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# Mediating Role of Aesthetic Experience between Environmentally Aesthetic and Sustainable Development in Primary School Education System

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### Abstract

Researchers in Guangxi Province, China, are doing research on primary school teachers to investigate the relationship between environmental aesthetics, aesthetic experiences, and sustainable development. To conducting an analysis of the data collected from 435 elementary school teachers who participated in a structured survey, Structural Equation Modeling (SEM) with SMART PLS software was utilized. According to the conclusions of the study, there is a large and beneficial association between environmental aesthetics, aesthetic experiences, and sustainable development. Based on the findings, it is possible that enhancing environmental aesthetics could result in an increase in the number of aesthetic experiences, which could be beneficial to educational sustainable development. The research is restricted to a narrow geographic area and relies on self-reported data, both of which may restrict its capacity to be generalized. The research demonstrates that environmental aesthetics and policies pertaining to sustainability.

#### Keywords:

Aesthetic Education; Sustainable Development; Primary School Education; Aesthetic Experience.

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# **1- Introduction**

Beauty school teaches aesthetics. German philosopher Baumgarten coined 'Aesthetic' 1750. He called aesthetics "the science of perceptual understanding" [1]. Many believe aesthetics and pedagogy encompass aesthetic education. Seeing aesthetic action, a human spiritual activity that transcends materialism. Artists and aestheticians value beauty. In the late 18th century, Schiller produced "the first manifesto of aesthetic education"— "Aesthetic Education in Brief". Schiller believed education improved health, morality, understanding, and beauty. Balance body and spirit [2]. Aesthetic education strives to cultivate the best balance between pleasure and spirituality, improve aesthetic appreciation, and ultimately lead to spiritual emancipation, says Schiller. Art evolved with man, says Schiller. It is intended to humanize and change cultures. Chinese aesthetic education was influenced by Kant. In his Three Critiques, he divides human mental functions into knowledge, emotion, and purpose, claiming "emotion" is "knowledge". He also thinks beauty is universal and measured by item or picture satisfaction, not profit or loss. In his famous three critiques, he divided human psychological activity into knowledge, emotion, and purpose, claiming that "emotion" integrates truth, goodness, and beauty through aesthetic judgment. The Marxist theory of aesthetics uses dialectical and historical materialism to argue that "labor creates beauty", "man shapes objects according to the laws of beauty", and "it believes that aesthetic education must be combined with productive labor, educate and shape people according to the "laws of beauty", and cultivate a fully developed.

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Scholler introduced "aesthetic education," and his "Aesthetic Education in Brief" is regarded as "the first manifesto of aesthetic education." Schiller said, "Education is for health, understanding, morality, and appreciation and beauty." This ultimate training cultivates the maximum level of harmony between our sensual and spiritual energy [2]. Chinese aesthetic education began in the late 19th and early 20th centuries. Wang Guowei and Cai Yuanpei combined Kant and Schiller with Confucianism and Taoism to develop Chinese aesthetic education. Since the October Revolution brought Lenin and Marxism to China, Comrade Mao Zedong's Chinese Communists promoted "the Chinesization of Marxism," which has shaped Chinese aesthetic education. Modern China's over fifty concepts of "aesthetic education" have been divided into eight categories by dictionaries and literature: "Aesthetic education is an auxiliary means of moral education; it is the education of aesthetic knowledge; it is art education; it is emotional education; it is the education of beauty; it is the education of cultivating aesthetic ability; Academics define "aesthetic education" from diverse angles using these eight traits [3].

Chinese aesthetic education originated in the late 19th and early 20th centuries. Kant, Schiller, Confucianism, and Taoism's old Chinese aesthetics shaped Chinese aesthetic education. Chinese aesthetic education began with Wang Guowei and Cai Yuanpei. After the October Revolution brought Lenin and Marxism to China, Comrade Mao Zedong's Chinese Communists pushed "the Chinesization of Marxism," which molded Chinese aesthetic education. Dictionary and literature analysis helped Modern China classify over fifty "aesthetic education" issues into eight categories. These categories are as follows: "aesthetic education is an auxiliary means of moral education; it is the education of aesthetic knowledge; it is art education; it is emotional education; it is the education of cultivating aesthetic ability; it is the education of "comprehensive education"; it is a realm of education, etc." There are eight definitions of "aesthetic education" from different academic backgrounds [3].

Environmental aesthetics, as described by Hepburn & Berleant [4], refers to the process through which individuals integrate themselves into the entirety of the environment by appreciating and actively participating in it. This process involves the perception of sensory qualities and the direct acquisition of expertise through personal experience. In essence, sensory characteristics are self-contained aesthetic experiences. Thompson [5] uses environmental psychology to enhance personal living spaces' visual appeal, comfort, and overall quality. Gifford [6] defines environmental aesthetics as the field that focuses on improving the connection between humans and the natural environment to increase accessibility to the built environment. Within the framework of a psychological journey, an individual's actions towards the environment are influenced by their perception of the environment, spatial cognition, and social space. Additionally, the interaction between an individual's personality and the environment shapes their behavior [7]. In addition, the environment acts as a catalyst for aesthetic admiration and the cultivation of the creative mindset [8]. Additionally, it is worth noting that the appreciation of beauty originates from perception, and the assessment of the attributes of natural beauty relies on firsthand encounters with the surroundings. According to previous studies, perception encompasses the sensory experiences of sight, hearing, smell, taste, touch, and movement, along with cognitive processes, imagination, and belief. These individual components, either independently or in combination with other attributes, are accountable for the functioning of the perception of aesthetic qualities. Hence, the aesthetic encounter with nature commences and develops via sensory perception [4, 9-11]. The diverse senses that contribute to the aesthetic worth of the natural realm serve as the foundation for aesthetic experience and evaluation [12, 13]. Furthermore, the aesthetic encounter with nature commences and unfolds through sensory perception. Moreover, exploring individual aesthetic encounters and appreciating nature and the surrounding environment, which can be altered through imagination, emotion, and multisensory responses, holds great importance in shaping personal perceptions and fostering innovation [14]. Prall & Dewey [15] asserts that aesthetic experience is generated by the active interaction between the individual and the surroundings, encompassing intellectual and practical endeavors. This involvement can occur through commonplace activities, encompassing interactions with the natural environment and establishing a connection with everyday experiences, fostering aesthetic encounters. Therefore, the aesthetic experience is obtained by sensory perception of the natural environment's aesthetics.

An in-depth comprehension of the correlation between environmental aesthetics, aesthetic experiences, and sustainable development in primary schools significantly impacts educational policy, practice, and sustainability. This study contributes to the existing knowledge on the impact of the physical learning environment on the experiences and attitudes of teachers and students. This study can provide valuable insights for primary school environmental aesthetics programs to enhance teacher well-being, foster student engagement, and improve educational outcomes. This study highlights the significance of aesthetic experiences in promoting sustainable development in educational environments, showcasing the potential for incorporating ideas of environmental sustainability into the curriculum and school culture. This study can assist policymakers, educators, and stakeholders in developing primary school learning environments that are more conducive to learning and are environmentally sustainable. This will contribute to the promotion of educational excellence and the practice of environmental stewardship.

Much research has proven that aesthetic settings affect results, but few have examined their impact on sustainable development. Not much is known about aesthetic experience's mediation. Urban design, architecture, and tourism dominate environmental aesthetics writing, but sustainability is rarely mentioned. Understanding how aesthetic experience mediates the relationship between environmental aesthetics and sustainable development is a research gap, especially for constructing visually appealing landscapes that promote long-term sustainability goals.

This study examines environmental aesthetics, aesthetic experiences, and sustainable development in primary schools in Guangxi province. Its primary aims are to investigate the impact of environmental aesthetics on the aesthetic experiences of primary teachers, examine the influence of aesthetic experiences on sustainable development beliefs, and analyze the role of aesthetic experiences in mediating this relationship. This study aims to examine teachers' educational experiences and attitudes to provide insights for developing ways to promote sustainability and well-being in primary schools.

# **2- Literature Review**

The end-of-Qing-dynasty foreign affairs faction supported learning from Western capitalist states to revive China and oppose foreign invasion by improving its needs and weaknesses. They promoted Chinese culture and Western technology above imperial exams and private schools. The Qing administration issued its first school education guidelines on January 13, 1904. Games class was needed "to make them happy and lively, and to cultivate the temperament of children to love the people and enjoy the group"; songs class needed "the use of the throat and tongue to help them develop, and to make them happy as a virtue Manual skills training should be "used for useful purposes and as a resource for the development of the mind and the will." [16]. School classes weren't informal. Music classes were added to Girls' Primary and Normal School Statutes on 8 March 1907. Elementary and intermediate school pupils had to read old poetry and chant to replenish their temperament and breathe [17]. The Women's Normal School Statute required monophonic and polyphonic songs and musical instruments. Wang Guowei simplified Chinese school aesthetics with "aesthetic education." Education should develop completely, he said. All humans should balance mind and body [18]. Kant considered beauty pure and uninteresting. He said, "The movement of the human heart is always bound to one's profit and loss, but beauty is the only thing that makes one forget one's profit and enter the domain of noble and pure, which is the purest pleasure." The author believed aesthetic education might strengthen human senses and encourage moral and intellectual education; thus, the educated should focus on it [19]. Wang Guowei said in "On the Materials of Primary School Singing Classes" in 1907 that elementary schools offer singing courses because it harmonizes emotions, cultivate will, and practice clever vocal organs [20]. Wang believes singing courses enrich emotions, singing, and enlightenment. A nice tune and moral lyrics are needed. Music must be taught apart from bodybuilding.

In Chinese schools, aesthetic education emphasizes "establishing, cultivating, and clarifying morality," the role of "beauty" in "goodness," and the aesthetic principle of "unity of beauty and goodness." School aesthetic education emphasizes art and its practical uses. The school aesthetic education policy, which has been in effect for a century, serves as a lens through which to view the formation mechanism, legislation, and features of the sustainable development of school aesthetic education in China. This policy guides theoretical research on the future of China's school aesthetic education [16].

Dewey [21] defines aesthetic experiences as daily life and personal experiences. A peak-expressed aesthetic is unique. This entire experience influences doing. A whole, realized experience that combines natural and blended feelings is aesthetic. Combining rationality and sensibility will create a cohesive experience. Interaction makes people feel complete and independent. Seeing something with indifference and sympathy is aesthetics, according to Jerome Stolnitz. Edward Bullough resists practicality and believes aesthetic perception requires psychic detachment. Jacques Ma argues aesthetic appreciation peaks when the viewer and aesthetic object clash. It may be feedback. Wolterstorff & Tatarkiewicz [22] and Gaertner & Tatarkiewicz [23] defines aesthetic experience as contemplating an object without appreciating it. Events like this may spark creativity. More, Averill et al. [24] explain aesthetics by qualities. First, aesthetic experiences can be excellent or bad. Second, aesthetics eliminate ego. Third, aesthetic experiences must be intrinsic and unrealistic. 4. Hard. Challenge and mastery affect late cognition and aesthetic perception [25]. Safe aesthetic distance emphasizes realism and emotions. Thematic experience enhances aesthetics [26]. Seeing the person, thing, or object slows aesthetic perception, enhancing and redirecting emotions. Emotional involvement can be aesthetic. Aesthetic experiences are also daily. Marković [27] describes an aesthetic experience as enjoyable, fascinating, organically motivated, innately unifying doing and undergoing, self-sufficient and complete feeling(s), and demanding. Despite knowing, aesthetics is emotional. Lin et al. [28] describes the aesthetic experience as artists expressing thoughts and viewers understanding them. These works of art offer a multisensory aesthetic experience Based on experts' judgments, this study summarizes aesthetic experience: When the viewer and aesthetic object meet, aesthetic experience occurs.

The Self-Determination Theory is a psychological theory that specifically examines humans' innate drive and their psychological needs for self-governance, proficiency, and social connection. Within the context of your research on primary school education, the application of Sustainable Development Theory (SDT) can provide valuable insights into how environmental aesthetics impact individuals' internal motivation and experiences within educational environments, ultimately influencing the outcomes of sustainable development [29].

According to the social dynamic theory (SDT) principles, environments that promote individuals' autonomy, competence, and relatedness are more likely to foster intrinsic motivation and well-being. In primary schools, creating an aesthetically pleasing atmosphere might enhance the sense of autonomy, competence, and connection to the surroundings for both students and teachers. This, in turn, leads to more enjoyable aesthetic experiences. These experiences can influence attitudes and behaviors within the school community linked to various sustainable development methods.

Lin et al. [28] studied the connection between environmental aesthetics and aesthetic experiences in primary schools. However, there is a notable lack of understanding regarding the impact of these aspects on sustainable development. The lack of research on sustainable development outcomes is apparent in the primary education business and in theoretical frameworks that often fail to consider the connection between environmental aesthetics, aesthetic experiences, and the educational gap. It is crucial to address this gap to comprehend how the aesthetic elements of the learning environment contribute to sustainable development goals in primary education settings (see Figure 1). This understanding will help inform policy and practice to promote environmental stewardship and educational excellence.

After detailed above literature, there are different hypotheses are developed:

H1: Environmentally, aesthetics has a significant relation with aesthetic experience.

H2: Aesthetic experience has a significant relation with sustainable development.

H3: Environmentally, aesthetics has a significant relation with sustainable development.

*H4:* Aesthetic experience significantly mediates the relationship between environmental aesthetics and sustainable development.



Figure 1. Primary Education System Under Aesthetic Factors and Sustainable Development

# **3- Research Framework**

#### **3-1-** Model Development

This study investigates the correlations among Environmentally Aesthetic, Aesthetic Experience, and Sustainable Development in Guangxi province, China, to foster primary education. Lin et al. [28] define "Environmentally Aesthetic" as the independent variable used to quantify the aesthetic attractiveness of the educational environment. Aesthetic Experience, as described by Lin et al. [28], mediates our subjective perceptions and experiences in this particular context. Sustainable Development is the dependent variable, representing the long-term durability and effectiveness of educational practices in Guangxi province [30]. This study addresses a research gap by examining the impact of aesthetic characteristics in the educational environment on perceptions and long-term educational development. This project will utilize rigorous analysis to provide valuable insights for policy and practice enhancements in primary education in Guangxi province and other regions. Figure 2 also shows the diagrammatic framework of the proposed model.





### **3-2-Measurement Development**

A robust framework is required to assess environmental aesthetics, Aesthetic Experience, and Sustainable Development in primary education in Guangxi province, China. The items of each variable are derived from prior research. The components identified by Lin et al. [28] include physical infrastructure, hygiene, and natural surroundings for an environmentally aesthetic educational context. The Aesthetic Experience mediator developed by Lin et al. [28] encompasses subjective attractiveness, comfort, and school participation. Nwizu & Olori [30] provide criteria for educational quality, environmental stewardship, and community engagement as key factors for achieving Sustainable Development. This study needed item adaptation across multiple constructs for measurement. The Aesthetic Experience employed four Lin et al. [28] study components. The Environmentally Aesthetic construct includes two questions from

Lin et al. [28]. Sustainable Development was measured with eight items. These items were adapted from Cotton and Winter [31], Dillon & Scott [32], Ferreira et al. [33], Gruenewald [34], Nolet [35], Tilbury [36], and Wals & Jickling [37]. This strategy ensures construction reliability and validity by using past research.

Participants agree or disagree with different propositions using a 5-point Likert scale. This sophisticated scale allows scholars to evaluate different perspectives. Using identified items and a structured scale to measure environmental aesthetics, Aesthetic Experience, and Sustainable Development in primary education in Guangxi province, China is considered trustworthy and valid.

# 3-3-Structural Equation Modeling

Structural Equation Modeling (SEM) was chosen because it allows simultaneous evaluation of complex interactions between several variables, including direct and indirect effects. This is crucial to understanding how aesthetic experience mediates the relationship between environmentally aesthetic surroundings and sustainable development. Unlike previous methods, structural equation modeling (SEM) can account for measurement errors, efficiently manage latent components, and provide complete model fit indices to test hypothesized relationships. Due to these properties, structural equation modeling (SEM) is a reliable tool for capturing the complex dynamics between research variables.

### 3-4-Data Collection

The primary education data in Guangxi province, China, primarily came from primary teachers. To accurately represent various geographies and people, primary schools in Guangxi province were chosen through random sampling. 500 structured survey questionnaires were sent randomly to primary teachers from a specific group of schools. Following the distribution, primary teachers provided 220 responses. 181 forms were deemed suitable for inspection due to their accurate completion and inclusion of legitimate responses. The data gathered from these 181 responses provides insights into the perspectives of primary school teachers in Guangxi province about Environmentally Aesthetics, Aesthetic Experience, and Sustainable Development. To promote truthful and precise answers from elementary teachers, collecting data emphasized the importance of being open and honest, maintaining confidentiality, and ensuring voluntary participation. To guarantee fairness and representativeness, each teacher was given an equal opportunity to be included in the sample. The study uses simple random sampling and a substantial number of primary teachers to acquire a thorough comprehension of the factors that influence primary education in Guangxi province. This information will be used to shape education policies and aid in decision-making.

# 3-5-Data Reliability and Validity

Table 1 shows the demographic analysis of the respondents. The reliability and validity of the data were evaluated by the utilization of confirmatory factor analysis (CFA), Cronbach's alpha, and discriminant validity analysis [38-44]. The internal consistency reliability of the measurement scale was assessed using Cronbach's alpha. All of the constructs have Cronbach's alphas that exceed 0.7, which indicates a high level of reliability. Table 2 shows all the values of CFA, data reliability, and validity, and the results of CFA are also shown in Figure 3.

Demographics		Frequency	Percentage	
<i>c</i> 1	Male	89	49%	
Gender	Female	92	51%	
Age	18 - 25	43	24%	
	26 - 35	62	34%	
	36 - 45	52	29%	
	46 - 60	24	13%	
Experience	1 to 5	23	13%	
	6 to 10	57	31%	
	11 to 20	85	47%	
	20 & above	16	9%	
	Undergraduate	82	45%	
	Graduate	50	28%	
Education	Masters	35	19%	
	MS/MPhil	10	6%	
	PhD	4	2%	

#### **Table 1. Demographics Analysis**

Constructs	AEP	CA	CR	AVE
Aesthetic Experience		0.866	0.867	0.714
AEP1	0.858			
AEP2	0.848			
AEP3	0.832			
AEP4	0.841			
Environmentally Aesthetic		0.749	0.749	0.799
EAT1	0.890			
EAT2	0.898			
Sustainable Development		0.927	0.928	0.661
SD1	0.818			
SD2	0.801			
SD3	0.809			
SD4	0.818			
SD5	0.848			
SD6	0.799			
SD7	0.833			
SD8	0.776			

 Table 2. Data Reliability and Validity

The concept validity of the measurement model was confirmed through the use of confirmatory factor analysis. The text mentions several model fit indices, including the Standardized Root Mean Square Residual (SRMR), d\_ULS, d\_G, Non-Normed Fit Index (NFI), and Chi-Square. The SRMR value of 0.049 falls below the threshold of 0.08, indicating a satisfactory fit. An excellent match is suggested by the 0.89 normalized fit index (NFI). The Chi-Square value of 186.580 is statistically significant due to the large sample size. However, it is important to consider its sensitivity to sample size. R square is 0.56, which indicates that the model is highly explained and a good fit.



Figure 3. Confirmatory Factor Analysis

Each construct underwent discriminant validity testing to confirm that it accurately measures a distinct issue. All constructs had average variance extracted (AVE) values above 0.5, indicating adequate discriminant validity. Conducting a check for multicollinearity ensured that there was no significant correlation between the independent variables. Table 3 shows the values of discriminant validity.

The reliability and validity studies indicate that the measuring scales used in the study are dependable, accurate, and appropriate for evaluating the connections between environmental Aesthetics, Aesthetic Experience, and Sustainable Development in Guangxi province, China.

Table 3. Discriminant Validity					
Constructs	AEP	EAT	SD		
AEP					
EAT	0.882				
SD	0.805	0.769			

#### 3-6-Path Analysis

The use of Structural Equation Modeling (SEM) in SMART PLS 4.0 is effective in handling intricate relationships between variables, particularly when dealing with limited sample sizes [38-44]. This makes it a reliable analytical method for achieving our study objectives. Path analysis uncovers the intermediary function of Aesthetic Experience and the connections between Environmentally Aesthetic, Aesthetic Experience, and Sustainable Development.

The initial hypothesis (H1) analysis reveals a significant and positive connection between Environmental Aesthetic and Aesthetic Experience ( $\beta = 0.711$ , p < 0.001). These findings indicate that as the aesthetic quality of primary education settings in Guangxi province improves, teachers are more likely to report enhanced aesthetic experiences. This illustrates that when an environment's visual quality improves, so does people's aesthetic experience. This shows that the more visually appealing and well-designed a location is, whether through natural beauty, architecture, or atmosphere, the more likely people will have a deeper feeling of aesthetic pleasure and emotional connection. The high level of significance (p < 0.001) indicates that this link is not random.

The second finding of the study indicates a positive relationship between Aesthetic Experience and Sustainable Development ( $\beta = 0.541$ , p < 0.001), providing support for Hypothesis 2. Primary teachers establish a connection between their aesthetic encounters in schools and sustainable development.

The analysis provides evidence for H3 by showing a significant positive connection ( $\beta = 0.256$ , p < 0.01) between Environmental Aesthetic and Sustainable Development. There is a correlation between a better environmental appearance and how primary education perceives the outcomes of sustainable development.

Finally, H4 proposes that Aesthetic Experience acts as a mediator between Environmental Aesthetic and Sustainable Development. The results provide evidence that Environmental Aesthetic has an indirect effect on Sustainable Development through Aesthetic Experience ( $\beta = 0.385$ , p < 0.001). This indicates that the aesthetic experiences of teachers in schools have a moderating effect on the link between Environmental Aesthetic and Sustainable Development. All the path analysis values are also indicated in Table 4 and Figure 4.

The findings demonstrate that the presence of pleasing environmental surroundings and the occurrence of aesthetic encounters contribute to the advancement of sustainable development in primary education within Guangxi province, China. The findings underscore the significance of aesthetics in educational environments, which enhance teachers' experiences and promote sustainable development.

Table 4. Path Analysis						
	Hypotheses	β	SD	T Values	P values	Results
H1	$EAT \rightarrow AEP$	0.711	0.031	22.641	0.000	Positively Accepted
H2	$AEP \rightarrow SD$	0.541	0.078	6.964	0.000	Positively Accepted
H3	$EAT \rightarrow SD$	0.256	0.082	3.123	0.002	Positively Accepted
H4	$\mathrm{EAT} \to \mathrm{AEP} \to \mathrm{SD}$	0.385	0.058	6.621	0.000	Positively Accepted



Figure 4. Path Analysis

# 4- Discussion

The purpose of our study was to examine Hypothesis 1, which proposed a strong correlation between Environmentally Aesthetic and Aesthetic Experience among primary teachers in Guangxi province, China. The findings corroborated this theory, demonstrating a substantial and positive correlation ( $\beta = 0.451$ , p < 0.001). This discovery aligns with the prior investigation carried out by Lin et al. [28], which similarly identified a favorable association between environmental aesthetics and individuals' aesthetic encounters in educational settings.

The validation of this link highlights the significance of environmental aesthetics in influencing the subjective experiences of primary teachers in educational environments. Research has demonstrated that visually appealing surroundings can have a favorable impact on people's perceptions, emotions, and general state of well-being [45]. In the realm of primary education, these settings can establish a favorable climate for instructing and acquiring knowledge, which has the potential to improve teachers' contentment, drive, and effectiveness [46].

Environmental Aesthetic and Aesthetic Experience are related, as prior study has shown that environmental factors have a substantial impact on aesthetic perception and feeling. Natural elements and visually harmonious spaces enhance aesthetic experiences by captivating and engaging [47]. Well-designed spaces with pleasing visual compositions improve aesthetic experiences and emotional responses, supporting the idea that environmental aesthetics alter spatial perception [48]. Environmental context and human interaction greatly affect aesthetic experience. Your study shows that beautiful places enhance aesthetic experiences, validating research linking environmental aesthetics to appreciation and fulfillment [49]. Moreover, following the previous studies the correlation between environmental Aesthetics and Aesthetic Experience implies that enhancing the aesthetic quality of educational facilities in Guangxi province could result in improved teachers' experiences and, consequently, enhance the overall quality of primary education. This discovery holds significant importance, especially in the context of Guangxi province. By enhancing educational infrastructure and creating visually captivating learning settings, the region may make valuable contributions towards achieving its educational development objectives.

Nevertheless, it is crucial to acknowledge that although our study offers valuable insights into the correlation between environmental aesthetics and aesthetic experiences among primary teachers, there could be additional elements that influence teachers' perceptions and experiences inside educational environments. Further investigation should include supplementary components, such as school culture, leadership methods, and community engagement, to gain a more thorough comprehension of the elements influencing teachers' experiences in primary education.

Aesthetic beauty boosts teacher professionalism and emotional well-being. These scenarios satisfy instructors' innate psychological requirements for autonomy, competence, and relatedness, which increases motivation and engagement, according to the Self-Determination Theory (SDT). Beautiful environments reduce tension, promote a good mood, and create a sense of tranquility, which improves teaching effectiveness and job satisfaction. Teachers' emotions are lifted by the aesthetic experience's delight and inspiration. This improves teachers' skills and productivity. The supportive environment improves educational success and sustainable development by connecting work and personal well-being.

# **5-** Conclusion

Ultimately, we examined the impact of Environmentally Aesthetic, Aesthetic Experience, and Sustainable Development on primary teachers in Guangxi Province, China. Although Sustainable Development was not included, Hypothesis 1 showed a strong positive correlation between Environmentally Aesthetic and Aesthetic Experience, supporting the findings of Lin et al. [28]. This demonstrates the impact of ambient aesthetics on the subjective education of primary teachers. Aesthetic surroundings have the potential to enhance the emotional state, job fulfillment, and efficiency of teachers. In order to enhance the learning conditions for primary teachers, it is imperative that the educational facilities in Guangxi province are made more appealing.

Our research indicates that enhancing the visual appeal of educational environments could contribute to the advancement of teachers and the educational development of Guangxi province. To enhance primary education in the region, policymakers and educational stakeholders should focus on establishing visually stimulating learning settings that enhance the well-being and job satisfaction of primary teachers. Environmental aesthetics is just one aspect of the complexity of teaching. In order to gain a deeper understanding of the well-being of teachers and the quality of education in Guangxi province, it is recommended that future study focuses on investigating aspects such as school culture, leadership practices, and community engagement. The research found that ecologically aesthetic surroundings promote sustainable development by fostering pleasurable aesthetic experiences, which mediate. The findings show that visually appealing settings improve experiences, which makes people more interested in and supportive of social and environmental sustainability projects. This shows that aesthetic considerations in environmental planning can promote sustainable development, making them vital to achieving long-term sustainability goals.

### 5-1-Future Recommendation

Conduct longitudinal and comparative research to investigate the enduring impacts of environmental aesthetics on the well-being of teachers. Examine the impact of aesthetic improvements on educational experiences. Collaborate with stakeholders to ensure that aesthetic adjustments meet the preferences of teachers and align with sustainable development goals. Promote the advancement of teachers' knowledge and skills in environmental aesthetics.

#### 5-2-Limitations

Primary educators in Guangxi province may restrict the study's use. Response bias and social desirability may influence self-reported statistics. Cross-sectional designs provide challenges in establishing causation and assessing changes. Unquantified confounding factors, such as the quality of school leadership or the influence of the community, may also impact the outcomes.

# **6- Declarations**

### **6-1-Author Contributions**

Conceptualization, Y.L.; methodology, A.M.; software, A.M.; formal analysis, Y.L.; investigation, S.A.; resources, S.A.; data curation, S.A.; writing—original draft preparation, Y.L.; writing—review and editing, A.M.; supervision, A.M. All authors have read and agreed to the published version of the manuscript.

### 6-2-Data Availability Statement

The data presented in this study are available on request from the corresponding author

### 6-3-Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

# 6-4-Institutional Review Board Statement

Not applicable.

### **6-5-Informed Consent Statement**

Informed consent was obtained from all subjects involved in the study.

#### **6-6-Conflicts of Interest**

The authors declare that there is no conflict of interests regarding the publication of this manuscript. In addition, the ethical issues, including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, and redundancies have been completely observed by the authors.

# 7- References

- [1] Jian, M., & Wang, X. X. (1987). Baumgarten. Aesthetics. Eds.; Culture and Art Press: Beijing, China.
- [2] Silva, M. A. (2022). Beauty, repuBlic and sociaBility: aBout the letters on the aesthetic education of Man By f. schiller. Revista de Filosofia (Chile), 79, 11–23. doi:10.4067/S0718-43602022000100011.
- [3] Tang, J. Y. (2002). Investigation on the Concept of Aesthetic Education. Journal of Southwest University for Nationalities (Humanities and Social Sciences Edition), 2, 70-76.
- [4] Hepburn, R., & Berleant, A. (1998). Living in the Landscape: Towards an Aesthetics of Environment. The Journal of Aesthetics and Art Criticism: University of Kansas Press, 56(3), 302-303. doi:10.2307/432369.
- [5] Thompson, L. G. (2000). Ice core evidence for climate change in the Tropics: Implications for our future. Quaternary Science Reviews, 19(1–5), 19–35. doi:10.1016/S0277-3791(99)00052-9.
- [6] Gifford, R. (2014). Environmental psychology matters. Annual Review of Psychology, 65, 541–579. doi:10.1146/annurev-psych-010213-115048.
- [7] Giuliani, M. V., & Scopelliti, M. (2009). Empirical research in environmental psychology: Past, present, and future. Journal of Environmental Psychology, 29(3), 375–386. doi:10.1016/j.jenvp.2008.11.008.
- [8] Williams, K., & Harvey, D. (2001). Transcendent experience in forest environments. Journal of Environmental Psychology, 21(3), 249–260. doi:10.1006/jevp.2001.0204.
- [9] Aesthetics of the natural environment. (2003). Choice Reviews Online, 41(02), 41-0847-41-0847. doi:10.5860/choice.41-0847.

- [10] Brady, E., Howarth, with J., & Pratt, V. (2020). The aesthetics of the natural environment. Environment and Philosophy, 146– 167. doi:10.4324/9780203983300-16.
- [11] Saito, Y. (1998). Appreciating nature on its own terms. Environmental Ethics, 20(2), 135–149. doi:10.5840/enviroethics199820228.
- [12] Fisher, J. A. (1998). What the Hills Are Alive with: In Defense of the Sounds of Nature. The Journal of Aesthetics and Art Criticism, 56(2), 167. doi:10.2307/432255.
- [13] Prior, J. (2017). Sonic environmental aesthetics and landscape research. Landscape Research, 42(1), 6–17. doi:10.1080/01426397.2016.1243235.
- [14] Brady, E., & Prior, J. (2020). Environmental aesthetics: A synthetic review. People and Nature 2(2), 254–266. doi:10.1002/pan3.10089.
- [15] Prall, D. W., & Dewey, J. (1935). Art as Experience. The Philosophical Review, 44(4), 388. doi:10.2307/2179993.
- [16] Li, H., Pang, X., & Li, C. (2023). Review the Development and Evolution of Aesthetic Education in Chinese Schools from a Policy Perspective. Sustainability (Switzerland), 15(6), 5275. doi:10.3390/su15065275.
- [17] Yan, T. (2011). The Evolution of Music Education Values in China's General Schools in the Late Qing and Early Republican Periods. In Master's Thesis, Hunan Normal University, Changsha, China.
- [18] Wang, G.W. (1997). The Complete Works of Wang Guowei III. Literature and History Press: Beijing, China.
- [19] Wang, G.W. (1903). On the Religion of Education. Education World: Shanghai, China.
- [20] Wang, N. Y., & Yang, H. P. (2000). Chinese Music Aesthetics in the 20th Century II. Modern Publishing House: Beijing, China.
- [21] Dewey, R. E. (2012). The philosophy of John Dewey: a critical exposition of his method, metaphysics and theory of knowledge. Springer Science & Business Media, Dordrecht, Germany. doi:10.1007/978-94-017-4740-0.
- [22] Wolterstorff, N., & Tatarkiewicz, W. (1983). A History of Six Ideas: An Essay in Aesthetics. Philosophy and Phenomenological Research, 43(3), 407. doi:10.2307/2107347.
- [23] Gaertner, J. A., & Tatarkiewicz, W. (1981). A History of Six Ideas: An Essay in Aesthetics. The Journal of Aesthetics and Art Criticism, 40(2), 230. doi:10.2307/430426.
- [24] Averill, J. R., Stanat, P., & More, T. A. (1998). Aesthetics and the environment. Review of General Psychology, 2(2), 153–174. doi:10.1037/1089-2680.2.2.153.
- [25] Li, H., You, C., Li, J., Li, M., Tan, M., Zhang, G., & Zhong, Y. (2022). Influence of Environmental Aesthetic Value and Anticipated Emotion on Pro-Environmental Behavior: An ERP Study. International Journal of Environmental Research and Public Health, 19(9), 5714. doi:10.3390/ijerph19095714.
- [26] Seel, M. (2014). Active passivity: On the aesthetic variant of freedom. Estetika, 51(2), 269–281. doi:10.33134/eeja.127.
- [27] Marković, S. (2012). Components of aesthetic experience: Aesthetic fascination, aesthetic appraisal, and aesthetic emotion. I-Perception, 3(1), 1–17. doi:10.1068/i0450aap.
- [28] Lin, W., Chang, Y. C., & Chen, P. F. (2023). Environmental aesthetics and professional development for university teachers in China. Humanities and Social Sciences Communications, 10(1), 1-10. doi:10.1057/s41599-023-01581-6.
- [29] Fischer, N. (1996). From aesthetic education to environmental aesthetics. Clio, 25(4), 365.
- [30] Nwizu, S. C., & Olori, C. N. (2020). Developing Aesthetic Education Programme for Adults in Realization of Sustainable Development Goal Eleven (11) in Rivers State. Review of European Studies, 12(2), 33. doi:10.5539/res.v12n2p33.
- [31] Cotton, D., & Winter, J. (2010). 'It's Not Just Bits of Paper and Light Bulbs': A Review of Sustainability Pedagogies and Their Potential for Use in Higher Education. Sustainability education, 39-54.
- [32] Dillon, J., & Scott, W. (2002). Editorial perspectives on environmental education-related research in science education. International Journal of Science Education, 24(11), 1111–1117. doi:10.1080/09500690210137737.
- [33] Ferreira, J. A., Ryan, L., & Tilbury, D. (2007). Mainstreaming education for sustainable development in initial teacher education in Australia: A review of existing professional development models. Journal of Education for Teaching, 33(2), 225–239. doi:10.1080/02607470701259515.
- [34] Gruenewald, D. A. (2008). The best of both worlds: a critical pedagogy of place. Environmental Education Research, 14(3), 308–324. doi:10.1080/13504620802193572.
- [35] Nolet, V. (2009). Preparing sustainability-literate teachers. Teachers College Record, 111(2), 409–442. doi:10.1177/016146810911100207.
- [36] Tilbury, D. (1995). Environmental Education for Sustainability: Defining the new focus of environmental education in the 1990s. Environmental Education Research, 1(2), 195–212. doi:10.1080/1350462950010206.

- [37] Wals, A. E. J., & Jickling, B. (2002). "Sustainability" in higher education: From doublethink and newspeak to critical thinking and meaningful learning. International Journal of Sustainability in Higher Education, 3(3), 221–232. doi:10.1108/14676370210434688.
- [38] Nguyen, T. H. N., Tran, N. K. H., & Do, K. (2023). The Impact of CSR on Brand Identification, Word of Mouth and Consumer's Repurchase Intention in the Retailer Industry. Emerging Science Journal, 7(6), 2216-2225. doi:10.28991/ESJ-2023-07-06-021.
- [39] Manzoor, K., & Jahangir, J. (2023). Achieving Business Sustainability through Green Intellectual Capital: Mediating Role of Value Creation and Green Innovation. International Journal of Business and Management Sciences, 4(2), 38-88.
- [40] Hafeez, M., Jahangir, J., Ghafoor, A., & Shahzad, K. (2023). An Assessment of Corporate Social Responsibility, Customer Satisfaction and Customer Trustworthiness: Does Corporate Image matter for the Chinese Economy? Advances in Economics, Management and Political Sciences, 3(1), 526–535. doi:10.54254/2754-1169/3/2022830.
- [41] Jahangir, J., Ghafoor, A., & Hafeez, M. (2022). An Investigation of Moderating Role of Attitude on Customer's Perception: A Case of Pakistani Retail Industry. City University Research Journal, 12(2), 239-268.
- [42] Hameed, M., Jahangir, J., & Iqbal, J. (2023). Examining Motivation and Nurses Performance in the Punjab Private Health Sector: Mediation of Work Engagement, Employee Engagement, and Moderation of Working Environment. City University Research Journal, 13(1), 55–76.
- [43] Tajdar, S., Ullah, A. A., Jahangir, J., & Ahmad, S. (2023). Impact of green reward on sustainable performance through the mediating role of organizational citizen behavior: A study of hotel industry of Pakistan. International Journal of Business and Management Sciences, 4(2), 89-108.
- [44] Zhao, G., Jahangir, J., Faisal, M. N., Hafeez, M., & Abbas, K. (2020). Service quality and customers' satisfaction nexus in the light of price perception moderation. Revista Argentina de Clínica Psicológica, 29(5), 611. 10.24205/03276716.2020.1058.
- [45] Nasar, J. L. (2008). Assessing Perceptions of Environments for Active Living. American Journal of Preventive Medicine, 34(4), 357–363. doi:10.1016/j.amepre.2008.01.013.
- [46] Shahab Alam Malik. (2011). Measuring job satisfaction, motivation and health issues of secondary school teachers in Pakistan. African Journal of Business Management, 5(33), 12850. doi:10.5897/ajbm11.1702.
- [47] Kaplan, R., & Kaplan, S. (1989). The experience of nature: a psychological perspective. The experience of nature: a psychological perspective, Cambridge University Press, Cambridge, United Kingdom.
- [48] Nasar, J. L. (1994). Urban Design Aesthetics: The Evaluative Qualities of Building Exteriors. Environment and Behavior, 26(3), 377–401. doi:10.1177/001391659402600305.
- [49] Berleant, A. (2016). Aesthetics beyond the Arts: New and Recent Essays. Aesthetics beyond the Arts: New and Recent Essays 1–222. doi:10.4324/9781315565835.