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A Case Study of A Public Vocational College In Sichuan, China

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Abstract

The objective of this research is to investigate factors impacting students' satisfaction with aesthetic education. The study was conducted in a public vocational college in Sichuan, China. First, the research tool was validated using the item-objective consistency index (IOC). Then, a preliminary study was conducted to verify the reliability of the test and the data was analyzed using Jamovi. Third, the author used the stratified random sampling method to select 187 students as participants and collect the data. Multiple linear regression (MLR) was used to test the hypotheses. In the intervention design and implementation phase, the author used purposeful and convenience sampling, 30 students were selected for the intervention, The intervention was designed and implemented to evaluate its effectiveness. After intervention design and implementation (IDI), Paired sample t-tests were used to verify the effect of the intervention. The multiple linear regression showed that pleasure, arousal, aesthetics perceived quality and education perceived quality had significant effects on student satisfaction, while utilitarian value and social value had no significant effect on student satisfaction. Finally, the results of the paired-sample t-test showed significant differences in all variables except arousal (ARO) between pre-IDI and post-IDI, indicating that the intervention was effective. By enhancing students' satisfaction with aesthetic education, Neijiang Vocational and Technical College can strengthen art training, cultivate students' aesthetic abilities, and provide a high-quality, efficient platform for aesthetic experiences.

Keywords: Pleasure, Arousal, Utilitarian Value, Social Value, Aesthetics Perceived Quality, Education Perceived Quality, Student Satisfaction

Introduction

Aesthetic education is a fundamental component in cultivating professionally talented undergraduates and is open to all students across the university. In China, the promotion of aesthetic education has increased year by year, and studies and reports on college aesthetic education continue to grow. The mechanism of college aesthetic education is also constantly improving. Among these institutions, the majority—87.6 %—offer public art courses. At present, college aesthetic education features a wealth of artistic practice programmes. High-quality

aesthetic education activities guide students to inherit classics and foster a healthy appreciation of life. In recent years, the Ministry of Education of the People's Republic of China has introduced a series of policies to advance aesthetic education (Ministry of Education, PRC., 2023). These policies, together with those issued by local governments, show that college aesthetic education as a whole is moving through a trajectory from popularization to systematic construction to synthesis. As many scholars argue, it is necessary to let students experience it personally through mass organizations and cultural and sports activities, such immersion can refine their taste and promote well-rounded development (Liu, P. Z., 2013).

Although aesthetic education has become very popular in recent years, it still fails to receive enough attention in higher vocational colleges dominated by science and engineering. Liu (2013) analyzed the problems of these colleges: First, their educational philosophy focuses solely on skills and neglects all-round development. Second, aesthetic-education teaching suffers from a shortage of teachers and an unreasonable curriculum. Wang Fengyun argues that the objectives of vocational college education do not give sufficient weight to knowledge and ability, and that these institutions are ill-suited to China's exam-oriented evaluation system (Wang, 2013).

Traditional classroom teaching alone cannot develop students' practical ability and creative abilities. Aesthetic education is still insufficiently integrated with other disciplines, it remains merely an independent course, and its elements have not been infused into other subjects, thereby preventing the integration of aesthetic teaching across the curriculum. The assessment and evaluation system for aesthetic education is relatively simplistic, and specific evaluation criteria have not yet been established in line with the goals of aesthetic education.

Research on student satisfaction with aesthetic-education courses remains scarce. Barnett (2011) argued that such satisfaction is the only direct indicator of service quality in higher education, and the characteristics of the universities attended by students and the perception of educational services provided by schools bring different levels of satisfaction (Wilkins & Balakrishnan, 2013). This study aims to identify the factors affecting students' satisfaction with aesthetic activities through a case study of a public vocational college in the southwest of China, thereby providing scientific and effective guidance for aesthetic education.

Literature Review

Related Literature of Variables
Student Satisfaction (SS)

Student satisfaction is the embodiment of core competitiveness in educational programmes. Previous research has believed that the level of student satisfaction reflects the success of educational institutions, Panda et al. (2019) noted that in an intensely competitive academic setting, institutions whose graduates report high satisfaction possess positive assets and gain a significant edge in the competition. Sapri et al. (2009) considered that student satisfaction determines the accuracy and authenticity of the services provided by the school to the greatest extent. Appuhamilage and Torii (2019) believed that measuring student satisfaction serves as a gauge for assessing the extent to which both educators and the university fulfill their anticipated outcomes and objectives. Since service quality plays a crucial part in achieving competitive advantage, it is regarded as a key factor affecting student satisfaction (Saleem et al.,

2017). Numerous studies have provided substantial evidence that students' perceived quality of service can directly and significantly affect satisfaction (Teeroovengadum et al., 2019). In addition, Bitner and Zeithaml (1996) found that the teaching skills of university faculty and student interactions can increase student satisfaction. This was supported by Kuh and Hu (2001), who argued that the effective communication between teachers and students plays a crucial role in influencing student satisfaction.

In summary, student satisfaction signals an educational program's competitive strength and institutional success. It validates service quality, indicates whether universities are meeting their goals, and offers a market advantage. Perceived service quality is its primary driver, while faculty teaching skills and effective teacher-student interaction further enhance satisfaction.

Related Literature of Pleasure (PLE)

According to Russell's (1980) model, pleasure-unhappiness and arousal-drowsiness constitute the two main dimensions of emotion. He argues that every affective state can be located within the space defined by these two axes. The assessment of pleasure is determined by the combination of emotional and cognitive factors (Oliver, 1993). Mehrabian and Russell (1974) further maintain that people approach environments whose stimulation level matches their optimum, thereby maximizing felt pleasure. Empirical studies conducted in museums indicate that visitors' positive appraisals of the physical surroundings are a key source of pleasure (Lam & So, 2013). Such pleasant experiences heighten perceived freedom and control, facilitate social interaction, and encourage visitors to share their artistic impressions.

In summary, pleasure is closely related to the experience of the environment. It is an emotional activity. thus, fostering a supportive atmosphere and engaging students in immersive activities can heighten their sense of pleasure.

Related Literature of Arousal (ARO)

Mandler (1992) argued that arousal is triggered by unexpected or disruptive events, prompting the body to respond to environmental changes. For instance, a trendy museum setting may encourage visitors to spend more time processing high levels of stimulation. Arousal results from sensory input in the environment, leading to an immediate emotional reaction. Arousal was characterized as a fundamental subjective condition spanning from slumber to frenzied exhilaration, and its manifestation in the comprehension of visual service scape aesthetics is contingent upon temporal, spatial, and situational factors. (Berlyne, 1967). Arousal is largely influenced by the rate of information or the burden imposed by the surroundings. For example, with the rapid change of environment, complexity and the emergence of novel elements, the environment has a high information rate, making it easier for consumers to become aroused.

However, there may be differences in the expected and actual arousal states, and arousal consistency means that the level of arousal actually felt in the environment coincides with the level of the arousal expected by the consumer (Wirtz et al., 2000). It was suggested by Mattila and Wirtz (2006) that arousal consistency is only attained when the desired level aligns with the real-world setting. Instead, exceeding expected levels of arousal leads to over perception, and lower levels of expected arousal leads to under stimulation. When stimulation is insufficient, consumers can improve arousal through their own participatory behavior (such as active exploration of the environment and proximity to service personnel).

In summary, arousal is influenced by stimuli and prior experience, researchers therefore draw on existing findings to calibrate the intensity of aesthetic-education activities so that students attain an optimal level of arousal.

Related Literature of Utilitarian Value (UV)

Utilitarian value reflects consumers' overall assessment of the practical benefits and drawbacks of a product or service. In consumer services, this value hinges on whether the offering solves users' practical problems, emphasizes functional utility, and meaningfully satisfies their needs (Rubera et al., 2010).

The current body of knowledge regarding hedonism and utilitarian values lacks cohesion due to the dispersed nature of research in various academic domains, including psychology, retail, marketing, strategy, and consumer behavior (Babin et al., 1994). Traditionally, utilitarian evaluation is viewed as effective, practical, and cognitive. It is a means to achieve goals, mainly referring to consumers' instrumental expectations of products or services, usually related to time, place and rational motivation for possession needs. Utilitarian values mean that for consumers, finding relevant products and services in a complex shopping environment is the factor that creates a sense of value, rather than treating shopping as an entertainment (Bloch & Richins, 1983)

In summary, research on the utilitarian value of aesthetic education remains scarce. Such value should depend on the timing and location of the activities, as well as on their capacity to deliver practical benefits to students.

Related Literature of Aesthetic Perceived Quality (APQ)

In the mid-eighteenth century, the term "aesthetics" was first introduced by Baumgarten (1983). who defined it as "the science of knowing things through feeling". In other words, aesthetics refers to cognition obtained through the senses. Stone et al. (2018) describe aesthetics as "the outward visual appearance and attractiveness of a physical object or environment." Moorthy and Bovik (2011) concluded that the perception of beauty derived from visual stimuli is reflected by visual aesthetics. This concept also applies to other domains.

According to Johnson (2019), aesthetics is "the visual presentation and emotional experience of a given environment" (p. 2). She further emphasized that visual attractiveness—and the lack thereof—shapes users' appraisal of that environment. It is believed that the visual appeal of a space can influence how long people remain in it. The aesthetic dimension of a product is closely linked to in-store atmosphere, location, and the overall retail environment (Wong & Wan, 2013).

Different individuals may hold contrasting views on what is considered beautiful, some may even find it unattractive or uninteresting. In other words, beauty is subjective, and there is no universal standard for aesthetic experiences (Averill et al., 1998). For individuals, the perception of an object—whether beautiful or ugly—often evokes feelings of satisfaction or dissatisfaction. Moshagen and Thielsch (2010) reviewed previous studies on aesthetic elements and identified four key dimensions: simplicity, diversity, colorfulness and skillfulness.

In summary, aesthetics and aesthetic experience play a vital role in the human life. When encountering beautiful or sublime scenery, for instance, aesthetic education should cultivate students' perceptual sensitivity, enhance their ability to appreciate beauty, and thereby raise their aesthetic perceived quality.

Related Literature of Education Perceived Quality (EPQ)

The notion of education quality is ambiguous and contentious, its assessment in higher education depends on those who actually experience the offerings. As the primary user group, students' experience across different services constitute service quality (Jancey & Burns, 2013). Although gauging student satisfaction through their perceptions of university service quality is challenging, it enables institutions to build long-term relationships with both current and prospective students.

A large number of studies on service quality and its assessment in higher education have been conducted. The evaluation and measurement of educational service quality have been extensively examined, yet no consensus on its precise definition has been reached (Abdullah, 2005). Appuhamilage and Torii (2019) emphasize that universities must provide high-quality learning, an enabling environment, and adequate facilities to remain sustainable. It is believed that academic and course quality are the core products of higher education. strongly desire high-standard education, a supportive academic atmosphere, practical job-related skills, and enthusiastic engagement.

In summary, previous literature indicates that education perceived quality should adopt a student-centered approach, fully understand students' needs, given universities' actual conditions, strive to meet their diverse educational requirements.

Related Literature of Social Value (SV)

Raiden et al. (2019) proposed that social value denotes the rich, organic activities stemming from a social-self perspective or social outcomes, including self-worth, understanding, and abilities. Social value is highly important for individuals who seek personal growth and self-actualization through exhibition events. Chaston (2012) argued that social value emerges from intimate interactions between service providers and recipients. Recently, the Research Council for Vocational Education (RVC) called for greater social value through learning, urging managers to improve their enhancing abilities and results via interactive educational experiences (Tsai & Bagozzi, 2014).

It is believed that social value can be augmented through knowledge-driven goods and immersive experiential offerings. Because social value is enhanced by the acquisition of knowledge and experience, exhibition projects—which allow society to explore and practice advanced technologies—can effectively increase that value. Within exhibition services, product originality and information effectiveness are crucial to realizing viewers' social value, such as personal growth and the fulfilment of individual potential. The service environment has also been shown to enhance the social value of ordinary participants (D. H. Lee, 2021).

In short, social value is embodied in aesthetic education through harmonious teacher-student interaction: instructors design highly experiential courses and further enrich students' learning by means of exhibitions.

Research Hypothesis and Relationship between Variables

Pleasure and Student Satisfaction

Otterbring (2015) used the feelings-as-information theory to predict and verify that pleasure can better predict satisfaction judgments. Shim et al. (2017) found that Pleasure-oriented motivation significantly influenced emotional satisfaction. in the context of hedonic

services. Similarly, Jiang and Wang (2006) found that, within such environments, satisfaction is driven primarily by pleasure, when firms furnish customers with a pleasant atmosphere, customers rate the company more highly.

It has been proposed that the emotion of "light pleasure" is pivotal in shaping visitors' positive affect and overall satisfaction. mediating the relationship between tourism experience and satisfaction. Because "light pleasure" exerts the strongest influence on satisfaction, the present study advances the following hypothesis:

H1: Pleasure has significant impact on student satisfaction with aesthetic education.

Arousal and Student Satisfaction

Arousal is a key determinant of satisfaction and of consumers' intention to revisit. Research on hedonic services shows that sensory attributes first produce emotional satisfaction, and that novel, complex or stimulating leisure activities can elevate arousal, which in turn generates pleasure and higher satisfaction (Wirtz et al., 2000). Jiang and Wang (2006) further demonstrate that arousal exerts a strong direct effect on perceived service quality. Therefore, service providers must not only maintain baseline service standards but also monitor—and continually refresh—the arousal levels of loyal customers, supplying "extra information" on each return visit that keeps arousal optimally high without becoming stale, thereby locking-in long-term satisfaction and loyalty.

Previous research has demonstrated that arousal in a pleasant service environment can amplify the impact of pleasure on customer satisfaction. It is proposed that arousal positively influences satisfaction, as supported by the following hypothesis:

H2: Arousal has significant impact on student satisfaction with aesthetic education.

Utilitarian and Student Satisfaction

Previous research has shown that the primary determinant of consumer behavior is the utilitarian value, as consumers tend to prioritize functional benefits (Dorotic et al., 2012). In the context of online consumption, satisfaction is more influenced by utilitarian value. Similarly, in the fashion and clothing sector, the utilitarian dimension significantly affects satisfaction (C. H. Lee & Wu, 2017). Compared to the hedonic dimension, satisfaction is more notably shaped by the utilitarian aspect, particularly when it emphasizes innovation (Kautish et al., 2022).

In the sharing economy, studies have established a link between utilitarian value and user satisfaction (Hamari et al., 2015). Furthermore, research has found that utilitarian value not only significantly influences customer satisfaction with the platform but also affects their trust in it.

In summary, prior studies have empirically validated the impact of utilitarian value on satisfaction and user behavior. Based on these findings, the following hypothesis is proposed:

H3: Utilitarian value has significant impact on student satisfaction with aesthetic education.

Aesthetic Perceived Quality and Student Satisfaction

Previous studies—covering heritage attractions, cruises, and bed-and-breakfast accommodation—indicate that the quality of aesthetic experience positively affects both satisfaction and recommendation intentions (Bonn et al., 2007; Hosany & Witham, 2009). Lai et al. (2020) argue that aesthetic experience is a prerequisite for satisfaction and exerts the strongest influence on it, passive immersive experiences significantly shape visitors'

contentment, and aesthetic cues can create instantaneous immersion. In the context of a rock-music festival, aesthetics is a key antecedent of satisfaction: an appealing aesthetic encounter generates positive perceptions that subsequently translate into overall satisfaction (Kubra Asan & Kucukergin, 2020). Collectively, these findings suggest that aesthetic experience is a powerful and accurate predictor of the total visitor experience.

In the aesthetic space, research has indicated that the presence of visually appealing surroundings can have a positive impact on individuals' psychological health and overall welfare (Barton & Le, 2022). In the workplace, a substantial proportion of employees report higher job satisfaction when their work environment is aesthetically pleasing. Likewise, Bideci and Albayrak (2018) indicated that aesthetic appeal and educational entertainment are the two strongest determinants of satisfaction among domestic tourists. In the online context, Finn (2010) demonstrated that aesthetic appreciation, as a dimension of the level of e-service quality, exerts a significant positive effect on user contentment, while Yoo and Donthu (2001) confirmed that the visual attractiveness of a website directly influences consumers' purchase intentions. Taken together, these studies underscore the critical role of aesthetics in shaping satisfaction across physical and digital settings. Accordingly, the following hypothesis is proposed：

H4: Aesthetic perceived quality has significant impact on student satisfaction with aesthetic education.

Education Perceived Quality and Student Satisfaction

Chaudhary and Dey (2021) found that perceived educational-service quality simultaneously shapes students' satisfaction and their evaluations of universities' sustainable practices. This positive, linear relationship between service-quality perceptions and student satisfaction has been corroborated by a growing body of empirical studies, providing a coherent conceptual framework for subsequent research.

Extensive research shows that multiple dimensions of perceived service quality in higher education predict student satisfaction. Satisfaction rises when students regard faculty as knowledgeable, attentive to their needs, and capable of instilling confidence (Chaudhary & Dey, 2021). By strengthening staff competences, institutions can therefore cultivate a culture of excellence in service. Building on this empirical foundation, the following hypothesis is proposed:

H5: Education perceived quality has significant impact on student satisfaction with aes thetic education.

Social Value and Student Satisfaction

Lai et al. (2012) argue that when students believe a degree improves their employability (functional value) and confers positive social identity (social value), their satisfaction with the programme increases, this effect is amplified when social value is reinforced by internship experiences. Similarly, social value mediates the link between service quality and satisfaction: exhibition visitors who receive high-quality services and environments perceive greater social value, which in turn enhances their satisfaction (Lee et al. 2022).

Sharma (2022) empirically confirms that social value exerts a significant positive effect on customer satisfaction, defining it as "the convenience of negotiation, coordination and decision-making on relationship issues". By lowering transaction costs and raising cooperation efficiency, social value indirectly elevates satisfaction. Likewise, Moharana and Pradhan (2020)

demonstrate that social value enhances shoppers' satisfaction, while studies of cultural tourism show that the acquisition of socially valued attributes improves tourists' overall experience. furthermore, among all exhibition-related cues, social-value elements exert the strongest influence on visitor satisfaction. Collectively, these findings indicate that social value boosts satisfaction through mechanisms such as effortless relationship coordination, a heightened sense of cultural gain, and interactive exhibition encounters (Lee, 2021). Extending this logic to aesthetic-education settings, the present study proposes the following hypothesis:

H6: Social value has significant influence on student satisfaction with aesthetic education.

Conceptual Framework

The foundational theory cited in this study is the S-O-R model proposed by Mehrabian and Russell (1974), Building on the framework, the author integrates four additional models developed by Lin (2016), Hyun et al. (2018), D. H. Lee (2021) and Vesci et al. (2020). The above theoretical frameworks all support and construct the conceptual framework.

Figure 1

Conceptual Framework
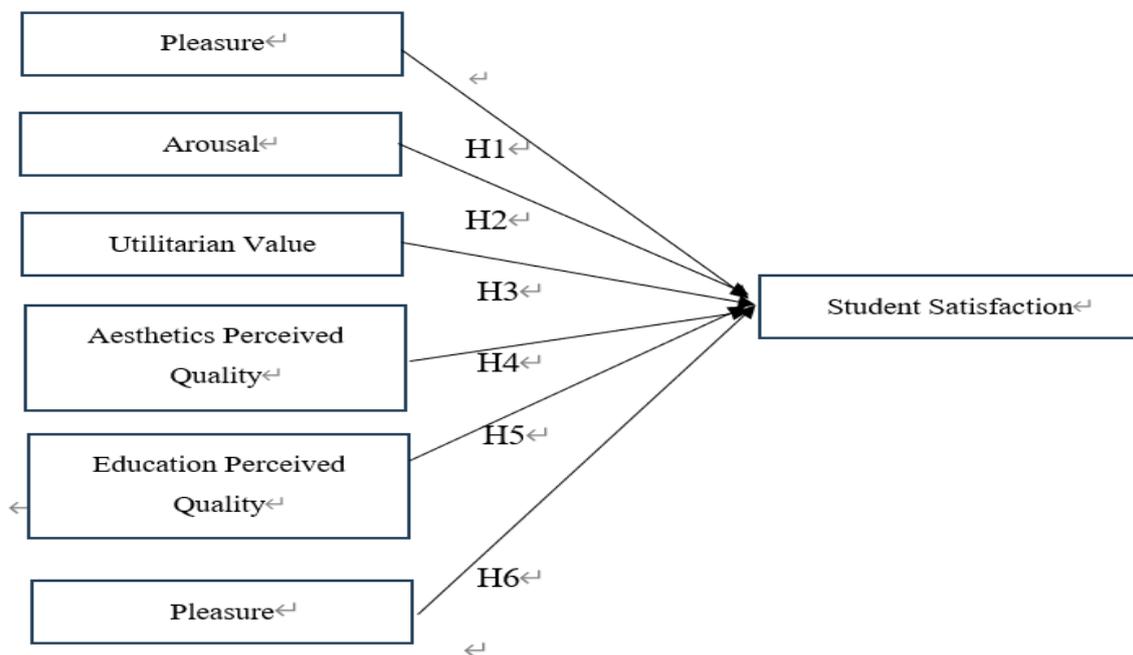
Source: Created by author

This study aims to investigate the variables that affect students' satisfaction with aesthetic education activities in order to implement more targeted aesthetic education teaching. Drawing on established theories and supported by previous empirical work. The conceptual framework of this study contains seven variables, including six independent variables: pleasure (PLE), arousal (ARO), utilitarian value (UV), social value (SV), aesthetics perceived quality (APQ), education perceived quality (EPQ). One dependent variable: student satisfaction (SS).

Research Methodology

Population

The study was conducted under conditions of full anonymity to protect participants' privacy. All procedures and instruments conform to the principles of the Declaration of Helsinki and were approved by the ethics committee of the participants' institution (approval No. 2024008). Three majors were selected from the School of General Education and Public Service at a public vocational college in southwest China, students in these majors are required to possess aesthetic competence and artistic creativity and had all taken part in formal aesthetic-education activities.

Sample size

Roscoe (1975) believed that in most behavioral science research, a sample size of fewer than 30 is rarely proven reasonable. only when the sample size exceeds 30 can it be considered statistically meaningful. Thus, a sample size ranging from 30 to 500 participants is generally sufficient for most studies. The researcher randomly selected 30 students to participate in a reliability test. After all variables passed the reliability assessment, the author recruited 187 different students (distinct from the initial 30) as the main study participants and ultimately collected 187 valid questionnaires. Multiple linear regression analysis was then conducted to investigate the relationships between the independent and dependent variables. Finally, 30 participants who were willing to take part in the IDI (In-Depth Interview) stage were selected from the 187 respondents.

Sampling Procedures

Sampling 1：Sampling for pilot survey and pilot test

Using probability sampling, the author randomly selected 30 students to complete a pilot questionnaire and give feedback on the pilot survey and test.

Sampling 2：Stratified Random Sampling for Pre-survey

A pre-survey was conducted using Questionnaire Star, an online platform. A total of 187 students were randomly selected in a stratified manner from the three majors within the Department of General Education and Public Service. The researcher then examined all the responses and confirmed that 187 of them were valid.

Sampling 3：Sampling for IDI

To conduct the intervention experiment, the researcher adopted a non-probability sampling method, combining purposeful sampling (focusing on students who had previously received aesthetic education) with convenient sampling (prioritizing accessibility and willingness), A total of 30 students from the class who were willing to participate in IDI were recruited. The IDI process included painting appreciation, creative activities, exhibition design courses, and a final exhibition, spanning 8 weeks.

Research Instruments
IOC Results
Three experts were invited to conduct the IOC grading, including two professors from China and a doctoral supervisor from Assumption University, in this process, independent experts (scholars or doctoral-level reviewers) rated each item as +1 (Congruent), 0 (Questionable), or -1 (Incongruent). Items with an IOC score below 0.67 were flagged for revision or removal (Carlson & da Silva, 2003). In this research, the item UV1 (Aesthetic Education is functional to me) did not pass the IOC rating, and was therefore excluded from the questionnaire during the pilot testing phase.

Pilot survey
After the IOC process, one item (UV1) was deleted, thus, the questionnaire containing 29 questions was delivered to 30 respondents for the reliability test.

Results and Discussion

Results
Results of Pilot test
According to the results of the IOC evaluation, 29 items passed the reliability test. De tailed results and association strength are shown in the table 1.

Table 1

Number of Measurement Items and Cronbach's Alpha of Each Construct (n=30)

Variables	Before Pilot Test	After Pilot Test	Cronbach's Alpha	Strength of association
Pleasure (PLE)	5	5	0.900	Excellent
Arousal (ARO)	4	4	0.856	Good
Utilitarian Value (UV)	5	5	0.874	Good
Social Value (SV)	3	3	0.694	Questionable
Aesthetics Perceived Quality (APQ)	5	5	0.880	Good
Education Perceived Quality (EPQ)	4	4	0.849	Good
Student Satisfaction (SS)	3	3	0.865	Good

Results of multiple linear regression
The author analyzed the 187 valid questionnaires with Jamovi (version 2.5) to examine the relationships among variables. The results revealed that four independent variables—pleasure, arousal, aesthetic perceived quality, and educational perceived quality—significantly influenced student satisfaction (SS) ($p < 0.05$), whereas utilitarian value and social value did not ($p > 0.05$). The model explained 71.3 % of the variance in SS ($R^2 = 0.713$). Standardized regression coefficients (β) for pleasure, arousal, aesthetic perceived quality, and educational perceived quality were 0.393, 0.206, 0.213, and 0.175, respectively, indicating that these four factors exerted strong effects on student satisfaction (see Table 2).

Table 2

The multiple linear regression of six independent variables on student satisfaction

Variables	standardized Coefficients Beta	t-value	p-value	VIF	R Square
Pleasure (PLE)	0.3930	6.398	$<.001*$	2.37	
Arousal (ARO)	0.2055	3.402	$<.001*$	2.29	
Utilitarian Value (UV)	0.0664	1.074	0.284	2.40	
Social Value (SV)	-0.0492	-0.861	0.390	2.04	0.713
Aesthetics Perceived Quality (APQ)	0.2134	3.697	$<.001*$	2.09	
Education Perceived Quality (EPQ)	0.1753	2.887	0.004*	2.31	
Dependent variable: Student Satisfaction (SS)					

Note: *p-value <0.05**

In sum, six hypotheses were proposed at the diagnosis stage. The results showed that H1, H2, H4 and H5 were supported, whereas H3 and H6 were not. Specifically, pleasure (PLE), arousal (ARO), aesthetics perceived quality (APQ), and education perceived quality (EPQ) exerted significant effects on student satisfaction (SS). while utilitarian value (UV) and social value (SV) did not. However, to further verify whether the variables changed before and after the IDI, the researchers retained all variables for the next stage of the study; the Intervention Design and Implementation (IDI) phase was then conducted to test the following hypotheses:

H7: There is a significant difference in PLE between Pre-IDI and Post-IDI.

H8: There is a significant difference in ARO between Pre-IDI and Post-IDI.

H9: There is a significant difference in UV between Pre-IDI and Post-IDI.

H10: There is a significant difference in APQ between Pre-IDI and Post-IDI.

H11: There is a significant difference in EPQ between Pre-IDI and Post-IDI.

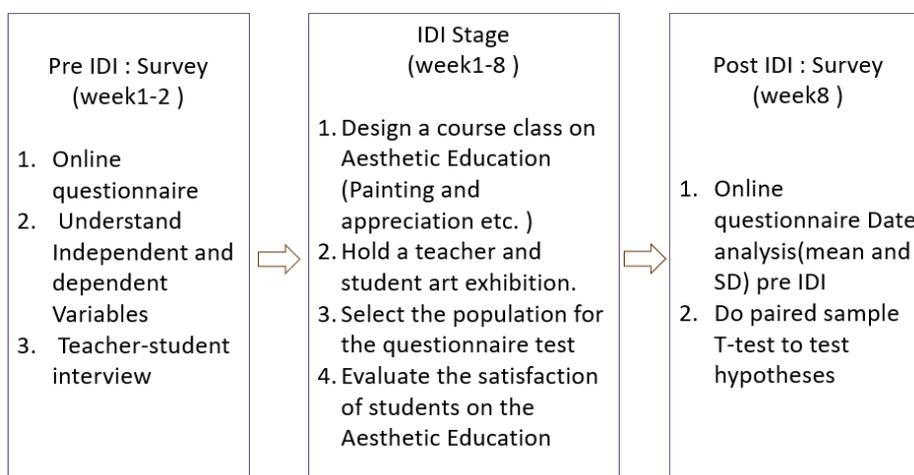**H12**: There is a significant difference in SV between Pre-IDI and Post-IDI.

H13: There is a significant difference in SS between Pre-IDI and Post-IDI.

IDI Intervention Stage

IDI phase was designed in detail based on the quantitative and qualitative data collected at the pre-IDI stage to achieve the study's objectives.

Figure 2

IDI Framework

Source: Created by author

During the 8-week IDI stage, the researcher deconstructed traditional ink-wash paintings into a complete experiential chain that could be viewed, played with, taught, and exhibited, allowing early childhood education students to simultaneously play the roles of "creator" and "little teacher"

Table 3

Details of the IDI based on the IDI Framework

Activity	Student Participants	Details (steps)	Timeline
Pre-IDI Survey	187	Online questionnaire	One week/on-line
Design Course /teach	30	Material preparation, Painting and appreciation, Share the aesthetic experience, Generalization and Summarization	One month (2 times/per week)
Student lecture	30	Students are divided into groups, Design courses and give lectures	One week
Collect painting works	30	Guide students to revise their works and collect final works	One week
Exhibition	30	Exhibition planning and discussion	One day
Post-IDI Survey	30	Data analysis and interviews	One week/on-line

Source: Created by author

In this process, the intervention of pleasure (PLE), arousal (ARO), utilitarian value (UV), aesthetics perceived quality (APQ), education perceived quality (EPQ), social value (SV) and student satisfaction (SS) is realized.

Results of Comparison between Pre-IDI and Post- IDI

The researcher conducted paired-sample t-tests on all seven variables to determine whether the intervention was effective and whether student satisfaction had improved. The table below presents the results of these paired-sample t-tests as follows:

Table 4

Paired-Sample T-Test Results

Variables		Mean	SD	SE	df	p-value
Pleasure (PLE)	Pre-IDI	4.13	0.736	0.1344	29	0.023
	Post-IDI	4.55	0.517	0.0744		
Arousal (ARO)	Pre-IDI	3.82	0.921	0.1682	29	0.028
	Post-IDI	4.27	0.440	0.0803		
Utilitarian Value (UV)	Pre-IDI	3.92	0.736	0.1345	29	0.003
	Post-IDI	4.39	0.541	0.0987		
Social Value (SV)	Pre-IDI	3.89	0.651	0.1189	29	p<0.01
	Post-IDI	4.47	0.629	0.1148		
Aesthetics Perceived Quality (APQ)	Pre-IDI	4.18	0.694	0.1266	29	0.032
	Post-IDI	4.51	0.381	0.0696		
Education Perceived Quality (EPQ)	Pre-IDI	4.04	0.807	0.1473	29	0.002
	Post-IDI	4.60	0.319	0.0582		
Student Satisfaction (SS)	Pre-IDI	4.02	0.839	0.1532	29	0.025
	Post-IDI	4.48	0.516	0.0941		

The results of paired-sample t-test analysis of pre-IDI and post-IDI comparison are as follows:

H7: There was a significant difference in PLE between pre-IDI (M=4.13, SD=0.736) and post-IDI (M=4.55, SD=0.517); t (29) =-2.41, p =0.023 (<0.05) and the mean difference was -0.420.

H8: There was a significant difference in arousal between pre-IDI (M=3.82, SD=0.921) and post-IDI (M=4.27, SD=0.440); t (29) =-2.32, p=0.028(< 0.05) and the mean difference was -0.450.

H9: There was a significant difference in utilitarian value between pre-IDI (M=3.92, SD=0.736) and post-IDI (M=4.39, SD=0.541); t (29) =-3.31, p =0.003 (<0.05) and the mean difference was -0.467.

H10: There was a significant difference in aesthetics perceived quality between pre-IDI (M=4.18, SD=0.694) and post-IDI (M=4.51, SD=0.381); t (29) =-2.25, p=0.032 (< 0.05) and the mean difference was -0.327.

H11: There was a significant difference in education perceived quality between pre-IDI (M=4.04, SD=0.807) and post-IDI (M=4.60, SD=0.319) condition; t (29) =-3.48, p=0.002(< 0.05) and the mean difference was -0.558.

H12: There was a significant difference in social value between pre-IDI (M=3.89, SD=0.651) and post-IDI (M=4.47, SD=0.629); t (29) =-4.42, p <0.01 (<0.05) and the mean difference was -0.578.

H13: There was a significant difference in student satisfaction between pre-IDI (M=4.02, SD=0.839) and post-IDI (M=4.48, SD=0.516); t (29) =-2.36, p=0.025(<0.05) and the mean difference was -0.456.

In summary, the quantitative results revealed significant differences in pleasure, arousal, utilitarian value, social value, aesthetics perceived quality, education perceived quality and student satisfaction between the pre-IDI and post-IDI phases. H7, H8, H9, H10, H11, H12 and H13 are supported. Moreover, students' satisfaction with aesthetic education increased significantly.

Conclusions and Recommendations

Conclusions & Discussions

The objective of this research is to investigate factors impacting students' satisfaction with aesthetic education. The study was conducted at a public vocational college in Sichuan, China. The researcher examined the relationships among pleasure (PLE), arousal (ARO), utilitarian value (UV), social value (SV), aesthetic perceived quality (APQ), educational perceived quality (EPQ), and student satisfaction (SS).

Initially, three experts evaluated the Index of Objective Congruence (IOC) for each item. Next, the 30 pilot responses were analyzed with Jamovi to verify reliability and internal consistency. Subsequently, questionnaires were distributed to 187 randomly selected students from the College of General Education and Public Service, and the hypotheses were tested using multiple linear regression (MLR). Finally, an 8-week Intervention Design and Implementation (IDI) was conducted with a group of 30 selected students. Post-IDI data were collected and compared with pre-ID data via paired-sample t-tests.

The research results indicate that certain factors significantly influence student satisfaction. Specifically, pleasure, arousal, aesthetic perceived quality, and education perceived quality had significant effects on student satisfaction, while utilitarian value and social value did not. This suggests that fostering a pleasant learning atmosphere, generating appropriate arousal, and enhancing both aesthetic perceived quality and education perceived quality play a crucial role in improving student satisfaction.

A paired sample t-test was conducted to examine whether there were significant differences between the pre-IDI and post-IDI phases. The results revealed significant differences in pleasure, arousal, utilitarian value, social value, aesthetic perceived quality, educational perceived quality, and student satisfaction.

In summary, this study presents the factors influencing the aesthetic education satisfaction of students in a public junior college in Sichuan, China, and offers valuable academic insights. By enhancing student satisfaction with aesthetic education, the findings can

assist Neijiang Vocational and Technical College in improving art training, developing students' aesthetic abilities, and providing a high-quality, high-level and high-efficiency aesthetic experience platform.

Recommendation

As society develops, aesthetic education has acquired new contemporary connotations. Breiby and Slåtten (2018) define the aesthetic encounter as "both sensory involvement and symbolic representation that enhance individual value". Through such education, college students cultivate personal refinement and aesthetic literacy while forming sound value orientations. Drawing on the findings, this study offer the following recommendation to raise student satisfaction: optimize the curricular structure to strengthen aesthetic perceived quality.

Traditional courses alone seldom meet diverse student needs. We therefore propose three measures. First, integrate extracurricular activities with the formal curriculum so that the second classroom complements the first. Second, ensure that these out-of-class activities are theme-based and aligned with the learning objectives of the core course. Third, invite scholars and artists to deliver on-campus lectures regularly to broaden students' artistic horizons.

The second suggestion is to create a pleasurable and harmonious learning atmosphere. In such an environment, students feel more at ease. First, teachers should adopt a kind, gentle, and humorous manner to inquire about students' interests. Second, varied teaching methods should be used to avoid monotony. Third, create a comfortable physics learning space, for example, the classroom can be decorated as a studio to provide a warm, artistic setting.

Understanding student needs is essential for improving perceived educational quality (Eagle & Brennan, 2007). Teachers of aesthetic education should therefore identify the artistic needs of students from different majors, tailor curricula to those majors, and engage in interdisciplinary pedagogical research. They should also be encouraged to undertake social-practice collaborations with galleries and art-training institutions to create broader learning platforms for students.

In short, to enhance students' satisfaction with aesthetic education, educators and university administrators must address three key areas: the coherence and continuity of the curriculum, the optimisation of classroom layout and hardware, and the continuous professional development of teachers.

Limitations of the Research

Although this study has a complete research system, there are still some limitations that need further attention.

Sample Size and Demographics

The data were obtained from a college of a public vocational college in Sichuan Province, China. the participants were enrolled in the infant care service and management major. Students of this major had already received art education before entering the university, giving them a degree of artistic appreciation and creativity. Consequently, post-IDI scores may have been inflated, limiting the generalizability of the findings.

Intervention Design

The 8-week IDI experiment focused solely on traditional ink-wash painting activities, a format that was conservative and did not incorporate modern tools such as digital technology, potentially limiting the depth and sustainability of the intervention's impact.

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