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Developing Aesthetic Competence among Economics Students in Contemporary Vietnamese Higher Education

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Abstract This study examined a conceptual and simulated quantitative framework for assessing aesthetic competence among economics students in contemporary Vietnamese higher education and considered its implications for university teaching and curriculum development. A simulated cross-sectional dataset comprising 360 hypothetical undergraduate student records across three higher education institutions in Hanoi, Vietnam, was used to illustrate the proposed analytical approach; no independently documented student survey or raw observational dataset was supplied with this manuscript. A structured 20-item questionnaire based on a five-point Likert response format represented four dimensions: aesthetic perception and experience, aesthetic interpretation and judgment, aesthetic expression and creativity, and aesthetic application in academic and professional contexts. Descriptive statistics, Cronbach's alpha, independent-samples *t* tests, and one-way analysis of variance (ANOVA) were presented as illustrative analytical outputs. Within the simulated results, the four dimensions displayed satisfactory internal consistency, and the composite scores indicated a generally high level of self-reported aesthetic competence. Aesthetic perception and experience was the highest-scoring dimension, whereas aesthetic interpretation and judgment was comparatively less developed. The simulated comparisons also illustrated differences by gender, institutional context, and year of study, with the most pronounced descriptive pattern occurring across successive university years. These findings should be understood as demonstrations of an analytical framework, not as independently verified empirical evidence about actual Vietnamese students. The conceptual implications suggest that aesthetic competence need not be treated as an isolated component of arts education; instead, it can be incorporated into economics education through professional learning activities, creative academic tasks, cultural experiences, and digital communication. The article offers a transparent basis for designing and validating future empirical research on aesthetic development as part of the professional and personal formation of economics students.

Index Terms aesthetic competence; aesthetic education; economics students; higher education; Vietnam

1. Introduction

Higher education has traditionally been concerned with the development of knowledge and professional competence. Yet university education also shapes how students perceive, interpret, and respond to the social and cultural world around them. This dimension has become increasingly important as graduates are expected not only to perform specialized tasks but also to exercise judgment, communicate ideas effectively, work creatively, and respond to complex human situations. Within this broader understanding of education, aesthetic competence deserves greater attention. It concerns the ability to recognize and appreciate aesthetic qualities, to form considered judgments about them, and to bring aesthetic sensitivity into learning, communication, and everyday practice.

The educational value of aesthetic experience extends be-

yond formal engagement with the arts. Aesthetic experience can influence how individuals attend to their surroundings, make meaning from experience, and relate emotional responses to reflection and judgment. Earlier discussions of aesthetic education have therefore treated it as part of a broader process of human development rather than simply as instruction in artistic knowledge or skills [1], [2]. More recent studies provide further support for this perspective. Aesthetic and arts education has been associated with students' emotional experiences and psychological well-being [3]–[5], while research on creativity and higher-order thinking suggests close connections among aesthetic engagement, creativity, critical thinking, and the capacity to approach problems from different perspectives [6], [7]. These capacities are increasingly relevant to university graduates who are expected to work effectively and responsibly in environments characterized by

rapid technological, organizational, and social change.

This issue has particular relevance for students in economics and related fields. Their university education is commonly organized around disciplinary knowledge, analytical reasoning, quantitative methods, management skills, and preparation for professional practice. Such priorities are understandable, but they may leave relatively limited space for the deliberate cultivation of aesthetic perception and judgment. Economic activity, however, is not separated from aesthetic considerations. Decisions concerning products, services, brands, communication, workplaces, consumer experiences, and organizational environments frequently involve questions of form, presentation, cultural meaning, and human experience. A graduate working in business or economics may therefore encounter aesthetic judgments in ordinary professional situations even when those judgments are not explicitly described as aesthetic competence.

The growing emphasis on creativity makes this relationship even more apparent. Creativity is no longer viewed only as a characteristic of artistic production. It is increasingly discussed as a capacity that operates across professional and social contexts and involves the ability to recognize possibilities, reinterpret existing conditions, and produce responses that are both meaningful and appropriate [8], [9]. Research has also drawn attention to the importance of creativity, critical thinking, communication, and collaboration as interconnected capabilities for contemporary education and work [10]. From this perspective, aesthetic competence can contribute to professional education by broadening students' ways of seeing and interpreting problems rather than by attempting to transform professionally oriented economics programs into specialized arts programs.

This question is especially pertinent in contemporary Vietnamese higher education. Universities are responding to digital transformation, changing labor-market expectations, internationalization, and growing demands for graduates who can adapt to diverse professional and social settings. At the same time, higher education continues to carry a wider responsibility for students' cultural, ethical, and personal development. Studies conducted in university settings have suggested that engagement with art and culture can provide meaningful opportunities to connect knowledge with environmental awareness, social responsibility, and lived experience [11], [12]. For economics students, such engagement may be particularly useful because their formal curriculum tends to emphasize specialized and instrumental knowledge. Developing aesthetic competence offers one way of complementing this preparation with greater sensitivity to cultural context, human experience, and the qualitative dimensions of professional practice.

Aesthetic competence should not, however, be understood simply as participation in cultural activities or exposure to works of art. Recent research on aesthetic education points toward a more multidimensional understanding involving aesthetic perception, experience, judgment, expression, and their relationship with learner development, including the integration of cultural heritage into university learning [13], [14].

This distinction matters in higher education. Universities may organize artistic events, cultural activities, or elective courses without necessarily developing a coherent educational process through which students learn to observe, interpret, evaluate, and apply aesthetic understanding. The challenge is therefore not merely to provide more aesthetic experiences but to determine what kind of competence should be developed and how it can be meaningfully connected with students' disciplinary learning and future professional lives.

Despite increasing scholarly attention to aesthetic education, much of the existing literature has examined university students as a general population or has focused on art education, creativity, psychological well-being, and cultural participation. Less attention has been given to aesthetic competence among students whose primary field of study lies outside the arts, particularly economics and business-related disciplines. The Vietnamese context remains even less explored in this respect. This creates a need for a clearer conceptual discussion of what aesthetic competence means for economics students and how universities can foster it without separating aesthetic education from professional education.

Against this background, the present study develops and illustrates an analytical framework for examining aesthetic competence among economics students in contemporary Vietnamese higher education. Based on a review and synthesis of relevant literature, supplemented by transparently identified simulated data, it seeks to clarify the meaning and educational significance of aesthetic competence, identify its main dimensions in relation to economics students, and propose directions for its development and future empirical validation within university education. Rather than treating aesthetic education as an additional or peripheral component of the curriculum, the study considers how aesthetic competence may become part of the broader formation of graduates who are professionally capable, culturally aware, creative, and responsive to the human dimensions of economic and social life.

II. Literature Review

A. *Aesthetic competence and aesthetic education*

Aesthetic competence is rooted in the broader concept of aesthetic experience. In educational research, aesthetics is not limited to judgments about beauty or artistic taste. It also concerns how individuals perceive, interpret, and respond to qualities of objects, environments, experiences, and forms of expression. Shusterman [2] argued for an understanding of aesthetic experience that extends beyond conventional artistic boundaries and connects aesthetics with lived experience. From an educational perspective, this understanding is important because it places aesthetic development within everyday processes of perception, reflection, and meaning-making rather than restricting it to specialized art education.

Kerdeman [1] further showed that aesthetic experience has educational significance because it can challenge familiar ways of seeing and encourage learners to reconsider their assumptions. An aesthetic encounter may involve emotion and sensory perception, but it can also lead to reflection and judg-

ment. This suggests that aesthetic competence includes more than the ability to recognize what is visually or artistically appealing. It involves the capacity to attend carefully to experience, identify aesthetic qualities, interpret their meanings, and make judgments that can be explained and reconsidered.

Recent studies have approached aesthetic education from a similarly broad perspective. Li et al. [13], in developing an aesthetic literacy scale for university students, treated aesthetic literacy as a construct that can be identified and assessed rather than as an abstract personal quality. Yang et al. [14] likewise examined the integration of intangible cultural heritage into aesthetic education in higher education, emphasizing learner development, preferences, and educational context. These studies indicate a shift from viewing aesthetics as an isolated cultural component toward considering it as part of students' wider development.

This broader conception is particularly relevant to higher education. University students encounter aesthetic dimensions not only through art and cultural activities but also through learning spaces, digital media, visual communication, professional products, social interaction, and everyday environments. Aesthetic education can therefore be understood as a process through which students gradually develop the capacity to perceive, experience, interpret, judge, and express aesthetic values. Aesthetic competence represents the ability to mobilize these capacities in particular educational, social, and professional situations.

B. Aesthetic competence in higher education

The place of aesthetics in higher education has often been less explicit than the development of disciplinary knowledge or technical competence. Nevertheless, a growing body of research suggests that aesthetic experience can contribute to several dimensions of university student development.

One dimension concerns emotional experience and psychological well-being. Jin and Ye [4] reported a positive association between fine arts education and psychological well-being in their cross-sectional study of higher education students, while recognizing that the design does not itself establish a causal improvement in mental health. More recent studies have continued to examine this relationship. Han and Lu [3] examined the relationship between aesthetic experience and positive and negative emotional responses, while Ye et al. [5] examined the relationship between aesthetic experience and subjective well-being. Separately, Yang et al. [14] investigated the incorporation of intangible cultural heritage into aesthetic education, thus extending the discussion toward cultural participation and learner development. Although these studies differ in their research designs, populations, and specific variables, they demonstrate that aesthetic engagement has educational implications beyond artistic appreciation itself.

A second dimension concerns cognition and creativity. Aesthetic experience requires learners to notice details, compare forms, interpret meanings, and consider alternatives. Such processes have clear connections with creative and critical thinking. Maras and Shand [7] argued for a closer relation-

ship between creativity and critical thinking in educational contexts, while Li and Qi [6] examined aesthetic education as a means of fostering creativity and critical thinking among university students. This relationship is important because aesthetic judgment rarely depends on a single predetermined answer. Students are often required to consider context, explain their interpretations, and recognize that an object or experience can be approached from more than one perspective.

The literature on creativity provides additional grounds for this connection. Kaufman and Beghetto [8] emphasized the temporal dimension of creativity, drawing attention to how its past, present, and future dimensions interact rather than treating creative achievement as a context-free, single moment. Similarly, Lebuda et al. [9] showed that creative behavior is related to personal and environmental factors. Thornhill-Miller et al. [10] placed creativity alongside critical thinking, communication, and collaboration as capacities relevant to education in the twenty-first century. Taken together, these studies suggest that aesthetic competence can support a form of learning in which students become more attentive to alternatives, more willing to interpret experience, and more capable of producing and communicating meaningful ideas.

A third dimension concerns the relationship between students and their cultural and social environments. Aesthetic education provides opportunities for learners to engage with cultural forms and to consider how values are represented through objects, spaces, practices, and symbols. This aspect is particularly important when university education is expected to prepare students for participation in diverse social and professional environments. In this sense, aesthetic competence has both an individual and a social character: it develops personal sensitivity while also enabling learners to understand how aesthetic values are shaped by culture and context.

C. Aesthetic competence and the education of economics students

The relevance of aesthetic competence to economics students requires particular consideration because their academic programs are not primarily concerned with artistic practice. Economics and business-related programs typically emphasize economic theory, quantitative analysis, finance, management, marketing, and other forms of professional knowledge. As a result, aesthetic education can easily be regarded as peripheral to the main curriculum.

However, professional activities in economic fields frequently contain aesthetic dimensions. Products are evaluated not only for their functional or economic value but also for their design and presentation. Marketing and communication rely on visual forms, language, symbols, and cultural meanings. Consumer experiences are influenced by the appearance and organization of physical and digital environments. Corporate identity, branding, workplace design, advertising, and digital interfaces all involve choices that have aesthetic consequences. Economics students may therefore need to make or interpret aesthetic judgments even when such judgments

are not formally identified as part of their professional competence.

The connection becomes clearer when aesthetic competence is considered together with creativity. Contemporary economic activity increasingly requires graduates to respond to unfamiliar problems, communicate ideas to different audiences, and develop products or services that respond to changing needs. Creativity in this context does not replace analytical reasoning. Rather, the two can operate together. Analytical knowledge helps students determine whether an idea is feasible, while creative and aesthetic judgment can help them consider how that idea is experienced, represented, and valued by others.

This perspective also prevents aesthetic education from being reduced to adding art-related courses to economics programs. The issue is not whether economics students should receive the same aesthetic training as students specializing in the arts. What matters is whether their university education provides meaningful opportunities to develop aesthetic perception, interpretation, judgment, and expression in ways relevant to their own learning and future professional activities.

D. Approaches to developing aesthetic competence

The literature suggests that aesthetic competence can be developed through more than one educational pathway. Formal courses in the arts, humanities, and cultural studies provide an obvious route, but aesthetic development can also take place through interdisciplinary learning, extracurricular activities, engagement with cultural spaces, and experiences embedded in professional subjects.

Experiential engagement appears particularly important. Students are unlikely to develop aesthetic competence solely by learning definitions or principles. They need opportunities to observe, experience, compare, discuss, interpret, and create. Pham Van Xay and colleagues [11], for example, explored the integration of art, culture, and ecological education in university settings as a way of encouraging students to engage with environmental issues. Their related study further examined ways in which art and cultural engagement might foster environmental responsibility and ecological awareness among university students [12]. These findings illustrate how aesthetic experiences can connect artistic engagement with issues that extend beyond the arts themselves.

Digital environments have added another setting for aesthetic learning. University students increasingly encounter information through multimedia presentations, social media, online platforms, digital learning resources, and visually organized data. The ability to evaluate the form in which information is presented is therefore becoming relevant to academic as well as professional learning. Digital transformation does not diminish the importance of aesthetic competence; in some respects, it increases the number of situations in which students need to make judgments about visual form, representation, communication, and user experience.

An effective approach to aesthetic competence development consequently needs to combine experience with reflection.

Exposure alone does not guarantee competence. Students should have opportunities to explain why they respond to particular forms or experiences, compare their judgments with those of others, and connect aesthetic choices with cultural and professional contexts. This process moves aesthetic education from passive appreciation toward active judgment and application.

E. Research gap and conceptual orientation

Existing studies offer evidence and theoretical arguments concerning the educational value of aesthetic experience and increasingly connect aesthetic education with creativity, critical thinking, emotional experience, cultural engagement, and psychological well-being, although the strength of the available evidence depends on individual research designs. At the same time, several limitations remain relevant to the present study.

First, much of the literature discusses aesthetic education in relation to university students in general. The particular meaning of aesthetic competence for students in economics and business-related disciplines has received considerably less attention. The professional contexts of these students differ from those of art students, and this difference needs to be reflected in how aesthetic competence is conceptualized and developed.

Second, previous studies have frequently examined individual outcomes of aesthetic education, such as creativity, mental health, or well-being. These findings are useful, but they do not by themselves provide a sufficiently integrated account of the competence that students need to develop. A competence-oriented approach requires attention to what students are able to perceive, understand, judge, express, and apply rather than only to the effects of participating in aesthetic activities.

Third, there remains limited discussion of this issue within Vietnamese higher education, particularly for economics students. The educational, cultural, and institutional context matters because aesthetic values and opportunities for aesthetic engagement are not independent of the environment in which students learn. Approaches developed in other higher education systems therefore provide useful references but cannot simply be transferred without consideration of the Vietnamese context.

On the basis of the reviewed literature, the present study understands aesthetic competence as the capacity of university students to perceive and experience aesthetic qualities, interpret and evaluate aesthetic values in their cultural and social contexts, express aesthetic understanding, and appropriately apply aesthetic judgment in learning, everyday life, and professional situations. For economics students, this competence should not be separated from professional development. Instead, it can be approached as a complementary capacity that connects sensitivity and judgment with creativity, communication, cultural understanding, and professional practice.

This conceptual orientation provides the basis for examining how aesthetic competence can be developed among economics students in Vietnamese higher education and for

identifying the dimensions that should be addressed in an appropriate framework for this student group.

III. Methodology

A. Research design

An illustrative quantitative cross-sectional survey design was developed to examine how aesthetic competence could be assessed among university students in Hanoi, Vietnam. The analysis below uses simulated observations rather than an independently documented survey of actual students. The study focused on four dimensions identified from the literature review: aesthetic perception and experience, aesthetic interpretation and judgment, aesthetic expression and creativity, and the application of aesthetic competence in academic, everyday, and professional contexts.

For this simulated empirical design, the dataset was structured to represent undergraduate students hypothetically attending three higher education institutions: Thuongmai University, the Posts and Telecommunications Institute of Technology, and the National Academy of Education Management. These institutions were used as illustrative institutional categories to represent different disciplinary and educational environments within higher education in Hanoi; the source manuscript does not provide independent evidence of recruitment or institutional participation. The unit of analysis was the individual undergraduate student.

B. Participants

The simulated dataset consisted of 360 hypothetical undergraduate student records, which must not be interpreted as a sample of verified participants. Of these, 142 students (39.4%) were from Thuongmai University, 118 (32.8%) were from the Posts and Telecommunications Institute of Technology, and 100 (27.8%) were from the National Academy of Education Management.

The illustrative sample allocation included 153 male student records (42.5%) and 207 female student records (57.5%). Records representing all four years of undergraduate study were included in the simulation: 78 first-year students (21.7%), 96 second-year students (26.7%), 103 third-year students (28.6%), and 83 fourth-year students (23.1%). The simulated sample structure, including the institution, gender, and year-of-study categories, is summarized in Table 1.

A stratified convenience-sampling structure was specified for purposes of illustrating the proposed study design, rather than documenting an actual completed recruitment procedure. The three institutions constituted the main strata, while students from different years of study were included within each institution. In a future empirical application, this approach could obtain variation in students' educational experiences while helping ensure that no single institution accounts for the entire sample.

C. Research instrument

The simulated responses were organized according to a structured questionnaire developed from the theoretical frame-

Table 1: Characteristics of the study sample (n = 360)

Characteristic	n	%
Institution		
Thuongmai University	142	39.4
Posts and Telecommunications Institute of Technology	118	32.8
National Academy of Education Management	100	27.8
Gender		
Male	153	42.5
Female	207	57.5
Year of study		
First year	78	21.7
Second year	96	26.7
Third year	103	28.6
Fourth year	83	23.1
Total	360	100.0

work established through the literature review. The original individual-level response data and instrument validation records were not provided for independent verification. The questionnaire consisted of two sections.

The first section collected demographic and academic information, including institution, gender, and year of study. The second section contained 20 items measuring aesthetic competence. All items were rated on a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree.

The 20 measurement items were organized into four dimensions, with five items assigned to each dimension.

The first dimension, Aesthetic Perception and Experience (APE), measured students' sensitivity to aesthetic characteristics in objects, environments, cultural products, learning materials, and digital content. Items addressed the ability to notice form, harmony, arrangement, visual characteristics, and emotional responses to aesthetic experiences.

The second dimension, Aesthetic Interpretation and Judgment (AIJ), assessed students' ability to interpret aesthetic meanings, compare alternative forms, evaluate appropriateness, and provide reasons for their aesthetic judgments. Attention was given to the relationship between aesthetic choices and their cultural, social, and communicative contexts.

The third dimension, Aesthetic Expression and Creativity (AEC), measured students' capacity to express ideas through appropriate forms, generate creative alternatives, and combine substantive content with aesthetic presentation. The items reflected common university activities such as presentations, projects, visual communication, and digital content creation.

The fourth dimension, Aesthetic Application in Academic and Professional Contexts (AAP), assessed students' ability to apply aesthetic understanding to practical situations. The items covered academic presentations, product and service communication, branding, digital environments, consumer experience, and other situations relevant to future professional practice.

The questionnaire was designed for students who were not specializing in the arts. Consequently, the items did not assess artistic techniques or specialized knowledge of fine arts. Instead, they focused on aesthetic perception, judgment, expression, and application that could reasonably occur within general and professionally oriented university education.

D. Data collection procedure

For the simulated study protocol, proposed questionnaire administration was organized around the three institutional categories. This procedural description illustrates how a subsequent real-world study could be conducted; it does not constitute evidence of actual administration at those institutions. The proposed participant-information materials would explain the purpose of the study, the voluntary nature of participation, confidentiality protections, and respondents' right not to answer specific questions before they complete the questionnaire.

The questionnaire was designed to require approximately 10–12 minutes to complete. Under the proposed administration protocol, respondents would be asked to answer each item according to their own experiences rather than what they believed to be the socially desirable response. The simulated analytical dataset contained no actual names, student identification numbers, telephone numbers, or other directly identifying information; a future empirical survey should apply the same privacy-protective approach.

The simulated screening procedure assumed that completed questionnaires would be checked before analysis, with responses containing substantial missing information excluded and questionnaires meeting the completeness criteria retained. These are proposed quality-control criteria rather than independently audited fieldwork records. The analytical dataset used for the simulated analyses comprised 360 valid cases.

E. Variables and measurement

In the simulated analytical framework, the four dimensions were treated as the principal study variables. Composite scores were calculated from the corresponding items after checking their internal consistency. Higher scores indicated a higher self-reported level of aesthetic competence in the relevant dimension.

For descriptive interpretation, mean scores on the five-point scale were classified into five intervals: 1.00–1.80 indicated a very low level; 1.81–2.60 indicated a low level; 2.61–3.40 indicated a moderate level; 3.41–4.20 indicated a high level; and 4.21–5.00 indicated a very high level. These intervals were used primarily to support interpretation of the descriptive results rather than as substitutes for the original continuous scores in statistical testing.

An illustrative overall aesthetic competence score was also calculated from the four dimensions. However, dimension-level scores were retained in the analysis because they provided more detailed information about students' relative strengths and areas requiring further development.

F. Data analysis

The simulated dataset was structured for statistical analysis using procedures appropriate to the research questions. Both descriptive and inferential statistics were included.

First, frequencies and percentages were calculated to describe the characteristics of the simulated sample. For the 20

questionnaire items and four competence dimensions, means (M) and standard deviations (SD) were used to summarize students' responses.

Second, the internal consistency of each dimension was assessed using Cronbach's alpha. Item-total relationships were examined before composite scores were calculated. A Cronbach's alpha coefficient of .70 or above was treated as an acceptable indication of internal consistency for the purposes of the study.

Third, differences between demographic and institutional groups were examined. An independent-samples *t* test was used to compare male and female students. One-way analysis of variance (ANOVA) was used to examine differences among the three institutions and among the four years of study. Where an overall ANOVA indicated a statistically significant difference, post hoc comparisons were used to identify the groups between which the differences occurred.

For the illustrative analyses, statistical significance was evaluated at the $p < .05$ level. Because the reported observations are simulated and no underlying data file was supplied, the inferential results are descriptive demonstrations rather than independently reproduced empirical tests. However, interpretation was not based on statistical significance alone. The direction and magnitude of differences, together with the descriptive pattern of the four competence dimensions, were considered when discussing the educational implications of the findings.

G. Analytical procedure

The analysis was conducted in three consecutive stages. The first stage examined the measurement quality of the four dimensions through internal consistency analysis. The second stage established the descriptive profile of aesthetic competence by comparing mean scores across the four dimensions. This made it possible to identify which dimensions appeared relatively stronger and which required greater attention.

The third stage examined whether the observed patterns differed according to institution, gender, and year of study. These comparisons were included not to rank the participating institutions but to determine whether students' educational environments and accumulated university experience were associated with differences in aesthetic competence.

The illustrative quantitative results were subsequently interpreted in relation to the literature reviewed earlier in the study, without treating simulated differences as verified population findings. Particular attention was given to the relationships between aesthetic competence, creativity, critical thinking, cultural understanding, communication, and professional learning. This procedure enabled the statistical findings to be discussed within the broader educational context rather than as isolated numerical results.

IV. Results

Simulation disclosure. The tables and significance tests in this section reproduce the numerical results supplied in the source manuscript for a simulated dataset. The full row-level dataset

and computational output were not supplied for independent re-analysis. Accordingly, reported coefficients and inferential results are illustrative and should not be interpreted as observations from recruited university students.

A. Reliability of the measurement scales

The internal consistency of the four aesthetic competence dimensions was first illustrated using reported Cronbach's alpha coefficients for the simulated dataset. As shown in Table 2, all four scales demonstrated acceptable reliability, with coefficients ranging from .812 to .879. The overall 20-item scale obtained a Cronbach's alpha of .921. Within the illustrative model, these reported coefficients indicated satisfactory internal consistency and supported the demonstration of composite scores in the subsequent analyses; their reproducibility cannot be assessed without the underlying simulated item-level data.

Table 2: Reliability of the aesthetic competence scales

Dimension	Number of items	Cronbach's α
Aesthetic Perception and Experience (APE)	5	.846
Aesthetic Interpretation and Judgment (AIJ)	5	.812
Aesthetic Expression and Creativity (AEC)	5	.879
Aesthetic Application in Academic and Professional Contexts (AAP)	5	.858
Overall aesthetic competence	20	.921

Among the four dimensions, Aesthetic Expression and Creativity had the highest reliability ($\alpha = .879$), followed by Aesthetic Application in Academic and Professional Contexts ($\alpha = .858$) and Aesthetic Perception and Experience ($\alpha = .846$). Although Aesthetic Interpretation and Judgment had the lowest coefficient, its value of .812 remained above the .70 criterion established in the methodology. No dimension was therefore removed from further analysis.

B. Overall level of aesthetic competence

Table 3 presents the descriptive statistics for the four dimensions. The overall aesthetic competence score was 3.68 (SD = 0.54), corresponding to the high level according to the interpretation criteria established in Section 3.

Table 3: Descriptive statistics for aesthetic competence (n = 360)

Dimension	M	SD	Rank	Level
Aesthetic Perception and Experience (APE)	3.82	0.61	1	High
Aesthetic Expression and Creativity (AEC)	3.74	0.65	2	High
Aesthetic Application in Academic and Professional Contexts (AAP)	3.65	0.63	3	High
Aesthetic Interpretation and Judgment (AIJ)	3.52	0.66	4	High
Overall aesthetic competence	3.68	0.54		High

The simulated results illustrated an uneven pattern across the four dimensions despite all reported dimension-level mean scores falling within the high range. Aesthetic Perception and Experience received the highest mean score (M = 3.82, SD = 0.61). This was followed by Aesthetic Expression and Creativity (M = 3.74, SD = 0.65) and Aesthetic Application in Academic and Professional Contexts (M = 3.65, SD = 0.63). Aesthetic Interpretation and Judgment had the lowest mean score (M = 3.52, SD = 0.66).

The difference between the highest and lowest reported dimension means was 0.30 points in the simulated dataset. Thus, students appeared more confident in recognizing and

experiencing aesthetic qualities than in interpreting these qualities and providing reasoned aesthetic judgments.

C. Results for aesthetic perception and experience

Aesthetic Perception and Experience was the strongest of the four dimensions (M = 3.82, SD = 0.61). Item-level analysis, presented in Table 4, provided a more detailed picture of this dimension and its constituent questionnaire statements.

Table 4: Results for Aesthetic Perception and Experience

Item	Content	M	SD
APE1	I pay attention to the visual appearance and arrangement of objects and environments around me.	3.91	0.76
APE2	I can recognize harmonious and appropriate forms of visual presentation.	3.84	0.73
APE3	I notice aesthetic qualities in learning materials and digital content.	3.79	0.78
APE4	Cultural and artistic experiences often attract my attention and interest.	3.76	0.82
APE5	I am sensitive to how the design of a product or environment affects my experience.	3.80	0.77
Dimension mean		3.82	0.61

The highest-rated item was APE1 (M = 3.91, SD = 0.76), indicating that students generally paid attention to visual appearance and arrangement in their surroundings. The lowest score was observed for APE4 (M = 3.76, SD = 0.82), which concerned interest in cultural and artistic experiences. Although the difference among the five items was relatively small, the pattern suggests that aesthetic awareness was more apparent in students' everyday environments than in explicitly artistic or cultural settings.

D. Results for aesthetic interpretation and judgment

Aesthetic Interpretation and Judgment recorded the lowest mean among the four dimensions (M = 3.52, SD = 0.66). The item-level results are presented in Table 5.

Table 5: Results for Aesthetic Interpretation and Judgment

Item	Content	M	SD
AIJ1	I can explain why I consider a product or presentation aesthetically effective.	3.56	0.79
AIJ2	I can compare different forms of presentation and identify their aesthetic strengths and limitations.	3.61	0.77
AIJ3	I consider cultural context when evaluating aesthetic choices.	3.43	0.84
AIJ4	I can justify my aesthetic judgments rather than relying only on personal preference.	3.39	0.86
AIJ5	I consider the intended audience when evaluating the appropriateness of an aesthetic choice.	3.61	0.80
Dimension mean		3.52	0.66

AIJ2 and AIJ5 received the highest scores (both M = 3.61). By contrast, AIJ4 received the lowest score (M = 3.39, SD = 0.86), placing this item at the upper boundary of the moderate level. AIJ3 was also comparatively low (M = 3.43, SD = 0.84).

The results indicate that students were relatively able to compare different forms and recognize audience appropriateness, but were less confident in justifying aesthetic judgments

or placing them within a cultural context. This pattern distinguishes aesthetic preference from more developed aesthetic reasoning.

E. Results for Aesthetic Expression and Creativity

Aesthetic Expression and Creativity was the second-highest dimension ($M = 3.74$, $SD = 0.65$). Table 6 presents the five individual items.

Table 6: Results for aesthetic expression and creativity

Item	Content	M	SD
AEC1	I try to present my academic work in a clear and aesthetically appropriate form.	3.88	0.75
AEC2	I can generate different ways of presenting the same idea.	3.72	0.82
AEC3	I pay attention to the relationship between content and form when creating presentations or projects.	3.83	0.76
AEC4	I can use visual elements creatively to communicate an idea.	3.67	0.84
AEC5	I am confident in developing creative forms for academic or professional tasks.	3.60	0.87
Dimension mean		3.74	0.65

AEC1 had the highest mean ($M = 3.88$, $SD = 0.75$), followed by AEC3 ($M = 3.83$, $SD = 0.76$). The lowest mean was found for AEC5 ($M = 3.60$, $SD = 0.87$). Thus, students reported greater confidence in organizing and presenting existing academic content than in independently developing creative forms for academic or professional purposes.

F. Application in academic and professional contexts

The mean score for Aesthetic Application in Academic and Professional Contexts was 3.65 ($SD = 0.63$), placing it third among the four dimensions. The five relevant item-level scores are presented in Table 7, allowing closer inspection of their descriptive differences.

Table 7: Results for Aesthetic Application in Academic and Professional Contexts

Item	Content	M	SD
AAP1	I apply aesthetic considerations when preparing academic presentations.	3.78	0.79
AAP2	I recognize the importance of aesthetics in product and service communication.	3.81	0.75
AAP3	I can apply aesthetic judgment when creating digital content.	3.64	0.82
AAP4	I consider aesthetic factors when thinking about consumer experience.	3.58	0.85
AAP5	I can apply aesthetic understanding to situations related to my future profession.	3.44	0.88
Dimension mean		3.65	0.63

AAP2 received the highest score ($M = 3.81$, $SD = 0.75$), indicating relatively strong recognition of the importance of aesthetics in product and service communication. AAP5 had the lowest mean ($M = 3.44$, $SD = 0.88$). The difference suggests that students recognized the general importance of aesthetics more readily than they could identify how aesthetic competence would be applied in their own future professional activities.

G. Differences by gender

An independent-samples t test was used to examine whether overall aesthetic competence differed between male and female students. The results are presented in Table 8.

Table 8: Aesthetic competence by gender

Gender	n	M	SD	t	p
Male	153	3.61	0.55	-2.16	.031
Female	207	3.73	0.52		

Female students reported a somewhat higher overall aesthetic competence score ($M = 3.73$, $SD = 0.52$) than male students ($M = 3.61$, $SD = 0.55$). The difference reached statistical significance, $t = -2.16$, $p = .031$. The difference in mean scores was nevertheless relatively small (0.12 points), and should therefore not be interpreted as indicating a large gender difference in aesthetic competence.

H. Differences among the three institutions

An illustrative one-way ANOVA was conducted to examine differences in overall aesthetic competence among the three simulated institutional groups. Table 9 presents their sample sizes, mean scores, and standard deviations.

Table 9: Aesthetic competence by institution

Institution	n	M	SD
Thuongmai University	142	3.74	0.52
Posts and Telecommunications Institute of Technology	118	3.58	0.56
National Academy of Education Management	100	3.71	0.53

The ANOVA indicated a statistically significant difference among the three groups, $F(2, 357) = 3.58$, $p = .029$. The mean scores ranged from 3.58 at the Posts and Telecommunications Institute of Technology to 3.74 at Thuongmai University, representing a maximum difference of 0.16 points.

Post hoc comparisons indicated that the clearest difference was between Thuongmai University and the Posts and Telecommunications Institute of Technology. Differences involving the National Academy of Education Management were smaller. Given the relatively narrow range of mean scores, the institutional result should be interpreted as evidence of variation in the sample rather than as a ranking of the three institutions.

I. Differences by year of study

A further illustrative one-way ANOVA examined whether aesthetic competence varied according to the simulated students' year of study. Table 10 presents the corresponding descriptive group statistics.

Table 10: Aesthetic competence by year of study

Year of study	n	M	SD
First year	78	3.53	0.56
Second year	96	3.63	0.54
Third year	103	3.72	0.51
Fourth year	83	3.82	0.50

The simulated results showed a gradual increase in mean aesthetic competence scores across the four year-of-study categories. First-year students recorded the lowest mean ($M = 3.53$, $SD = 0.56$), while fourth-year students recorded the highest ($M = 3.82$, $SD = 0.50$).

The overall difference was statistically significant, $F(3, 356) = 4.72$, $p = .003$. Post hoc analysis indicated that the most notable difference occurred between first-year and fourth-year students. The descriptive pattern suggests that students with more university experience reported higher aesthetic competence, although the simulated cross-sectional design cannot establish that progression through university caused this difference or that the pattern would occur in an actual student population.

J. Summary of the results

Three main patterns emerged from the analysis. First, the four dimensions demonstrated satisfactory internal consistency, with Cronbach's alpha coefficients ranging from .812 to .879 and an overall coefficient of .921. This provided support for treating the four dimensions as components of the broader aesthetic competence construct.

Second, students' overall aesthetic competence was at a high level ($M = 3.68$, $SD = 0.54$), but the four dimensions were not equally developed. Aesthetic Perception and Experience had the highest score ($M = 3.82$), whereas Aesthetic Interpretation and Judgment had the lowest ($M = 3.52$). The results therefore indicate a gap between students' ability to recognize aesthetic qualities and their ability to interpret and justify aesthetic judgments.

Third, statistically significant differences were observed according to gender, institution, and year of study. The illustrated gender and institutional differences were relatively modest, whereas the simulated results by year of study showed a clearer progressive pattern, from $M = 3.53$ among first-year students to $M = 3.82$ among fourth-year students. These illustrative findings provide a structured starting point, rather than an independently established empirical basis, for discussing how aesthetic competence might be developed and subsequently measured within university education.

V. Discussion

The conceptual synthesis and illustrative analysis suggest that aesthetic competence among university students can extend beyond the appreciation of beauty or participation in artistic activities. Because the numerical results were simulated, they should not be presented as independently observed findings from the Vietnamese student population. It involves the ability to perceive aesthetic qualities, interpret and evaluate them, express ideas creatively, and apply aesthetic understanding in academic and professional contexts. This broader interpretation is consistent with Shusterman's [2] view of aesthetics as part of lived experience and with Kerdeman's [1] emphasis on the educational value of aesthetic experience.

A notable pattern within the simulated scores is that students were represented as more confident in perceiving aes-

thetic qualities than in interpreting and justifying aesthetic judgments. Regular exposure to digital media, products, advertising, learning materials, and visual environments may help students develop aesthetic awareness, but such exposure does not necessarily lead to reflective judgment. This finding supports previous research linking aesthetic education with critical and creative thinking [6], [7]. Aesthetic education in universities should therefore encourage students not only to identify what they find attractive but also to explain why a particular form is meaningful, appropriate, or effective in a given context.

The conceptual analysis, together with the illustrative scores, also highlights a possible connection between aesthetic competence and creativity that warrants direct empirical investigation. For economics students, aesthetic expression does not require specialized artistic ability. It can be demonstrated through the way students organize presentations, communicate data, develop project ideas, create digital content, or present products and services. This interpretation is consistent with contemporary approaches that regard creativity as context-dependent and applicable across different areas of learning and professional practice [8], [10]. Aesthetic competence can therefore complement rather than compete with the analytical and professional orientation of economics education.

In the Vietnamese higher education context, aesthetic competence could be developed through integration rather than through a separate arts-centered curriculum. Professional courses can incorporate aesthetic considerations into marketing, entrepreneurship, business communication, service design, product presentation, and digital projects. Cultural activities, exhibitions, community projects, and other extracurricular experiences can provide additional opportunities for aesthetic development. However, participation alone is insufficient. Students need opportunities to observe, discuss, interpret, create, and reflect on these experiences if they are to develop sustainable competence.

Digital transformation further increases the relevance of aesthetic competence. University students increasingly communicate through presentations, digital platforms, social media, visualized data, and multimedia content. In these environments, effective communication depends not only on accurate information but also on appropriate form, clarity, audience awareness, and cultural sensitivity. Developing aesthetic competence can therefore contribute to preparing economics students who are not only professionally knowledgeable but also capable of communicating creatively and making context-sensitive judgments in contemporary academic and professional environments.

The reported findings must be interpreted with the more fundamental limitation that the dataset is simulated and no original participant-level data, institutional recruitment records, or independently executable analysis files accompanied the manuscript. The exercise cannot establish actual prevalence, between-group differences, or educational effects in Vietnam. Even a subsequently collected real dataset

would require interpretation within the limitations of a cross-sectional, self-report design. Future research should examine aesthetic competence across a wider range of Vietnamese universities and combine questionnaires with interviews, observations, performance-based assessments, or educational interventions. Such studies would provide stronger evidence about how aesthetic competence develops and how it can be effectively integrated into economics and business education.

VI. Conclusion

This study proposed and illustrated the assessment of aesthetic competence among economics students through four interconnected dimensions: aesthetic perception and experience, aesthetic interpretation and judgment, aesthetic expression and creativity, and application in academic and professional contexts. Within the simulated dataset, the illustrated scores suggest a generally positive profile of aesthetic competence, although values vary across its dimensions; this pattern is not evidence that actual students have attained those levels. In particular, the illustrative results and underlying conceptual discussion point to the educational importance of strengthening students' ability to move beyond aesthetic perception toward interpretation, reasoned judgment, and purposeful professional application, an implication that should be tested empirically.

For economics students, aesthetic competence should not be understood as specialized artistic ability. Its value lies in helping students observe more carefully, communicate ideas more effectively, approach problems creatively, and make judgments that are sensitive to purpose, audience, and cultural context. These capacities are increasingly relevant to areas such as marketing, entrepreneurship, business communication, product and service presentation, consumer experience, and digital environments.

Vietnamese universities can therefore develop aesthetic competence through integration into existing academic and professional activities rather than relying solely on separate arts-related courses. Project-based learning, presentations, digital content creation, cultural experiences, interdisciplinary activities, and professionally situated tasks can provide suitable opportunities for such development. The immediate research priority is to implement and validate the proposed questionnaire with consenting real participants, report transparent recruitment and ethics procedures, and release sufficiently detailed analysis code and de-identified data as permitted. Subsequent research should extend the study to a wider range of universities and disciplines and employ longitudinal, qualitative, and performance-based approaches to better understand how aesthetic competence develops and how it can be effectively supported in higher education.

Author Contributions

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Competing Interests

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Data Availability

Data can be obtained from corresponding author upon request.

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