Interdisciplinary Academic and Research Journal, 6 (2), March-April 2026
Old ISSN 2774-0374: New ISSN 2985-2749
Website: https://so03.tci-thaijo.org/index.php/IARJ/index
Article ID: e290888

A Study on the Correlation Between Personality Traits and Aesthetic Ability of College Students in Sichuan

Hu Shu[1], Piyapun Santaveesuk[2] and Samrerng Onsampant[3]
[1,2] Faculty of Education, Shinawatra University, Thailand
[3] Shinawatra University, Thailand
[1] E-mail: hushu1063858118@gmail.com, ORCID ID: https://orcid.org/0009-0007-1418-1665
[2] Email: piyapun.s@siu.ac.th, ORCID ID: https://orcid.org/0000-0002-7083-4815
[3] Email: Samrerng.o@siu.ac.th, ORCID ID: https://orcid.org/0009-0004-2031-9091
Received 23/06/2025 Revised 22/07/2025 Accepted 25/08/2025

Abstract

Background and Aims: This study investigates the relationship between personality traits and aesthetic ability among college students in Sichuan Province, China. As aesthetic education gains prominence in the cultivation of innovative and well-rounded talent, this research aims to clarify how the Big Five personality dimensions—Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism—are associated with students' aesthetic competence. The study also examines gender differences and offers educational implications for individualized aesthetic development.

Methodology: A mixed-methods approach was employed, combining qualitative literature analysis with quantitative data collection. The quantitative phase involved 501 students from 29 universities across Sichuan, selected through multi-stage stratified sampling. Data were gathered using validated instruments: the Chinese Big Five Personality Inventory (CBF-PI) and an aesthetic ability scale assessing range, emotional depth, and integrative sensitivity. Statistical analyses—including Pearson correlation, multiple regression, and structural equation modeling (SEM) —were conducted using SPSS and AMOS.

Results: All five personality traits were significantly correlated with aesthetic ability. Neuroticism was the strongest predictor, indicating that emotional sensitivity plays a key role in aesthetic engagement. Conscientiousness also had a substantial impact, while Openness, though positively correlated, did not significantly predict aesthetic ability in regression or SEM models. Gender moderated some trait–aesthetic relationships, suggesting differentiated educational needs.

Conclusion: The findings affirm that personality traits—particularly Neuroticism and Conscientiousness—are influential in shaping students' aesthetic competence. Based on these insights, an Integrated Aesthetic Education Development Model is proposed, emphasizing psychological diversity, cultural contextualization, and personalized pedagogical strategies. This

Citation: Hu, S., Santaveesuk, P., & Onsampant, S. (2026). A Study on the Correlation Between Personality Traits and Aesthetic Ability of College Students in Sichuan. Interdisciplinary Academic and Research Journal, 6(2), e290888; DOI: https://doi.org/10.60027/iarj.2026.e290888

research contributes to both theoretical refinement and the practical enhancement of aesthetic education in Chinese higher education.

Keywords: Personality Traits; Aesthetic Ability; Big Five Personality Traits; College Students

Introduction

Aesthetic experience and aesthetic literacy are an essential part of human development, which help to enrich and make people's emotional life more colourful and promote the harmonious development of people. In recent years, aesthetic competence has been more and more recognized as one of the important basic qualities of the quality of a quality of a quality-educated person. In the context of the increasing influence of visual culture, information technology, and creative industries, the aesthetic literacy of college students has become a key and necessary ability for students to obtain a higher quality of education and to participate in academic and social activities.

Personality is one of the stable character traits that have been shown to significantly affect people's behavior, creativity, and perception of emotions, the most common of which is the Big Five personality dimension, which includes Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. In previous studies, the personality trait of Openness is most often associated with imagination, creativity, innovation, originality, and aesthetic sensitivity. Since China has been vigorously promoting the training of innovation-oriented talents by deepening curriculum reform and strengthening aesthetic education, it is of great theoretical and practical significance to explore the relationship between the stable personality traits of university students and their aesthetic development and growth in the Chinese cultural context.

Although there have been many studies on the relationship between the personality traits of Openness and Extraversion and creativity or aesthetic perception, especially in Western samples, empirical results have been inconsistent and partly generalizable to non-Western populations. While some studies have found a significant relationship between personality and aesthetic ability, some studies have shown that there is no relationship or only a certain relationship between the two under specific conditions and in a small sample of the college population. As an important emerging economy with different cultural values, education models, and aesthetic standards, there are few systematic studies on the relationship between college students' personalities and their aesthetic ability in China.

Therefore, this study will explore the relationship between college students' personalities and their aesthetic ability in Sichuan Province, China, and the corresponding gender differences to provide suggestions for improving and optimizing aesthetic education.

Citation: Hu, S., Santaveesuk, P., & Onsampant, S. (2026). A Study on the Correlation Between Personality Traits and Aesthetic Ability of College Students in Sichuan. Interdisciplinary Academic and Research Journal, 6(2), e290888;
DOI: https://doi.org/10.60027/iarj.2026.e290888

Research Questions

What are the current patterns of personality traits and aesthetic ability among college students in Sichuan?

How do specific personality traits influence students' aesthetic competence?

What targeted strategies can be proposed to enhance aesthetic development based on personality profiles?

Objectives

This study aims to explore the relationship between personality traits and aesthetic ability among college students in Sichuan Province. The specific objectives are:

1. To examine the current status of personality traits and aesthetic ability among college students.

2. To analyze how the Big Five personality traits influence students 'aesthetic competence.

3. To investigate whether differences such as gender affect the relationship between personality traits and aesthetic ability.

4. To provide practical recommendations for enhancing aesthetic education based on personality characteristics.

Scope of the Study

The subjects were 501 undergraduates from 29 universities in Sichuan Province, who were from different disciplines and types of institutions. The sampling method was multi-level stratified sampling to ensure the demographic representativeness of the subjects. The present study used quantitative research software, including SPSS and AMOS, to use descriptive statistics, regression analysis, and structural equation modeling to test the correlation and model relationship between Big Five personality traits and aesthetic ability.

Literature review

Over the past few decades, a growing body of literature has emerged on personality traits, aesthetic ability, and aesthetic education. This paper reviews the literature on four topics that have been previously researched, namely: (1) the relationships between the Big Five personality traits and aesthetic ability, (2) the effects of aesthetic education on emotional and cognitive development, (3) the impact of technology on aesthetics, and (4) cultural and contextual factors, in particular in the Chinese context. This review of the literature aims to provide a conceptual framework for a study that will investigate the relationship between personality traits and aesthetic development within the Chinese higher education context.

Citation: Hu, S., Santaveesuk, P., & Onsampant, S. (2026). A Study on the Correlation Between Personality Traits and Aesthetic Ability of College Students in Sichuan. Interdisciplinary Academic and Research Journal, 6(2), e290888;
DOI: https://doi.org/10.60027/iarj.2026.e290888

Interdisciplinary Academic and Research Journal, 6 (2), March-April 2026
Old ISSN 2774-0374: New ISSN 2985-2749
Website: https://so03.tci-thaijo.org/index.php/IARJ/index
Article ID: e290888

Personality Traits and Aesthetic Ability

The Big Five model proposed by Costa and McCrae (1987) is one of the most widely used methods of classifying stable personality dimensions, with Openness to experience being the dimension most strongly related to aesthetic sensitivity, creative abilities, as well as engagement in imaginative play and exploration. Feist (1998) found it to be the best overall predictor of artistic creativity in his meta-analysis, and subsequent studies have continued to show its preeminent role in creative cognition. More recent research, however, has placed increased emphasis on the possible contributions of other dimensions. Hu et al (2023) found that both Openness to experience and Conscientiousness had equally strong contributions to students 'frequency of engagement with cultural and aesthetic materials, while Luo et al. (2021) showed that Extraversion and Openness are important for activating creativity via social stimulation and the affective and cognitive mechanisms it engenders. Contrary to expectations, Neuroticism, which is otherwise considered to be maladaptive in most areas of functioning, has been posited to make individuals more aesthetically receptive due to the intensification of emotional experiences and other subjective factors (Świątek et al.,2023). However, at present, there is little large-scale empirical work that directly examines the relationship between each of the Big Five dimensions and aesthetic ability, which, for this project is being considered as an umbrella term for the general set of capacities for perceptual sensitivity, emotional resonance, evaluative judgment, creative expression, and other psychological components that make up aesthetic activity or sensitivity. Many existing studies investigate the relationships between these traits and creativity in general rather than aesthetic competence as a distinct psychological ability, while the contributions of Agreeableness and Neuroticism have largely gone unexamined.

The Impact of Aesthetic Education

Aesthetic education also promotes emotional well-being and other personal attributes. Zhao (2021) discovered that effective aesthetic education in Chinese settings should incorporate the nation's traditions and modernize teaching methods to help students locate their cultural identity in an increasingly globalized world. Minmin and Mo (2024) found a positive correlation between aesthetic education and emotional well-being. Ye et al (2025) discovered that aesthetic education indirectly and positively affected self-efficacy in the learning and emotional aspects through the partial mediating influence of basic psychological needs. Chen (2023) and Peng (2023) 's research both found that students can better recognize their regional cultural characteristics through specific cultural elements in the Jingchu region during aesthetic education, and thereby acquire and promote the regional culture and characteristics of Jingchu art, and further improve the regional atmosphere and aesthetic quality of the class. However, these studies rarely explain the mediating role of personality traits in the aesthetic education process.

Citation: Hu, S., Santaveesuk, P., & Onsampant, S. (2026). A Study on the Correlation Between Personality Traits and Aesthetic Ability of College Students in Sichuan. Interdisciplinary Academic and Research Journal, 6(2), e290888;
DOI: https://doi.org/10.60027/iarj.2026.e290888

Technology, Innovation, and Aesthetic Development

Digital technologies and AI in learning present new frontiers for aesthetic education. While Bulut et al. (2024) warn that AI could lead to the homogenization of inherently subjective aesthetic judgment, they also recognize its capacity to facilitate adaptive and individualized learning. Dimitriadou and Lanitis (2023) argue that smart classrooms should not only focus on interactive technologies but also preserve and emphasize the subjective essence of aesthetics in learning. Empirical examples from school-museum collaborations by Parisi-Moreno et al. (2021) and Hu (2021) show how immersive and interactive environments can promote aesthetic engagement and cultural literacy. Dan, Wu, and Yang (2024) develop a validated multidimensional scale to assess aesthetic competence across various art forms, including music, painting, literature, and film, which this study employs to measure aesthetic dispositions quantitatively. While technology provides new modalities for aesthetic experiences, its interplay with individual differences, for example, how Conscientious or Extraverted students differently engage with digital art platforms, remains underexplored.

Cultural Context and Theoretical Gaps

While the Big Five framework has been cross-culturally generalizable, there is evidence that the relationships between personality and aesthetics may differ across sociocultural contexts. For example, in more collectivist cultures like China, Conscientiousness and Agreeableness might be more strongly associated with desirable aesthetic behaviors such as harmony, discipline, and emotional restraint than Openness, which is more emphasized in Western ideals of creativity. This could partially account for the null and contradictory findings in empirical research across different cultural contexts. On the research design front, the majority of studies so far have been cross-sectional and self-reported, as well as focused on creativity in general, instead of aesthetic ability as a unique construct. Studies so far have also focused on samples of urbanites or elitist university students, rarely distinguishing for regional differences, as is in the Sichuan context.

Summary and Rationale

In general, existing studies have shown that there is a theoretical connection between personality traits, particularly the Openness factor, and aesthetic sensitivity; however, empirical research has yielded inconsistent results, particularly in non-Western cultural contexts. Aesthetic education, a process of emotional, cultural, and intellectual development, is experiencing a paradigm shift under the influence of digital technology. Despite this, the relationship between personality traits and aesthetic ability, particularly in the Chinese context, has been relatively underexplored. This study aims to fill this gap by investigating the association between all five personality traits and aesthetic ability. The latter is conceptualized in this study as a multidimensional construct that includes not only aesthetic perception and understanding but

Citation: Hu, S., Santaveesuk, P., & Onsampant, S. (2026). A Study on the Correlation Between Personality Traits and Aesthetic Ability of College Students in Sichuan. Interdisciplinary Academic and Research Journal, 6(2), e290888;
DOI: https://doi.org/10.60027/iarj.2026.e290888

also creative synthesis. This research also considers the potential moderating effects of gender and local cultural variables on this relationship. The study is based on a sample of college students from various disciplines in Sichuan Province, China.

Conceptual Framework

This study provides a conceptual model based on the concepts of aesthetic education and personality psychology in order to elucidate the basic mechanisms via which the Big Five personality traits influence the aesthetic aptitude of college students in Sichuan Province. A powerful and widely recognized theoretical framework, the Five-Factor Model (Costa & McCrae, 1992) views personality as a stable, multifaceted construct that influences people's behavior, thoughts, and emotional responses. The cognitive paradigm of aesthetic experience defines aesthetic ability as the capacity to recognize, understand, and experience beauty. It encompasses value judgment, emotional resonance, and perceptual sensitivity.

Theoretical Rationale and Hypotheses

Drawing from the literature review, the following hypotheses are proposed:

H1: Openness to Experience will be positively associated with aesthetic ability, due to its link with creativity, imagination, and receptiveness to art and abstract ideas (Feist,1998).

H2: Conscientiousness will be positively associated with aesthetic ability, as it supports self-discipline, sustained effort, and structured engagement with artistic tasks (Hu et al.,2023).

H3: Extraversion will be positively associated with aesthetic ability, given its role in emotional expressiveness and social participation in aesthetic activities (Luo et al.,2021).

H4: Agreeableness will be positively associated with aesthetic ability, reflecting its connection with emotional attunement, empathy, and interpersonal sensitivity, which may enhance aesthetic perception (Perugini et al.,2003).

H5: Neuroticism will be positively associated with aesthetic ability, based on recent findings suggesting that emotional sensitivity can deepen aesthetic engagement (Świątek et al.,2023).

These hypotheses are grounded in the assumption that aesthetic ability is not driven by a single trait, but emerges from interacting personality dimensions that shape how students perceive, respond to, and engage with beauty.

Moderating and Contextual Variables

Since previous research has indicated that personality traits and aesthetic habits may manifest differently between genders, gender is included as a potential moderating variable in addition to these direct relationships (Ye et al., 2025). Additionally, because local conventions and societal norms impact aesthetic choices and behaviors, Sichuan's regional features,

Citation: Hu, S., Santaveesuk, P., & Onsampant, S. (2026). A Study on the Correlation Between Personality Traits and Aesthetic Ability of College Students in Sichuan. Interdisciplinary Academic and Research Journal, 6(2), e290888;
DOI: https://doi.org/10.60027/iarj.2026.e290888

Interdisciplinary Academic and Research Journal, 6 (2), March-April 2026
Old ISSN 2774-0374: New ISSN 2985-2749
Website: https://so03.tci-thaijo.org/index.php/IARJ/index
Article ID: e290888

educational experience, and cultural background provide an important sociocultural lens (Zhao, 2021; Chen, 2023).

Methodology

Research Design

This study combined a qualitative theoretical analysis with a quantitative research design. A questionnaire is used as the data gathering tool, and SEM, regression, and correlation are the data analysis techniques. In order to examine the cross-sectional, modern, psychological, and aesthetic circumstances in various schools, the research uses a descriptive design for college students using a cross-sectional design and a general survey. The theory of education, psychology, and the creation of psychometric tests serve as the foundation for this design, which aligns with the qualitative theory review and the two testing phases.

Participants and Sampling Procedure

The sample consisted of 501 Chinese undergraduates, who were from 29 different universities in Sichuan Province. A multi-stage stratified random sampling approach was adopted for the sample in an attempt to increase the representativeness of the sample and minimize sampling bias. The 29 universities were selected first to ensure that there was a balance of universities from urban and rural locations, and a mixture of comprehensive, normal, and art-specialized universities, as well as a range of university ranks. Within each university, a further stratification of students by academic discipline and year of study was conducted. Then, the students from each of these strata were randomly sampled according to a quota from enrollment rosters obtained from the university registrars. A convenience sample was used to fill any quota that had recruitment challenges (e.g., in some universities in rural areas where there was less digital access). The required sample size was determined by using Yamane's formula:

$$n = \frac{N}{1 + N(e)^2}$$

Where N=2,050,000N = 2,050,000N=2,050,000 (estimated number of undergraduates in Sichuan), and e=0.05e = 0.05e=0.05.

The resulting minimum sample size was roughly 400. The survey generated 501 valid responses and thus exceeds the recommendations for sample size for SEM of a minimum ratio of 10:1 for each observed variable.

The demographic representation with regard to gender, discipline, and institutional type provides opportunities for subgroup analyses, including moderation testing on the basis of gender.

Citation: Hu, S., Santaveesuk, P., & Onsampant, S. (2026). A Study on the Correlation Between Personality Traits and Aesthetic Ability of College Students in Sichuan. Interdisciplinary Academic and Research Journal, 6(2), e290888;
DOI: https://doi.org/10.60027/iarj.2026.e290888

Interdisciplinary Academic and Research Journal, 6 (2), March-April 2026
Old ISSN 2774-0374: New ISSN 2985-2749
Website: https://so03.tci-thaijo.org/index.php/IARJ/index
Article ID: e290888

The sampling method used in this study is a robust sampling design; however, the sampling method was in part convenience sampling, with no explicit reporting of the proportion of the sample selected in this way, which has the potential to impact the representativeness of the sample. This may be an issue for future studies that claim to have used a hybrid method of sampling, and full transparency of the proportion for both approaches is needed. For future studies using this same sampling approach, to account for validity, it is important to be explicit in the reporting of the proportion of participants who were selected on the basis of convenience sampling and account for potential biases in this way.

Research Instruments

Two validated instruments were used:

Big Five Personality Traits were assessed using the Chinese Big Five Personality Inventory (CBF-PI), which measures:

Neuroticism (α = 0.84)

Extraversion (α = 0.81)

Openness (α = 0.79)

Agreeableness (α = 0.83)

Conscientiousness (α = 0.86)

Aesthetic Ability was measured using a modified scale based on Dan et al. (2024), which included three dimensions:

Aesthetic Range (α = 0.82)

Depth of Experience (α = 0.85)

Integrative Sensitivity (α = 0.80)

The two scales consisted of five-point Likert items (1 = Strongly Disagree, 5 = Strongly Agree). The reliability and content validity of the instrument were evaluated by experts (3 psychologists and 2 art educators) and through pilot testing (n = 30) and then revised through several iterations. The adapted aesthetic ability scale shows good reliability, but its validity in the context of Chinese universities has not yet been verified. Future studies could perform factor analysis on the scale to provide more evidence for its construct validity in this specific context. Conducting either an exploratory or confirmatory factor analysis would strengthen the psychometric properties of the instrument, ensuring its suitability for the target population.

Data Collection Procedure

Online Surveys were sent to multiple email lists of universities, learning platforms, and social media groups. Logic checks were applied in the online survey to prevent respondents from submitting random or incomplete answers.

Citation: Hu, S., Santaveesuk, P., & Onsampant, S. (2026). A Study on the Correlation Between Personality Traits and Aesthetic Ability of College Students in Sichuan. Interdisciplinary Academic and Research Journal, 6(2), e290888;
DOI: https://doi.org/10.60027/iarj.2026.e290888

Offline Surveys involved administering the printed questionnaire in class or a library. It was applied in universities or colleges with no or restricted access to an online survey.

Informed Consent: Respondents were given an informed description of the purpose of the study, their rights as participants, and the confidentiality of the data. Participants were included in the analysis only if they submitted their consent through a written or digital signature.

Screening: A total of 531 responses were collected. After discarding patterned responses and incomplete responses, 501 questionnaires were included in the final data.

Ethics Approval: The study was approved by the ethical review boards of each institution's academic department.

Data Analysis

Statistical analyses were performed with SPSS 26.0 and AMOS 26.0. Descriptive statistics were used to provide information on the demographic characteristics and distribution of the five traits. Pearson correlation analysis was used to explore the correlations between Big Five traits and aesthetic ability. Multiple regression analysis was used to further examine the predictors of aesthetic ability while controlling for the effects of gender and major. Structural Equation Modeling (SEM) was used to test the hypothesized conceptual model in its entirety, including both the direct and indirect paths. The following fit indexes were used to determine if the models showed adequate fit to the data: Chi-square (χ^2/df), RMSEA, CFI, and TLI. Moderation analysis was conducted to determine the interaction of gender with personality traits in predicting aesthetic ability.

Methodological Limitations

As with any self-report instrument, responses may be influenced by social desirability bias. Anonymizing the survey and stressing in the instructions that there were no right or wrong answers helped to mitigate this. Reverse-scoring items were also included to reduce response bias. Furthermore, although the cross-sectional design captures associations at a single point in time, it limits causal inference. Future studies may employ triangulation with performance-based assessments or observer-rated evaluations to reduce the bias associated with self-report surveys and provide a more comprehensive measure of artistic aptitude.

Results

1. Descriptive Statistics

In order to analyze the total situation of college students in Sichuan Province on the two variables of personality traits and aesthetic ability, descriptive statistical results were calculated. 501 valid questionnaires were analyzed in the survey. Among them, there were 196 males (39.1%) and 305 females (60.9%), and the respondents came from all subjects and universities. As can be

Citation: Hu, S., Santaveesuk, P., & Onsampant, S. (2026). A Study on the Correlation Between Personality Traits and Aesthetic Ability of College Students in Sichuan. Interdisciplinary Academic and Research Journal, 6(2), e290888;
DOI: https://doi.org/10.60027/iarj.2026.e290888

seen in Table 1, the mean score of Openness was the highest (M = 3.92, SD = 0.81). This suggests that, on the whole, college students in Sichuan are curious, imaginative, and willing to try new things. The mean scores of Conscientiousness (M = 3.85, SD = 0.78) and Agreeableness (M = 3.82, SD = 0.74) are also at a higher level. This suggests that, on the whole, college students in Sichuan have a good sense of responsibility and are also in harmony with each other. On the contrary, the mean score of Neuroticism is the lowest (M = 2.94, SD = 0.85). This suggests that, on the whole, college students in Sichuan do not have emotional instability. The mean of aesthetic ability is 3.67 (SD = 0.72). On the whole, college students in Sichuan have a good sensitivity, perception, and integration ability.

Table 1 Descriptive Statistics

Trait/Ability	Mean	SD
Neuroticism	2.94	0.85
Extraversion	3.45	0.76
Openness	3.92	0.81
Agreeableness	3.82	0.74
Conscientiousness	3.85	0.78
Aesthetic Ability	3.67	0.72

2. Correlation Analysis

Pearson correlation analysis was used to analyze the correlation between the Big Five model of personality and aesthetic ability. The five variables are all significantly positively correlated with aesthetic ability ($p<0.01$), which is consistent with the hypothesis that personality has an impact on the perceptual and cognitive aspects of aesthetic ability. The analysis also shows that neuroticism has the most significant correlation ($r=0.547$, $p<0.01$) among all five personality traits, and it is found that people with higher scores in neuroticism, that is, emotionally sensitive people, may pay more attention to aesthetic works and have stronger aesthetic needs when experiencing aesthetic works, thus enhancing their ability to appreciate aesthetic works. On the other hand, conscientiousness ($r=0.543$, $p<0.01$) is the second personality trait with the highest correlation, which may be related to the fact that students with higher scores in conscientiousness are more likely to form good study habits and stable aesthetic preferences and show better aesthetic ability through continuous learning. In addition, the correlation between aesthetic ability and agreeableness ($r=0.497$, $p<0.01$), extraversion ($r=0.419$, $p<0.01$), and openness ($r=0.401$,

Citation: Hu, S., Santaveesuk, P., & Onsampant, S. (2026). A Study on the Correlation Between Personality Traits and Aesthetic Ability of College Students in Sichuan. Interdisciplinary Academic and Research Journal, 6(2), e290888;
DOI: https://doi.org/10.60027/iarj.2026.e290888

p<0.01) is also moderate, which may mean that students who are more sociable, more stable, and more curious have better aesthetic sensitivity and aesthetic evaluation ability.

Table 2 Correlation between Personality Traits and Aesthetic Ability

Personality Trait	Correlation with Aesthetic Ability (r)	Significance
Neuroticism	0.547	p<0.01
Extraversion	0.419	p<0.01
Openness	0.401	p<0.01
Agreeableness	0.497	p<0.01
Conscientiousness	0.543	p<0.01

3. Regression Analysis

A multivariate linear regression analysis was performed in order to ascertain the predictive potential of personality factors on aesthetic ability. With an R2 of 0.496 and a statistically significant regression model (F=96.927, p<0.001), the five personality characteristics together accounted for over half of the variance in aesthetic ability. Conscientiousness (β=0.207, p<0.001) and neuroticism (β=0.219, p<0.001) were the most significant predictors, confirming their significance in the formation of aesthetic abilities and preferences. Additionally, extraversion (β=0.134, p<0.01) and agreeableness (β=0.176, p<0.001) were significant predictors. It is noteworthy that, in contrast to some theoretical expectations, Openness (β=0.069, p>0.05) did not substantially predict aesthetic ability in this model. This result might indicate that among Chinese college students, the usual relationship between Openness and aesthetic engagement is moderated by contextual or cultural factors.

Table 3 Multiple Regression Analysis

Trait	Beta Coefficient	Significance
Neuroticism	0.219	p<0.001
Extraversion	0.134	p<0.01
Openness	0.069	n.s.
Agreeableness	0.176	p<0.001
Conscientiousness	0.207	p<0.001

Citation: Hu, S., Santaveesuk, P., & Onsampant, S. (2026). A Study on the Correlation Between Personality Traits and Aesthetic Ability of College Students in Sichuan. Interdisciplinary Academic and Research Journal, 6(2), e290888;
DOI: https://doi.org/10.60027/iarj.2026.e290888

Interdisciplinary Academic and Research Journal, 6 (2), March-April 2026
Old ISSN 2774-0374: New ISSN 2985-2749
Website: https://so03.tci-thaijo.org/index.php/IARJ/index
Article ID: e290888

4. Regression Analysis: Multicollinearity Diagnosis and VIF Analysis

The study's regression analysis revealed that while Openness and aesthetic ability had a strong connection ($r = 0.401$, $p < 0.01$), Openness did not substantially predict aesthetic ability ($\beta = 0.069$, $p > 0.05$). We also performed a multicollinearity diagnostic to investigate any collinearity problems among the personality traits, specifically utilizing the Variance Inflation Factor (VIF) and tolerance tests, to understand these phenomena.

We determined the VIF values for each of the five Big Five personality traits, as indicated in Table 4.3. VIF measures the extent to which correlations with other model factors raise a regression coefficient's variance. A multicollinearity issue is usually indicated by a VIF number larger than 10. The following are the outcomes:

Openness: VIF = 2.23, Tolerance = 0.45

Conscientiousness: VIF = 2.95, Tolerance = 0.34

Agreeableness: VIF = 2.57, Tolerance = 0.39

Extraversion: VIF = 2.21, Tolerance = 0.45

Neuroticism: VIF = 2.89, Tolerance = 0.35

From these VIF values, we can see that all the personality traits have VIF values below 10 and tolerance values above 0.1, which is considered normal. In general, a VIF value greater than 10 or a tolerance value below 0.1 indicates a potential multicollinearity problem. In this case, none of the VIF values or tolerance values exceeded the normal range, which means that there is no severe multicollinearity in our regression model. In other words, there is a high correlation between predictors, but it is not extremely high to influence the regression result.

However, we suggest that future research should continue to improve multicollinearity testing to obtain more robust regression results. For example, researchers can further examine multicollinearity in different samples and model specifications. If high VIF values are detected, multicollinearity can be reduced by removing the highly correlated variable or using a method like Principal Component Analysis (PCA) to address it.

In this way, we performed a VIF and tolerance test to ensure that the multicollinearity in the regression model in this paper did not affect the prediction of aesthetic ability by Openness and other personality traits. We can also continue to conduct multicollinearity tests in future studies with larger samples or different cultural backgrounds to further test the validity of our model and conclusions.

5. Structural Equation Modeling (SEM)

SEM analysis was carried out using AMOS 26.0 in order to verify the theoretical model and examine the structural correlations between the variables. The following indices showed that the

Citation: Hu, S., Santaveesuk, P., & Onsampant, S. (2026). A Study on the Correlation Between Personality Traits and Aesthetic Ability of College Students in Sichuan. Interdisciplinary Academic and Research Journal, 6(2), e290888;
DOI: https://doi.org/10.60027/iarj.2026.e290888

Interdisciplinary Academic and Research Journal, 6 (2), March-April 2026
Old ISSN 2774-0374: New ISSN 2985-2749
Website: https://so03.tci-thaijo.org/index.php/IARJ/index
Article ID: e290888

model fit the data well: χ^2/df=2.394, CFI=0.930, TLI=0.918, and RMSEA=0.053. These data show a strong structural model because they are within the suggested bounds. Conscientiousness and neuroticism had the strongest and most direct effects on artistic talent, according to the standardized path coefficients. To a lesser extent, agreeableness and extraversion also had favorable contributions. Remarkably, Openness displayed a modest and non-significant path coefficient, supporting the regression analysis's conclusions. This finding might suggest that although Openness and aesthetic responsiveness are conceptually related, Openness may not correspond to quantifiable proficiency in formal educational settings. The SEM results offer a strong empirical foundation for theoretical improvement and further bolster the dependability.

Table 4 SEM Model Fit Indices

Fit Index	Value	Threshold	Interpretation
χ^2/df	2.394	<3	Good Fit
CFI	0.93	>0.90	Good Fit
TLI	0.918	>0.90	Good Fit
RMSEA	0.053	<0.08	Acceptable Fit

Discussion

This study aimed to explore the predictive value of the Big Five personality traits on aesthetic ability in college students from Sichuan Province. The research question consisted of three parts as follows: (1) What is the personality and aesthetic profile of the student body? (2) How do the personality traits predict aesthetic ability? (3) Based on the predictive traits, what strategies can be recommended to stimulate aesthetic development in college students?

This study supported the original hypotheses partially. The five personality traits were significantly correlated with the aesthetic ability scores, indicating that they could be used as predictors of individual differences in aesthetic ability; however, the predictive power of the five personality traits on the dependent variable varied—Neuroticism was the most powerful predictor, while Openness to Experience, the trait most often associated with aesthetic engagement and creative pursuits in previous literature, could not serve as a significant predictor in both the regression and SEM models.

Neuroticism as the Strongest Predictor

Neuroticism, widely regarded in the literature as the “maladaptive” or “low-functioning” trait, unexpectedly showed the strongest and most consistent predictive power in this study, supporting the H5. These findings echo and are reinforced by a recent article (Świątek et al.,2023),

Citation: Hu, S., Santaveesuk, P., & Onsampant, S. (2026). A Study on the Correlation Between Personality Traits and Aesthetic Ability of College Students in Sichuan. Interdisciplinary Academic and Research Journal, 6(2), e290888;
DOI: https://doi.org/10.60027/iarj.2026.e290888

suggesting that the higher emotional sensitivity of neurotic individuals may cause them to be more sensitive to and involved in aesthetic activities due to a tendency toward greater affective processing.

In the current sample, this may mean that students high in Neuroticism are more likely to be introspective, emotionally volatile, or to seek aesthetic experiences as a form of emotional release or management, especially as they may be more likely to experience negative affect under the pressures of college life.

These results highlight the need to reconsider Neuroticism as a non-beneficial trait to be ignored in educational design, suggesting instead that it can be leveraged to promote aesthetic engagement if harnessed within a reflective, expressive, or art-therapy-based pedagogy.

Conscientiousness and Discipline-Driven Aesthetic Growth

The second-strongest predictor, Conscientiousness, supports H2 and indicates that the formation of aesthetic ability is not only related to emotional, imaginative, or flexible traits but also to discipline, persistence, and effort.

This result aligns with a recent study by Ye et al. (2025), suggesting that students high in self-regulation and organization are more likely to engage with art forms that require long-term involvement, such as dedicated participation in art clubs or the gradual development of technical skills and knowledge in specific art domains like music, design, and performance.

The current findings thus support the argument that aesthetic ability, while often considered an inspirational and emotive quality, cannot be separated from a certain degree of practice and cognitive investment.

Openness and Its Weaker Predictive Value

Openness to Experience, despite being the most frequently cited personality trait in creativity research in general and in creativity–aesthetic linkages in particular (Feist,1998), failed to be a significant predictor in this study's regression and SEM models, corroborating none of the hypotheses (H1) and thus requiring a more in-depth interpretation.

One possible explanation for this contradiction is the cultural and educational context: as Zhao (2021) points out, the affective and collective dimensions of aesthetic education in China, characterized by emotional cultivation, art appreciation, values inculcation, and social obligations, are sometimes in tension with the individualistic imagination, discovery, and abstract exploration that Openness thrives on in Western models.

Another possible reason is the lack of measurement alignment: if the items of the aesthetic ability scale, especially in the lower-order factors, are more closely related to structured aesthetic judgment or applied aesthetic sensitivity (e.g., the interpretation of traditional art pieces or formal beauty in design), Openness may be underrepresented due to the narrow scope of the aesthetic

Citation: Hu, S., Santaveesuk, P., & Onsampant, S. (2026). A Study on the Correlation Between Personality Traits and Aesthetic Ability of College Students in Sichuan. Interdisciplinary Academic and Research Journal, 6(2), e290888; DOI: https://doi.org/10.60027/iarj.2026.e290888

inventory—while if the inventory is more strongly related to technical skill or the development of specific knowledge in an art domain (music, crafts, speechcraft), Openness may still be underrepresented by the nature of its measurement, which emphasizes divergent thinking or curiosity.

Taken together, this result suggests that the aesthetic behaviors resulting from Openness may be less salient or even differently expressed under a collectivist, examination-oriented educational system that standardizes and, implicitly or explicitly, guides aesthetic involvement and choice.

The Moderating Role of Social Traits: Agreeableness and Extraversion

The moderating role of Agreeableness and Extraversion in aesthetic ability, while more modest than that of Conscientiousness and Neuroticism, also partially supported H3 and H4 and can be complemented by a recent study on aesthetic individual differences by Minmin and Mo (2024), which showed that the social expressiveness and emotional resonance of students, such as the ability to display their emotions or empathize with others, often realized through art activities with a strong social component (collaborative projects, performances, easy social bonding through simple art-making tasks), can also be predictive of their aesthetic development.

The results of this study thus support the argument that aesthetic ability is not purely introspective or individual but is also socially constructed, mediated, or affected by social interaction, cultural empathy, and participation.

Revisiting the Literature: Points of Convergence and Divergence

Overall, the results of this study broadly echo the established trends in the field's literature, with the same caveat that some predictive effects were not significant and not all relationships were uniform or one-way across the data.

On one hand, this study can be said to confirm and reiterate some of the major conclusions regarding aesthetic–personality linkages, such as the benefits of Conscientiousness for growth and the emotional dimension often associated with Neuroticism.

On the other hand, this study both extends and challenges some of the dominant conclusions from the literature regarding the relevance of the personality traits to aesthetic ability, suggesting that the current results may not be generalizable to Western samples or contexts that assume Openness to Experience as the primary, or only, driver of aesthetic sensitivity.

To the best of the researcher's knowledge, very few previous studies have simultaneously measured the five personality traits and aesthetic ability in college students, particularly Chinese college students in higher education. Thus, these data may serve as a reference for understanding the nuance of trait expression and the role of environment, educational values, and other contextual factors in the aesthetic–personality relationship.

Citation: Hu, S., Santaveesuk, P., & Onsampant, S. (2026). A Study on the Correlation Between Personality Traits and Aesthetic Ability of College Students in Sichuan. Interdisciplinary Academic and Research Journal, 6(2), e290888; DOI: https://doi.org/10.60027/iarj.2026.e290888

Conclusion

This study aimed to delve into the intricate relationship between personality traits and aesthetic ability among college students, providing empirical support and theoretical insights that hold practical significance for educational psychology and aesthetic education. Utilizing the Big Five personality framework and validated instruments for assessing aesthetic competence, the study's findings illuminated the differential predictive power of various personality dimensions on aesthetic ability. Among the personality traits examined, Neuroticism and Conscientiousness emerged as the most potent predictors of aesthetic ability. In contrast, Openness, despite its theoretical importance in discussions of aesthetic receptivity and creativity, did not exhibit a significant predictive relationship with aesthetic competence in this study. These findings offer a unique perspective that challenges prevailing Western assumptions about the interplay between personality and aesthetic sensitivity, particularly the expected prominence of Openness. The study also identified positive predictive effects of Agreeableness and Extraversion on aesthetic ability. These findings suggest that interpersonal sensitivity and social openness, characteristics associated with Agreeableness and Extraversion, respectively, may play a role in enhancing an individual's capacity to perceive and appreciate beauty. This underscores the multifaceted nature of aesthetic development, indicating that it is not solely influenced by traits associated with imagination and creativity but is also shaped by emotional depth, behavioral discipline, and social receptivity. The study's results are expected to have practical implications for the design of more personalized, inclusive, and culturally responsive aesthetic education programs. By understanding the diverse personality factors that influence aesthetic ability, educators can tailor their approaches to accommodate and nurture the aesthetic potential of students with different personality profiles. The findings also contribute to a more nuanced understanding of how personality traits impact a student's capacity to engage with, interpret, and be transformed by aesthetic experiences in the contemporary higher education landscape.

Limitations and Future Directions

Regional scope: The sample is confined to Sichuan Province universities. Despite the region's diversity, the results might not be directly transferable to other provinces or China as a whole, with different educational systems or cultural atmospheres.

Cross-sectional and correlational nature: This study does not allow for causal inferences. It is also possible that aesthetic engagement may also predict changes in personality traits over time, which is a potential avenue for future longitudinal research.

Citation: Hu, S., Santaveesuk, P., & Onsampant, S. (2026). A Study on the Correlation Between Personality Traits and Aesthetic Ability of College Students in Sichuan. Interdisciplinary Academic and Research Journal, 6(2), e290888;
DOI: https://doi.org/10.60027/iarj.2026.e290888

Self-report measures: All variables were assessed using self-report measures, which are subject to social desirability or self-insight biases. Steps were taken to minimize such biases, such as ensuring anonymity and including reverse-coded items in the questionnaire.

In future studies, we could incorporate longitudinal designs to track how long-term exposure to aesthetic education or activities might lead to changes in personality (e.g., higher openness or better emotional control). Additionally, qualitative methods (interviews or case studies) could provide more in-depth insights into how individual students might experience and manifest their aesthetic development differently based on their personality types.

Recommendation

As a final note to the study and for the development of future interventions related to aesthetic education, the following considerations are given:

Recommendations for Teachers:

Individualize aesthetic interventions based on personality profiles.

Students with higher levels of Conscientiousness may benefit from structured, project-based aesthetic activities, such as portfolio creation or art club participation, which allow for detailed and goal-oriented work.

Students who score high on Neuroticism, on the other hand, may be more emotionally sensitive to aesthetic experiences. These learners could benefit from reflective practices like journaling or expressive arts, as these offer a safe and constructive outlet for their emotional engagement and self-expression.

Teachers can provide emotional support and a safe space for high-neuroticism students to process and engage more deeply with their aesthetic experiences.

Recommendations for Curriculum Designers:

Design aesthetic modules or activities that target students' personality traits.

Students with high Agreeableness and Extraversion might particularly benefit from more socially immersive aesthetic experiences. Curriculum designers can consider incorporating group performances, collaborative art-making activities, or peer feedback and discussion sessions. These activities could foster shared aesthetic sensitivity and empathy while also encouraging the development of teamwork and communication skills.

Introverted or less agreeable students, by contrast, may prefer more individualized or quiet reflective practices in their engagement with aesthetic activities. Curriculum designers can incorporate these practices, allowing such students to explore and articulate their aesthetic experiences on a personal level.

Recommendations for Curriculum Reformers:

Citation: Hu, S., Santaveesuk, P., & Onsampant, S. (2026). A Study on the Correlation Between Personality Traits and Aesthetic Ability of College Students in Sichuan. Interdisciplinary Academic and Research Journal, 6(2), e290888;
DOI: https://doi.org/10.60027/iarj.2026.e290888

Rethink assumptions about Openness to experience for the learning of aesthetic content or its implementation in non-Western or collectivist cultures.

Openness to experience might not be a consistent predictor of aesthetic ability in structured learning environments, as the results of the study suggest. In order to engage students, curriculum reformers may design interdisciplinary and contextually relevant modules. Aesthetic activities in environmental art, cultural heritage, or technology-based aesthetics could help to activate curiosity and exploration. Curriculum reformers might create contextually relevant curricula that spark curiosity and exploration in a way that resonates with students' cultural values and educational needs.

Recommendations for University Administrators or Policymakers:

Include personality diagnostics in the student development framework.

Personality diagnostics can be included in the academic and extracurricular planning process to create personalized aesthetic learning pathways. By identifying personality traits, educational institutions may be able to provide more tailored and developmentally appropriate learning experiences for their students that promote aesthetic development.

Personality-informed strategies and considerations can be included in teacher training and student services to ensure that educational staff are equipped to provide inclusive and psychologically informed aesthetic education to students. Personalized and empathetic approaches might also help to improve student engagement with and retention of these learning experiences.

Recommendations for Future Researchers:

Investigate the causal and mutual relationship between personality and aesthetic growth using longitudinal and mixed-method research designs.

A better understanding of how personality develops over time and shapes aesthetic development will also provide more empirical information for practical applications in education.

Future research can also focus on the cultural and institutional variables that might moderate these effects. Further national or cross-cultural replications of the study can contextualize personality-aesthetic interactions and the relevance of these findings within different societal norms, educational models, and pedagogical approaches.

References

Bulut, O., Beiting-Parrish, M., Casabianca, J. M., Slater, S. C., Jiao, H., Song, D., & Tan, B. (2024). The rise of artificial intelligence in educational measurement: Opportunities and ethical challenges. *arXiv Preprints*. https://arxiv.org/abs/2406.18900

Citation: Hu, S., Santaveesuk, P., & Onsampant, S. (2026). A Study on the Correlation Between Personality Traits and Aesthetic Ability of College Students in Sichuan. Interdisciplinary Academic and Research Journal, 6(2), e290888; DOI: https://doi.org/10.60027/iarj.2026.e290888

Chen, Q. (2023). Research on the integration of Jingchu culture in school-based aesthetic education curriculum under the background of rural revitalization. *Curriculum and Teaching Methodology*, *6*, 36–42.

Costa, P. T., Jr., & McCrae, R. R. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of Personality and Social Psychology, 52*(1), 81–90. https://doi.org/10.1037/0022-3514.52.1.81

Costa, P. T., Jr., & McCrae, R. R. (1992). *Revised NEO Personality Inventory (NEO PI-R) and NEO Five-Factor Inventory (NEO-FFI) professional manual.* Psychological Assessment Resources.

Dan, Y., Wu, C., & Yang, M. (2024). Development and validation of the aesthetic competence scale. *Authorea Preprints*. https://doi.org/10.22541/au.171128553.05917226

Dimitriadou, E., & Lanitis, A. (2023). A critical evaluation, challenges, and future perspectives of using artificial intelligence and emerging technologies in smart classrooms. *Smart Learning Environments*, *10* (12). https://doi.org/10.1186/s40561-023-00231-3

Feist, G. J. (1998). A meta-analysis of personality in scientific and artistic creativity. *Personality and Social Psychology Review, 2*(4), 290–309. https://doi.org/10.1207/s15327957pspr0204_5

Hu, A., Li, X., & Song, H. (2023). The influence of Big Five personality traits on college students' key competencies: The mediating effect of psychological capital. *Frontiers in Psychology*, *14*, Article 1163137. https://doi.org/10.3389/fpsyg.2023.1163137

Hu, J. (2021). In-depth thinking in the partnership between schools and museums. In *2021 4th International Conference on Humanities Education and Social Sciences (ICHESS 2021)* (pp. 1208–1212). Atlantis Press. https://doi.org/10.2991/assehr.k.211220.207

Luo, N., Xin, X., Li, H., & Yu, X. (2021). Regulatory focus, boundaryless mindset, and creativity among Chinese college students: A trait activation perspective. *Frontiers in Psychology*, *12*, Article 670394. https://doi.org/10.3389/fpsyg.2021.670394

Minmin, H., & Mo, L. (2024). The important role of aesthetic education in universities: An empirical research of the effects of aesthetic experience on the emotions of university students in China. *Empirical Studies of the Arts*. https://doi.org/10.1177/02762374241298883

Parisi-Moreno, V., Llonch-Molina, N., & Selfa, M. (2021). Information literacy instruction in early childhood education: The school museum. *Literacy*, *55* (2), 83–90. https://doi.org/10.1111/lit.12258

Peng, Y. (2023). The practice of integration of art education and regional culture towards pedagogy enhancement. *Journal of Education and Educational Research*, *6* (2). http://doi.org/10.xxxx/jeer.v6i2

Citation: Hu, S., Santaveesuk, P., & Onsampant, S. (2026). A Study on the Correlation Between Personality Traits and Aesthetic Ability of College Students in Sichuan. Interdisciplinary Academic and Research Journal, 6(2), e290888; DOI: https://doi.org/10.60027/iarj.2026.e290888

Perugini, M., Gallucci, M., & Costantini, G. (2003). The personal norm of reciprocity. *European Journal of Personality, 17*(4), 251–283. https://doi.org/10.1002/per.474

Puryear, J. S., & Lamb, K. N. (2020). Creative productivity: Predicting and explaining creativity through a combination of variables. *Journal of Creative Behavior*, *54* (2), 395–408. https://doi.org/10.1002/jocb.369

Salimun, S., Bakar, N. A., & Hussin, Z. (2021). Personality traits and preference of aesthetic style in web interface design. *Journal of Computing Research and Innovation*, *6* (1), 11–19. https://doi.org/10.24191/jcri.v6i1.17971

Świątek, A. H., Szcześniak, M., Borkowska, H., Bojdo, W., & Myszak, U. Z. (2023). Aesthetic experience and the ability to integrate beauty: The mediating effect of spirituality. *Psychology Research and Behavior Management*, *16*, 4033–4041. https://doi.org/10.2147/PRBM.S423513

Ye, L., Li, Y., & Zhang, N. (2025). The impact of aesthetic education on university students' psychological wellbeing: Exploring mediating and moderating effects. *Frontiers in Psychology*, *16*, Article 1515671. https://doi.org/10.3389/fpsyg.2025.1515671

Zhao, S. (2021). Rethinking aesthetic education in China: Cultural identity and global vision. *International Journal of Education Through Art*, *17* (1), 89–104. https://doi.org/10.1386/eta_00056_1

Citation: Hu, S., Santaveesuk, P., & Onsampant, S. (2026). A Study on the Correlation Between Personality Traits and Aesthetic Ability of College Students in Sichuan. Interdisciplinary Academic and Research Journal, 6(2), e290888; DOI: **https://doi.org/10.60027/iarj.2026.e290888**