selecting research subjects from multiple domestic art and design universities, including undergraduate and graduate students, covering visual communication design, environmental design, product design, and other professional disciplines.

3.3.2. Data Collection

Questionnaires were distributed through online survey platforms, collecting 205 valid responses. Sample characteristics are as follows:

Table 2.
Sample Demographics.

Variable	Category	Frequency	Percentage (%)
Gender	Male	96	46.83
	Female	109	53.17
Age	Under 18	19	9.27
	18-20	56	27.32
	21-23	72	35.12
	24 and above	58	28.29
Education Level	Undergraduate	147	71.71
	Master's	46	22.44
	Doctoral	12	5.85
Current Grade	Freshman	55	26.83
	Sophomore	44	21.46
	Junior	16	7.8
	Senior and above	32	15.61
	Graduate	58	28.29
Previous Entrepreneurship Education	Yes	137	66.83
	No	68	33.17
Art/Design Entrepreneurship Intention	Yes	130	63.41
	No	55	26.83
	Uncertain	20	9.76

3.4. Data Analysis Methods

3.4.1 Reliability and Validity Testing

Cronbach's α coefficient was used to test the internal consistency reliability of the questionnaire, and the KMO measure and Bartlett's sphericity test were employed to evaluate the construct validity of the questionnaire.

3.4. Kano Attribute Classification

Based on the cross-analysis results of positive and negative items, the Kano model evaluation table was used to determine attribute classifications for each function.

3.4.1. Satisfaction Coefficient Calculation

Better coefficient (satisfaction impact) and Worse coefficient (dissatisfaction impact) were calculated:

Better coefficient = (A + O) / (A + O + M + I)

Worse coefficient = -(O + M) / (A + O + M + I)

Where A, O, M, I represent frequencies of attractive, one-dimensional, must-be, and indifferent attributes, respectively.

4. Data Analysis

4.1. Reliability and Validity Testing

4.1.1. Reliability Analysis

Cronbach's α coefficient is a commonly used reliability coefficient that evaluates the consistency of questionnaire item scores. It is an internal consistency reliability coefficient.

$$\alpha=\frac{k}{k-1}\left(1-\frac{\sum_{i=1}^{k}S_i^2}{S_T^2}\right)$$

Table 3.
Cronbach's Reliability Analysis.

	Items	Sample Size	Cronbach's α
Positive Items	15	205	0.924
Negative Items	15	205	0.913
Overall	30	205	0.952

The results of Cronbach's reliability analysis indicate that positive items, totaling 15, have a Cronbach's α coefficient of 0.924; negative items, also 15, have a coefficient of 0.913; and the overall 30 items, with a sample size of 205, have a coefficient of 0.952. Generally, Cronbach's α coefficients above 0.9 suggest very high reliability. Therefore, whether considering positive items, negative items, or the overall measurement, the results demonstrate good reliability within this

sample size, indicating that the measurement results are consistent and stable, and the measurement tool possesses strong reliability.

4.1.2. Validity Analysis

Table 4.
KMO and Bartlett's Test.

KMO Value		**0.954**
Bartlett's Sphericity Test	Approximate Chi-Square	4299.485
	df	435
	p-value	0.000

As shown, test results indicate: Bartlett's test p-value is less than 0.05, indicating questionnaire data is reliable. KMO value is 0.954 > 0.7, indicating high validity. Therefore, correlations exist among original variables, passing validity testing.

4.2. Kano Attribute Classification Results

According to the Kano model analysis framework, the attribute classification results for 15 entrepreneurship education functions are as follows:

Table 5.
Kano Model Analysis Results Summary.

Function/Service	**A**	**O**	**M**	**I**	**R**	**Q**	**Classification**
A1 & B1	15.12%	7.80%	47.80%	24.39%	4.88%	0.00%	Must-be
A2 & B2	52.68%	7.32%	14.63%	20.98%	4.39%	0.00%	Attractive
A3 & B3	56.59%	11.71%	7.80%	19.51%	4.39%	0.00%	Attractive
A4 & B4	14.15%	44.88%	14.63%	20.98%	5.37%	0.00%	One-dimensional
A5 & B5	22.93%	20.98%	15.12%	32.68%	8.29%	0.00%	Indifferent
A6 & B6	53.66%	7.80%	10.73%	21.95%	5.85%	0.00%	Attractive
A7 & B7	14.63%	44.88%	11.22%	21.95%	7.32%	0.00%	One-dimensional
A8 & B8	22.44%	16.10%	20.98%	33.66%	6.83%	0.00%	Indifferent
A9 & B9	47.80%	10.73%	15.12%	20.00%	6.34%	0.00%	Attractive
A10 & B10	49.27%	11.71%	13.17%	19.51%	6.34%	0.00%	Attractive
A11 & B11	13.66%	44.88%	17.07%	17.56%	6.83%	0.00%	One-dimensional
A12 & B12	15.12%	11.71%	45.85%	20.98%	6.34%	0.00%	Must-be
A13 & B13	10.24%	12.68%	47.32%	24.39%	5.37%	0.00%	Must-be
A14 & B14	49.27%	10.73%	15.12%	18.05%	6.83%	0.00%	Attractive
A15 & B15	13.17%	11.22%	49.27%	20.98%	5.37%	0.00%	Must-be

Note: A: Attractive attributes, O: One-dimensional attributes, M: Must-be attributes, I: Indifferent attributes, R: Reverse attributes, Q: Questionable attributes.

Based on the Kano model analysis results, among the entrepreneurship-related functions and services schools provide for art and design students, A12 (digital platform skills training), A13 (international art entrepreneurship exchange or overseas incubation resources), A15 (dedicated office or project incubation room for art and design entrepreneurship guidance), and A1 (specialized entrepreneurship courses for art and design) are classified as must-be attributes, indicating these are basic requirements students consider essential for schools' art and design entrepreneurship work.

A2 (commercial transformation platform for student artworks), A3 (industry mentor guidance for entrepreneurship projects), A6 (training or support for creative project applications and funding assistance), A9 (real entrepreneurship training projects and university-enterprise cooperation), A10 (psychological counseling and re-entrepreneurship opportunity mechanisms after failure), and A14 (regular campus entrepreneurship competitions with support or rewards for winners) are classified as attractive attributes, meaning these functions and services would greatly enhance student satisfaction with schools' art and design entrepreneurship work if provided, having strong appeal.

A4 (entrepreneurship achievement exhibitions), A7 (art industry legal and copyright foundation courses), and A11 (design economics and business model content in courses) belong to one-dimensional attributes, indicating that students have certain expectations for these aspects; schools providing them would increase student satisfaction, while not providing them would decrease satisfaction.

A5 (portfolio building and brand packaging guidance) and A8 (interdisciplinary entrepreneurship team formation platform) are classified as indifferent attributes, meaning the presence or absence of these functions and services has little impact on student satisfaction.

4.3. Satisfaction Coefficient Analysis

The KANO model results demonstrate the proportional distribution of six attributes, along with their classification outcomes and Better-Worse values.

First, the classification result refers to the attribute corresponding to the highest proportion among the six attribute categories.

Second, both Better (satisfaction influence) and Worse (dissatisfaction influence) indices are utilized to determine users' sensitivity to changes in feature/service levels.

Third, Better (satisfaction influence) = (A+O)/(A+O+M+I), where this indicator ranges from 0 to 1. A higher value indicates greater sensitivity and higher priority.

Fourth, Worse (dissatisfaction influence) = -1 × (O+M)/(A+O+M+I), where this indicator ranges from -1 to 0. A lower value indicates greater sensitivity and higher priority.

The table below incorporates 15 requirement indicators into a sensitivity matrix, with satisfaction coefficients as the horizontal axis and dissatisfaction coefficients as the vertical axis. Based on the statistical results presented in the table, a satisfaction matrix for the 15 requirement indicators is constructed, where the satisfaction coefficient is designated as the X-axis and the dissatisfaction coefficient as the Y-axis (with all data converted to absolute values). The X-axis centerline represents the mean satisfaction coefficient, while the Y-axis centerline represents the mean dissatisfaction coefficient.

The calculation formulas for Better-Worse indicators are as follows:

Post-implementation satisfaction coefficient B (Better): (Attractive attributes + One-dimensional attributes)/(Attractive attributes + One-dimensional attributes + Must-be attributes + Indifferent attributes), as shown in Equation :

$$B = \frac{A+O}{A+O+M+I}$$

Post-elimination dissatisfaction coefficient *W* (Worse): (One-dimensional attributes + Must-be attributes)/(Attractive attributes + One-dimensional attributes + Must-be attributes + Indifferent attributes) × (-1), as shown in Equation :

$$W = \frac{O+M}{A+O+M+I} \times (-1)$$

Table 6.
Better and Worse Coefficients.

Function/Service	Better	Worse
A1 & B1	24.10%	-58.46%
A2 & B2	62.76%	-22.96%
A3 & B3	71.43%	-20.41%
A4 & B4	62.37%	-62.89%
A5 & B5	47.87%	-39.36%
A6 & B6	65.28%	-19.69%
A7 & B7	64.21%	-60.53%
A8 & B8	41.36%	-39.79%
A9 & B9	62.50%	-27.60%
A10 & B10	65.10%	-26.56%
A11 & B11	62.83%	-66.49%
A12 & B12	28.65%	-61.46%
A13 & B13	24.23%	-63.40%
A14 & B14	64.40%	-27.75%
A15 & B15	25.77%	-63.92%

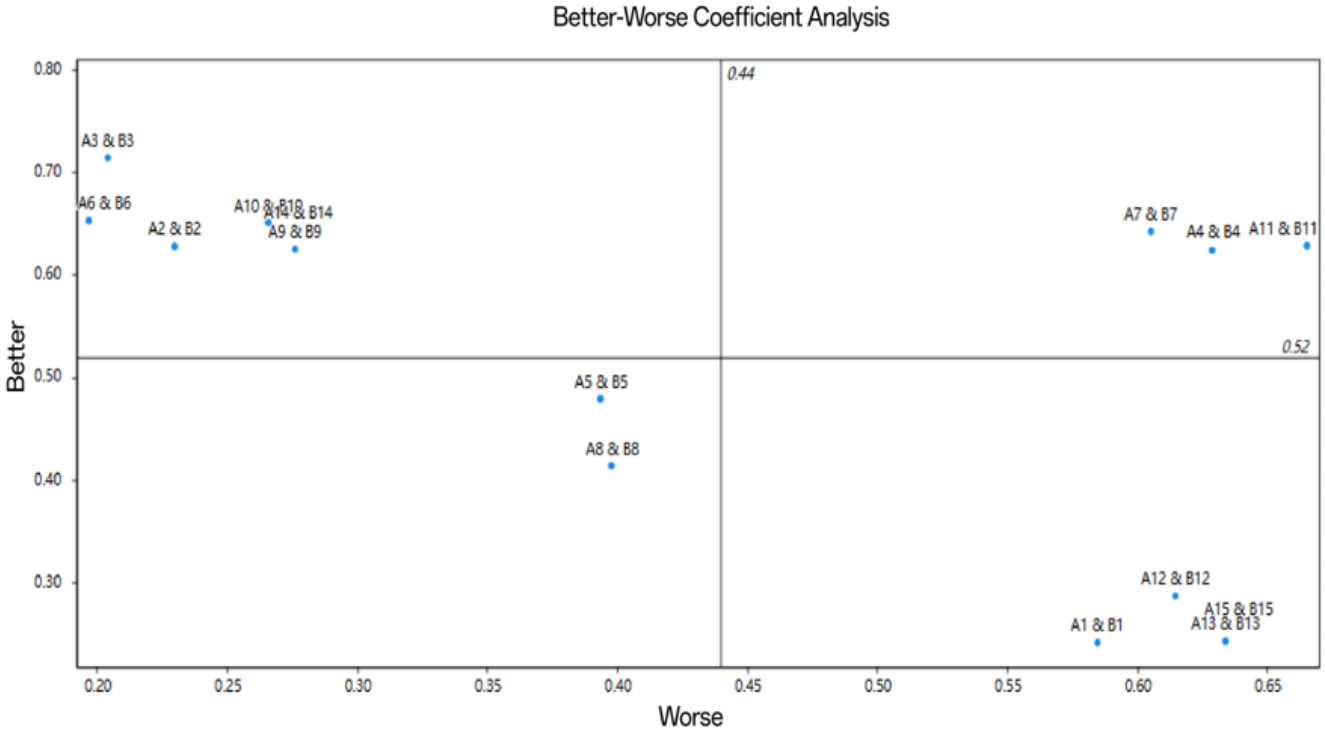

Figure 2.
Better-Worse Coefficient Analysis: Impact of Entrepreneurial Services on Student Satisfaction in Art and Design.

Better-Worse coefficients reflect the impact of each function/service on improving satisfaction (Better) and reducing satisfaction (Worse). Functions A2-A4, A6-A11, and A14 have higher coefficients, with A3 and B3 reaching 71.43%, indicating that improving these can significantly enhance student satisfaction with schools' art and design entrepreneurship work. Meanwhile, A1, A4, A7, A11-A15 have larger absolute Worse coefficients, with A11 and B11 at -66.49%, meaning the absence of these functions would greatly reduce student satisfaction.

4.4. Demand Priority Ranking

According to the Kano model theory, function provision priority is: Must-be attributes > One-dimensional attributes > Attractive attributes > Indifferent attributes

4.4.1. Priority Ranking

- First Priority (Must-be attributes): Digital platform skills training, international entrepreneurship exchange resources, dedicated entrepreneurship office, professional entrepreneurship courses
- Second Priority (One-dimensional attributes): Entrepreneurship achievement exhibitions, legal knowledge courses, business model content
- Third Priority (Attractive attributes): Industry mentor guidance, funding application training, artwork transformation platform, university-enterprise cooperation projects, psychological counseling mechanisms, entrepreneurship competitions
- Fourth Priority (Indifferent attributes): Portfolio guidance, interdisciplinary team platforms

5. Results Discussion

5.1. Must-be Attribute Function Analysis

The study found that digital platform skills training, international entrepreneurship exchange resources, dedicated entrepreneurship offices, and professional entrepreneurship courses are viewed by students as essential attributes. This result reflects the realistic needs of art and design students in the digital age:

Importance of Digital Skills: In the context of the digital economy, digital skills such as short video operations, e-commerce live streaming, and AI image tools have become fundamental capabilities for art and design students' entrepreneurship. This aligns with Landström et al. [13]'s views on digital technology's impact on the creative economy.

International Perspective Needs: Art and design possess strong international characteristics, and students generally aspire to broaden their horizons and acquire advanced experiences through international exchange. This reflects the globalization trend within the creative industries.

Specialized Service Expectations: Students believe schools should establish dedicated institutions to provide entrepreneurship guidance, reflecting the specificity and complexity of art and design professional entrepreneurship, requiring specialized support services.

5.2. Attractive Attribute Function Characteristics

All six attractive attribute functions have high Better coefficients (62.50%-71.43%), indicating that these functions can significantly enhance student satisfaction. Among them, industry mentor guidance has the highest Better coefficient (71.43%), reflecting students' strong desire for practical industry experience.

Common characteristics of these functions emphasize practicality and support, including commercial transformation, mentor guidance, funding applications, university-enterprise cooperation, psychological support, and competition platforms. This aligns with Bridgstock's [6] view that art students need more practical support.

5.3. One-Dimensional Attribute Function Role

Entrepreneurship achievement exhibitions, legal knowledge courses, and business model content are classified as one-dimensional attributes. These functions have high absolute Worse coefficients (60.53%-66.49%), significantly reducing student satisfaction when absent.

This result indicates that students have recognized the importance of intellectual property protection and business model design in creative industries, with clear expectations for related educational content.

5.4. Indifferent Attribute Function Reflection

Portfolio guidance and interdisciplinary team platforms are classified as indifferent attributes. Possible reasons include:

- Strong Substitutability: Students may obtain similar services through other channels
- Insufficient Recognition: Students may not fully recognize the value of these functions
- Individual Differences: Different students have significant differences in demand for these functions

5.5. Comparison with International Research

This study's results differ somewhat from related international research. Duval-Couetil and Long's [9] research emphasized the importance of experiential learning, while this study found that Chinese students place greater emphasis on digital skills and international resources. This may reflect differences in the stages of development within the creative industry and educational environments between China and the United States.

6. Conclusions and Future Directions

6.1. Research Summary

This study applied the Kano model to conduct an in-depth analysis of art and design university students' demand characteristics for entrepreneurship education functions, reaching the following main conclusions:

Clear Demand Hierarchy: Fifteen entrepreneurship education functions were clearly classified into must-be, attractive, one-dimensional, and indifferent attributes, providing scientific evidence for university resource allocation.

Prominent Digitalization Needs: Digital platform skills training was classified as a must-have attribute, reflecting the realistic needs of art and design students in the digital age.

Clear Practice Orientation: All six attractive attribute functions emphasize practicality and support, reflecting students' emphasis on practical operational capabilities.

High Specialization Requirements: Students expect schools to provide specialized entrepreneurship education services, including dedicated offices and industry mentors.

6.2. Research Limitations

Sample Limitations: This study's sample mainly consists of domestic universities; international comparative research needs to be strengthened.

Timeliness: Entrepreneurship education needs may change with industry development and technological progress, requiring dynamic tracking research.

Individual Differences: The study primarily focuses on group characteristics, with insufficient analysis of individual differences.

6.3. Future Research Directions

- Longitudinal Tracking Research: Conduct long-term tracking studies to understand the dynamic characteristics of student demand changes.
- Comparative Research: Conduct international comparative research exploring differences in art and design entrepreneurship education needs under different cultural backgrounds.
- Effect Evaluation: Optimize entrepreneurship education systems based on this study's results and evaluate the effects of improvements.
- Emerging Field Exploration: Focus on educational demand characteristics in emerging fields such as digital art entrepreneurship and cultural heritage entrepreneurship.
- Personalized Research: Explore personalized entrepreneurship education models based on students' individual characteristics.
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References

[1] UNCTAD, "Creative economy outlook: Trends in international trade in creative industries," presented at the United Nations Conference on Trade and Development, 2018.

[2] M. Li, "Research on the current situation and countermeasures of entrepreneurship education in art and design universities," *Art Education*, vol. 8, pp. 45-48, 2019.

[3] S. D. Sarasvathy, "Causation and effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency," *Academy of Management Review*, vol. 26, no. 2, pp. 243-263, 2001.

[4] S. Shane and S. Venkataraman, "The promise of entrepreneurship as a field of research," *Academy of management review*, vol. 25, no. 1, pp. 217-226, 2000.

[5] H. M. Neck and P. G. Greene, "Entrepreneurship education: known worlds and new frontiers," *Journal of small business management*, vol. 49, no. 1, pp. 55-70, 2011.

[6] R. Bridgstock, "Not a dirty word: Arts entrepreneurship and higher education," *Arts and Humanities in Higher Education*, vol. 12, no. 2-3, pp. 122-137, 2013.

[7] G. D. Beckman, "" Adventuring" arts entrepreneurship curricula in higher education: An examination of present efforts, obstacles, and best practices," *The Journal of Arts Management, Law, and Society*, vol. 37, no. 2, pp. 87-112, 2007.

[8] S. Doorley and S. Witthoft, *Make space: How to set the stage for creative collaboration*. Hoboken, NJ: John Wiley & Sons, 2012.

[9] N. Duval-Couetil and Z. Long, "Career impacts of entrepreneurship education: How and when students intend to utilize entrepreneurship in their professional lives," *Journal of Business and Entrepreneurship*, vol. 26, no. 1, pp. 63-86, 2014.

[10] N. Kano, N. Seraku, F. Takahashi, and S. Tsuji, "Attractive quality and must-be quality," *The Journal of the Japanese Society for Quality Control*, vol. 14, no. 2, pp. 39-48, 1984.

[11] K. C. Tan and X.-X. Shen, "Integrating Kano's model in the planning matrix of quality function deployment," *Total Quality Management*, vol. 11, no. 8, pp. 1141-1151, 2000.

[12] Z. Xie, W. Li, Y. Xie, and L. Wang, "Demand and satisfaction analysis of short health videos among Chinese urban youth: A mixed-methods study based on the KANO model," *Humanities and Social Sciences Communications*, vol. 11, no. 1, p. 740, 2024. https://doi.org/10.1057/s41599-024-03266-0

[13] H. Landström, G. Harirchi, and F. Åström, "Entrepreneurship: Exploring the knowledge base," *Research Policy*, vol. 50, no. 7, p. 104285, 2021.