

# The Impact of Aesthetic Education and Academic Management on the Innovative Development of Higher Vocational Colleges in Yuncheng City, Shanxi Province, China

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## Abstract

*This research aimed to explore the impact of aesthetic education factors on academic management in higher vocational colleges in Yuncheng City, Shanxi Province. It also aims to analyze how this influences the higher vocational colleges' innovative development. Furthermore, the study examines the effect of academic management factors on the innovative development at higher vocational colleges in Yuncheng City, Shanxi Province. A quantitative research method was adopted, with data collected through online questionnaires. The sample size of this study was 417, including 57 teachers, 353 students, and 7 school administrators. In order to analyze the data, reliability analysis, correlation analysis, and regression analysis were employed. This research shows that aesthetic education has a positive impact on the academic management of higher vocational colleges in Yuncheng City, Shanxi Province (0.587) at 0.01 level. The aesthetic education also has a positive impact on innovative development (0.570) at 0.01 level. Moreover, the study also demonstrates that effective academic management has a significant positive impact on innovative development (0.659) at the 0.01 significance level. In addition, this study makes a valuable intellectual contribution to the construction strategy of aesthetic education in local higher vocational colleges and provides important insights for policymakers, educators and administrators. It also offers valuable references for advancing innovation development of vocational education in the Yuncheng area, which is of a wide application value.*

**Keywords:** Aesthetic Education, Academic Management, Innovative Development, Higher Vocational Colleges, Reduce Inequality, sustainable Cities and Communities

## Introduction

In China's contemporary educational system, the holistic development of students is prioritized by implementing an educational framework that integrates five domains: moral education, intellectual education, physical education, aesthetic education, and labor education. Aesthetic education functions as a vital mechanism for nurturing students' aesthetic perception and character refinement, exerting an indispensable role in facilitating their overall welfare and comprehensive growth. Furthermore, aesthetic education constitutes a crucial element in enhancing the nation's cultural soft power and

promoting social harmony and civilization. Accordingly, the Chinese government has consistently attached considerable significance to this aspect of education.

In the document “Opinions on Effectively Strengthening Aesthetic Education in Colleges and Universities in the New Era” issued by the Ministry of Education, it is explicitly required that colleges and universities should incorporate public art courses and art practice into the talent cultivation plans of colleges and universities and school’s teaching plans. Each student must complete the credits of public art courses stipulated by the school before graduation (MoE, 2019). The Ministry of Education of China issued the “Notice of the Ministry of Education on the Comprehensive Implementation of School Aesthetic Education Immersion Action”, proposing specific measures for further promoting school aesthetic education work as a whole (MoE, 2023). The multiple important educational documents successively issued by the Chinese government mapped out the direction and provided fundamental guidance for aesthetic education work in colleges and universities.

In today’s fiercely competitive job market, modern society demands higher and more comprehensive qualifications from individuals. This includes not only strong professional skills but also exceptional overall qualities and innovative abilities. For vocational colleges, integrating aesthetic education is crucial as it develops students’ artistic skills while enhancing their humanistic understanding, aesthetic appreciation, creativity, and critical thinking. Therefore, vocational institutions should prioritize and actively promote aesthetic education to keep pace with the advancements of the new era.

Despite the issuance of significant documents on aesthetic education by the Ministry of Education and the Education Department of Shanxi Province, mandating that each college incorporate aesthetic education courses into their talent development and teaching blueprints to guarantee that every student receives such education, the actual state of aesthetic education in vocational colleges within the Yuncheng area remains conspicuously discrepant from these policy stipulations. A majority of vocational

institutions have failed to establish aesthetic education as a fundamental course in their talent development frameworks; instead, they have merely infused aesthetic notions into their professional curricula. Moreover, problems associated with unequal resource allocation and imperfect management mechanisms in academic administration persist, not only impeding students’ personal growth but also hampering the overall innovative advancement of these institutions. Consequently, it is of paramount importance for vocational colleges to recognize the influence of both aesthetic education and efficient academic management on comprehensive innovative development. This must be achieved while facilitating the all-round development of students and promoting institutional innovation through the proactive implementation of aesthetic education along with optimized academic governance.

This research contends that previous investigations into aesthetic education have substantially disregarded vocational colleges as research subjects. The extant scholarship has primarily focused on appraising the current situation of aesthetic education and exploring means to integrate aesthetic elements. Significantly, there exists a conspicuous dearth of research related to the comprehensive establishment of aesthetic education in particular cities of Shanxi Province, particularly Yuncheng City. The outcomes of this study aim to redress these deficiencies and offer intellectual contributions to the advancement of aesthetic education in Yuncheng City, as well as to stimulate innovation in vocational education across Shanxi Province.

### Research Questions

- What is the aesthetic education factors impact on academic management of higher vocational colleges in Yuncheng City, Shanxi Province?
- What is the influence of aesthetic education factors on innovative development of higher vocational colleges in Yuncheng City, Shanxi Province?
- What is the effect of academic management factors on innovative development of higher vocational colleges in Yuncheng City, Shanxi Province?

## Research Objectives

- To study the aesthetic education factors impact on academic management of higher vocational colleges in Yuncheng City, Shanxi Province.
- To analyze the aesthetic education factors impact on innovative development of higher vocational colleges in Yuncheng City, Shanxi Province.
- To examine the academic management factors impact on innovative development of higher vocational colleges in Yuncheng City, Shanxi Province.

## Conceptual Framework

This research is underpinned by three theoretical frameworks: humanistic theory (Maslow, 1943), constructivist theory (Piaget, 2000), and the theory of multiple intelligences (Gardner & Hatch, 1989). These frameworks offer a robust theoretical foundation and analytical lens for this investigation.



Figure 1 Conceptual Model

## Literature review

### A Relationship between Aesthetic Education (AE) to Academic Management (AM)

Aesthetic education constitutes an emotional form of education, facilitating individuals in understanding, discovering, pursuing, creating, and appreciating beauty. Its primary objective is to cultivate emotional intelligence and elevate the human spirit, thereby enhancing one's outlook on life, values, aesthetics, and moral character. During the process of aesthetic practice, when the subject is influenced by the aesthetic object, they subconsciously develop a sound aesthetic perspective. This ultimately contributes to constructing a comprehensive aesthetic psychological framework and nurturing a well-rounded personality. Aesthetic education has a positive effect on academic management, especially in enhancing the academic atmosphere, promoting innovation, and improving management structure. Tao and Tao (2024) explored how integrating aesthetic education into academic

structures could enhance quality education. They found that aesthetic education promotes creativity, empathy, and emotional intelligence, which align with innovative teaching and management strategies. This integration helps academic institutions foster personalized learning and improve social responsibility among students, suggesting that effective academic management benefits from incorporating aesthetics into educational goals. Acosta-Gonzaga (2023) emphasizes that students' self-esteem and academic engagement significantly affect their academic outcomes. The study identifies that fostering motivation and self-regulated learning behaviors enhances performance. This insight aligns with other research indicating that aesthetic experiences can foster positive emotions.

*H1: The aesthetic education factors have a positive impact on academic management of higher vocational colleges in Yuncheng City, Shanxi Province.*

### A Relationship between Aesthetic Education (AE) to Innovative Development (ID)

Growing demands for talent in response to societal advancements, particularly within vocational education. The aesthetic education should be leveraged during the vocational college phase to foster students' imagination and creative thinking. This approach enables students to integrate their professional knowledge with innovative ideas in their future careers, thereby enhancing their professional competitiveness and contributing to personal value creation. Aesthetic education can significantly enhance students' overall competencies within the contemporary educational landscape. The article contends that artistic and aesthetic experiences foster the holistic development of students, encompassing their emotional, cognitive, and cultural awareness skills. This enhancement of overall competencies not only facilitates deep learning in personal growth but also contributes to cultivating an innovative atmosphere throughout the school (Rattanapun, 2021; Qi & Rattanapun, 2024; Zhang et al., 2024). Furthermore, aesthetic education fosters creativity by encouraging students to engage in artistic practices that enhance cognitive flexibility. This aligns with the development of problem-solving skills through the arts, where students explore different perspectives

and ideas, laying the foundation for innovative thinking in various fields of study.

*H2: The aesthetic education factors have a positive effect on innovative development of higher vocational colleges in Yuncheng City, Shanxi Province.*

### **A Relationship between Academic Management (AM) to Innovative Development (ID)**

[Kwangmuang et. al. \(2021\)](#) aimed to enhance high-level thinking skills among Thai junior high school students. They found that analytical, creative, problem-solving, and critical thinking skills were effectively cultivated by the researchers and experienced by learners within the classroom environment. The average score of high-level thinking skills following exposure to innovative learning methods surpassed previous assessments. This finding suggests that effective academic management can foster a conducive academic atmosphere while stimulating both teachers' and students' innovative initiatives. With robust academic management support, schools are positioned to promote the implementation of diverse innovative projects, elevate overall teaching and research standards, and provide substantial backing for the long-term innovative development of educational institutions. Current issue within vocational colleges of prioritizing professional skills training while neglecting the cultivation of craftsmanship and innovative spirit. This article examined the beneficial effects of aesthetic education on fostering these qualities among vocational college students and proposed academic management strategies aimed at strengthening this development. It suggested that by optimizing the aesthetic education curriculum framework, enhancing faculty qualifications in aesthetic education, reforming pedagogical approaches, and diversifying evaluation methods, academic management can be reinforced to nurture both craftsmanship and innovation among students.

*H3: The academic management factors have a positive influence on innovative development of higher vocational colleges in Yuncheng City, Shanxi Province.*

### **Research Methodology**

This research employs a quantitative research methodology ([Mohajan, 2020](#)), utilizing a cross-

sectional design to gather data aimed at assessing the influence of aesthetic education and academic management on the innovative development of higher vocational colleges in Yuncheng City, Shanxi Province.

The population of the study included educators and students from six colleges and universities located in Yuncheng City, Shanxi Province. These institutions are Yuncheng Vocational and Technical University, Shanxi Water Conservancy Vocational and Technical College, Yuncheng Agricultural Vocational and Technical College, Yuncheng Preschool Education Teachers College, Yuncheng Normal College, and Yuncheng Nursing Vocational College. The enrolment figures for teachers and students at each institution as of February 2024 were based on data sourced from the official websites of various vocational colleges in Yuncheng City.

In this study, the calculation formula proposed by Yamane was adopted to determine the sample size. Yamane's method was adopted by the researchers with 95% confidence and 0.05 accuracy level. This study employed a simple random sampling method ([Noor et al., 2022](#)) to select participants, ensuring that both teachers and students from every college in Yuncheng City had an equal opportunity to be included as research subjects, thereby enhancing the representativeness and accuracy of the findings. Considering the total population size and a permissible error margin of 5%, a minimum of 397 valid questionnaires were required for this study. Based on actual collection data, 417 samples were utilized for subsequent data analysis.

The data collected was analyzed using SPSS software, encompassing descriptive statistics, reliability analysis, correlation analysis, and regression analysis to examine the specific effects of aesthetic education and academic management on innovative development.

### **Results**

#### **Descriptive Analysis for Demographic Factors**

A total of 420 questionnaires were sent out, and 417 valid questionnaires were collected and screened. According to the basic information of the respondents, 47.72% were males and 52.28% were females. The respondents were mainly students, accounting for 84.65% of the total. The majority

of the respondents were sophomores, accounting for 55.16%. The respondents majoring in literature and history and science and technology accounted for 36.69% and 38.37% of the total respectively. Yuncheng Vocational and Technical University accounted for 36.93% of the respondents' higher vocational colleges as seen in Table 1.

**Table 1 Basic Information and Statistics of the Respondents (N=417)**

Item	Category	Frequency	Percent (%)
Gender	Male	218	52.28
	Female	199	47.72
Identity	Teacher	57	13.67
	Student	353	84.65
	School administrator	7	1.68
Grade	Freshman year	33	7.91
	Sophomore year	230	55.16
	Junior year	93	22.3
	Senior year	1	0.24
	Other	60	14.39
Major	Literature	153	36.69
	Science and Engineering	160	38.37
	Art	78	18.71
	Other	26	6.24
College name	Yuncheng Vocational and Technical University	154	36.93
	Shanxi Water Conservancy Technical College	121	29.02
	Shanxi Yuncheng agricultural vocational and technical College	38	9.11
	Yuncheng preschool Teachers College	50	11.99
	Yuncheng Advanced Normal College	44	10.55
	Yuncheng Vocational Nursing College	10	2.4

## Variables Characteristics

**Table 2 Descriptive Statistics of Aesthetic Education, Academic Management and Innovative Development (N=417)**

Variables	Mean	S.D.	Meaning
Aesthetic Education (AE)	4.322	0.708	Agree
Academic Management (AM)	4.354	0.734	Agree
Innovative Development (ID)	4.396	0.653	Agree
Total	4.357	0.698	Agree

Descriptive statistics show that the mean values of aesthetic education (AE), academic management (AM) and innovative development (ID) of higher vocational colleges in Yuncheng, Shanxi Province are 4.322, 4.354 and 4.396, respectively. The standard deviations are 0.708, 0.734 and 0.653, respectively. The data show that respondents' evaluation of these three fields is generally high, and the differences in scores among individuals are relatively moderate. In particular, innovation development (ID) gets the highest evaluation and the strongest consistency, indicating that this field may be particularly prominent in Yuncheng higher vocational colleges.

## Reliability Analysis

The Cronbach's alpha coefficient is a well-established measure for evaluating the reliability of a scale. The values of this coefficient offer insights into how reliable respondents' answers are on that scale. A value greater than 0.8 indicates high reliability, values between 0.7 and 0.8 reflect good reliability, those from 0.6 to 0.7 suggest an acceptable level of reliability, while values below 0.6 indicate poor reliability.

The reliability of the questionnaire was verified through Cronbach's alpha coefficient and Corrected Item-Total Correlation (CITC) analysis. The results showed that Cronbach's alpha coefficient of all dimensions exceeded 0.9, indicating that the questionnaire had high reliability. In addition, most of the CITC values exceeded 0.3, indicating a strong correlation between each item and the overall scale, thus proving the rationality and effectiveness of the questionnaire design.

**Table 3 Cronbach alpha results of each item of questionnaire (N=417)**

	Statements	Total correlation (CITC)	Item deleted $\alpha$ Coefficient	Cronbach $\alpha$ Coefficient
AE	1. Dance performance, drama rehearsal, recitation, chorus, paper-cutting and so on are all aesthetic education practice activities.	0.598	0.910	0.915
	2. Aesthetic experience can be enriched through aesthetic education practice.	0.673	0.909	
	3. I can recognize the style of the artwork, understand the expression of emotion, and evaluate the technical level.	0.595	0.910	
	4. Learning on the aesthetic education course is helpful in enhancing personal aesthetic ability.	0.704	0.908	
	5. I have one or more artistic skills (music, dance, calligraphy, painting, reciting, paper-cutting, etc.)	0.435	0.917	
	6. Learning aesthetic education knowledge and art work analysis skills is helpful to improve aesthetic skills.	0.680	0.908	
AM	7. Our school offers aesthetic education courses.	0.309	0.935	
	8. I think universities should offer courses on aesthetic education.	0.712	0.907	
	9. Optimizing aesthetic education curriculum can effectively improve the teaching effect.	0.723	0.907	
	10. Enriching aesthetic education activities helps to expand students' artistic vision.	0.731	0.907	
	11. Increasing aesthetic education sites, providing special funding and optimizing teaching staff are conducive to comprehensively improving the quality of aesthetic education.	0.710	0.907	
ID	12. Aesthetic education curriculum should be different from traditional art education.	0.604	0.910	
	13. The application of new teaching methods, techniques and strategies can effectively improve the teaching effect.	0.728	0.907	
	14. The improvement of aesthetic education courses in higher vocational colleges should be combined with the characteristics of a colleges' majors and students.	0.724	0.907	
	15. The assessment design of aesthetic education curriculum should pay attention to reflect the process, performance and value-added of aesthetic education learning.	0.691	0.908	
	16. A diversified evaluation system should be constructed to assess students' learning outcomes, ability development and comprehensive performance more comprehensively and objectively.	0.721	0.907	
	17. Innovating an aesthetic education teaching mode and constructing diversified evaluation system will effectively promote the positive development of aesthetic education in our school.	0.672	0.908	
Cronbach's alpha coefficient = 0.915				

The below table's data reveals a reliability coefficient of 0.915, which exceeds the acceptable threshold of 0.9, indicating an exceptionally high level of data quality in terms of reliability. Analyzing

the 'alpha coefficient if items are deleted' shows that omitting the statements 'I have mastered one or more art skills (such as music, dance, calligraphy, painting, recitation, paper cutting.)' and 'my school

has implemented aesthetic education courses' would significantly enhance the reliability coefficient. This raises questions about the relevance of these specific items. Among the six vocational colleges surveyed, three do not provide aesthetic education courses, furthermore, some respondents lack proficiency in various art skills. In summary, with a reliability coefficient above 0.9, it can be concluded that the research data is highly reliable and appropriate for further analysis.

**Table 4 Cronbach's Alpha Reliability Analysis of Aesthetic Education, Academic Management and Innovative Development (N=417)**

Dimensionality	Cronbach's Alpha	Overall Cronbach's Alpha	No. of items
Aesthetic Education (AE)	0.910	0.915	6
Academic Management (AM)	0.913		5
Innovative Development (ID)	0.908		6

### Correlation Analysis

The Pearson correlation coefficient serves as a measure for determining this strength. An absolute value closer to 1 indicates a stronger correlation between the two variables. A significant result (denoted by \* in the upper right corner) suggests that there is indeed a correlation present; conversely, if no \* appears, it implies no association exists. Once a relationship has been established, its degree can be evaluated using the Pearson correlation coefficient: values above 0.7 which indicate a very strong

relationship, those ranging from 0.4 to 0.7 suggest a strong connection, while coefficients between 0.2 and 0.4 reflect moderate relationships. If the coefficient falls below 0.2 but remains significant (indicated by \*, where \* denotes significance at the 0.05 level and \*\* at the 0.01 level), it points to a weak yet statistically relevant relationship that should not be considered coincidental. The results from pertinent tests conducted in this paper are presented in Table 5.

**Table 5 Correlation Analysis of Aesthetic Education, Academic Management and Innovative Development (N=417)**

		AE	AM	ID
AE	Pearson correlation	1	0.762**	0.754**
	Sig.		0.000	0.000
AM	Pearson correlation		1	0.787**
	Sig.			0.000
ID	Pearson correlation			1
	Sig.			

\*means 0.05 level is significant,  
\*\*means 0.01 level is significant

Correlation analysis showed a significant positive correlation among AE, AM and ID. The phase relationship between AE and AM was 0.762, between AE and ID was 0.754, and between AM and ID was 0.787, all of which showed a significance level of 0.01. These significant positive correlations support hypotheses H1, H2 and H3. In other words, aesthetic education has a positive impact on academic management and the innovative development of higher vocational colleges in Yuncheng, Shanxi Province, and academic management also has a positive impact on the innovative development of higher vocational colleges in Yuncheng, Shanxi Province.

### Regression Analysis

**Table 6 Summary of the Hypotheses Result**

Variable	Regression Weight	Beta Coefficient	R <sup>2</sup>	F-values	p-value	Result
H1	AE→AM	0.762**	0.587	195.688	0.000**	Accepted
H2	AE→ID	0.754**	0.570	182.727	0.000**	Accepted
H3	AM→ID	0.787**	0.659	266.522	0.000**	Accepted

**Note:** \* < 0.05, \*\* < 0.01; AE=Aesthetic Education, AM=Academic Management, ID=Innovative Development of Higher Vocational Schools in Yuncheng City, Shanxi Province, China

Linear regression analysis further verifies the relationship between these variables. For aesthetic education (AE), the results show that AEE, AEA and AEAP all have significant positive effects on AE. In terms of academic management (AM), AE also showed significant positive effects. In regard to the innovation development (ID), aesthetic education (AE) and academic management (AM) of higher vocational colleges in Yuncheng City, Shanxi Province, all have a significant positive impact. These results show that aesthetic education not only has a positive effect on the field of academic management, but also the synergistic effect of aesthetic education and academic management has jointly promoted the innovative development of Yuncheng higher vocational colleges.

### Conclusion

A total of 417 valid questionnaires were collected to analyze the relationship between aesthetic education, academic management and innovation and development of higher vocational colleges in Yuncheng City, Shanxi Province. Through descriptive statistical analysis, reliability analysis, correlation analysis and regression analysis of different dimensions, the research hypotheses H1, H2 and H3 are verified.

The results of this study show that aesthetic education not only plays a key role in improving the management level of schools but also has a positive impact on the innovation ability of schools. In other words, the investment and emphasis on aesthetic education can promote the improvement of academic management and further promote the innovative development of higher vocational colleges. The results also show that improving the academic management level helps promote the innovation and development of higher vocational colleges. The optimization of academic management can not only enhance the organizational efficiency and educational quality of schools but also provide more favorable institutional support and resource guarantee for the implementation of innovative activities, thus promoting the improvement of the overall innovation ability.

### Discussion

Based on the hypothesis test results in the table above, the following discussions can be concluded in this study.

#### *1. Aesthetic Education has a Significant Positive Impact on Academic Management: Supported*

Aesthetic education not only improves the overall cultural literacy of the school at the level of knowledge but also promotes the effective operation of academic management by promoting the innovation of campus culture, improving the quality of the school's academic management and optimizing the overall effect of educational management, to promote the effective operation of academic management.

Aesthetic education is an important way to cultivate students' aesthetic accomplishment. The addition of aesthetic education courses and elements of aesthetic education in the process of talent training in higher vocational colleges can enhance students' cultural accomplishment and aesthetic ability. It can promote the comprehensive development of students' outlook on life, values, aesthetic outlook and moral quality. In the literature, according to the level theory of needs proposed by Maslow, the cultivation of aesthetic education includes three dimensions: aesthetic experience, aesthetic ability and aesthetic skills. The results show that all dimensions of aesthetic education have received positive feedback, and each dimension has more than 4.3 points, indicating that teachers and students in higher vocational colleges have a high sense of identity in aesthetic education. Aesthetic education in cultivating students' pursuit of beauty, understanding beauty at the same time, also can subtly promote the development of campus culture, and form a more harmonious, creative and cooperative academic environment, the harmonious academic atmosphere helps to improve the teachers' teaching quality, enhance students' interest in learning, to enhance the overall academic management effect. Therefore, the positive influence of aesthetic education on academic management is revealed.



*2. The Aesthetic Education Factor has a Positive Impact on Innovative Development of Higher Vocational Schools in Yuncheng City, Shanxi Province: Supported*

The quality of aesthetic education is not only related to the effect of academic management but also affects the innovation and development of the whole school. The promoting effect of aesthetic education on innovation and development is that it can cultivate the creative thinking of students and teachers, promote the integration between disciplines, and form an innovative culture within the school, to provide an important impetus for the innovation and development of the school.

In the literature, [Gardner and Hatch \(1989\)](#) proposed the theory of multiple intelligence in order to pay attention to the uniqueness and diversity of each student and promote the innovation of educational management with diversified educational programs. Aesthetic education focuses on cultivating students' perceptual cognitive ability and creative thinking. This educational concept can help students break the shackles of traditional thinking modes and stimulate a stronger sense of innovation. Aesthetic education itself is also an interdisciplinary form of education, which can integrate art and culture with other disciplines. Such an education mode encourages students to break disciplinary boundaries and stimulate cross-field innovation ability. Aesthetic education is also a kind of cultural atmosphere. Through the cultivation of aesthetic appreciation and art, students will pay more attention to details, creativity and uniqueness. This cultural atmosphere not only helps to realize the development goal of cultivating high-quality professional talents in higher vocational colleges but also helps to improve the overall innovation ability of the school. Aesthetic education encourages students to participate in artistic activities that promote cognitive flexibility, build problem-solving abilities through the arts, and allow students to explore new perspectives and ideas, laying the framework for creative thinking.

*3. The Academic Management Factor has a Positive Impact on Innovative Development of Higher Vocational Schools in Yuncheng City, Shanxi Province: Supported*

The positive impact of academic management on innovation development lies in the fact that it systematically supports the development of innovation activities. This is achieved by providing resources, stimulating motivation and management planning, and enabling schools to maintain competitiveness and innovation in the changing educational and technological environment.

Academic management refers to the management of academic affairs and activities in higher education. Academic management directly affects the resource allocation, teacher development and student cultivation. A good academic management system can provide the necessary resource support for innovation, including scientific research funding, innovation projects and practical conditions ([Rattanapun et al., 2018](#)). Under good academic management, teachers can get more academic freedom and innovation space, and students can also explore freely in a more open environment. This open and supportive academic environment provides a good basis for the innovative development of the school. Academic management can also promote the effective use of innovation resources by encouraging cross-departmental and interdisciplinary cooperation.

The establishment of the three hypotheses shows that aesthetic education and academic management are the key factors for promoting the innovative development of higher vocational colleges. In particular, the influence of academic management is more significant, which indicates that the development of innovation largely depends on the effective implementation of academic management. In addition, aesthetic education indirectly promotes the development of academic management and innovation by promoting students' creativity and aesthetic literacy. Aligning with vocational colleges can successfully foster inventive potential and innovation. Optimal management promotes the development of inventive thinking among students during their learning experiences and practical application of knowledge.

## Recommendations

According to the analysis results and the influence relationship between variables, combined with the results of research hypothesis verification, the following recommendations for aesthetic education, academic management and innovative development are proposed, aiming to promote the overall innovative development of higher vocational colleges.

The importance of incorporating aesthetic education into the curriculum, such as introducing art and culture courses to help students develop their creativity and critical thinking skills. Extracurricular activities such as art exhibitions, cultural salons, and design competitions are also suggested for creating an artistic campus environment and improving students' aesthetic literacy.

The institutions should optimize their academic management systems to better promote innovation. Key recommendations include improving cross-departmental cooperation to promote multidisciplinary collaboration and resource integration, particularly in research and development. Colleges should also improve incentives for scientific research and innovation by allocating special money to promote innovative projects and initiatives. Furthermore, improving teachers' research and inventive teaching abilities through training, academic discourse, and industry participation is critical to establishing an innovation culture.

Schools should modify their talent training methods to better meet the needs of aesthetic education and innovation, developing a curriculum that blends theory and practice. Strengthening links with businesses and research institutes through "school-enterprise cooperation" can further improve student development. A diverse teaching evaluation system is advocated, with an emphasis on students' overall talents, including participation in innovative activities and aesthetic instruction

Schools should create school-enterprise collaboration platforms, arrange innovation projects, and construct enterprise mentor programs to give students with practical assistance and experience, as well as host competitions and forums to improve innovation abilities.

Anyway, decision-makers in resource allocation, educational equity, and policy development should support policies that more effectively balance resources between vocational schools in different regions, promoting long-term education and economic growth.

## Research Contribution

This study highlights the impact of aesthetic education and academic management on individual student development, especially in the development of creativity and innovation.

This study provides practical implications for vocational colleges to seek to improve their academic and management structures. It provides insight into how schools can strategically improve the quality of education by optimizing aesthetic education and academic management practices.

It identifies successful practices that can be replicated in other vocational schools, supporting broader collaboration and knowledge sharing across institutions. The results can help schools to cooperate more effectively, share resources and promote collective innovation, thus improving the overall innovation capacity of the vocational education sector.

The results of this study can inform decision-making processes regarding resource allocation, educational equity and developing more targeted policies, for example, governments can use this study to support policies that more effectively balance resources between vocational schools in different regions, promoting sustainable education and economic growth.

By optimizing aesthetic education and academic management, this study improves the innovation ability and education quality of higher vocational colleges and contributes to many sustainable development goals (SDGs). First, research has promoted inclusive and equitable quality education (SDG 4), promoted the development of innovative talents, and contributed to local economic growth and decent work (SDG 8). In addition, it provides guidance for close integration of vocational education and industry, enhancing the innovation infrastructure (SDG 9), while promoting the equitable distribution of educational resources and reducing regional

education inequalities (SDG 10). Finally, the research results can help provide innovative talent support for local communities and promote sustainable urban and community construction (SDG 11).

In conclusion, this study makes a valuable contribution to the existing body of knowledge, providing practical strategic and theoretical insights that can guide individuals, educational institutions, industries, and policymakers to improve innovation capacity in vocational schools while advancing broader sustainable development goals.

### Further Research

Firstly, future research can explore the long-term impact of aesthetic education and academic management on the innovative development of higher vocational colleges. This study focuses on immediate effects, but the longitudinal approach allows for a deeper understanding of how ongoing academic management reform and aesthetic education initiatives impact innovation over time.

Secondly, comparative studies can be conducted between different regions or educational systems. The current study is limited to higher vocational schools in Yuncheng City, Shanxi Province. Further studies could investigate whether similar relationships exist in other regions within and outside of China, allowing for a broader understanding of how local context influences these dynamics.

Finally, future research could explore other factors influencing innovation development, such as digital transformation, entrepreneurship education, or international collaboration. Although this study highlights the importance of aesthetic education and academic management, other variables may also play a key role in promoting innovation in higher vocational colleges. Expanding the scope, including these variables, allows a more comprehensive understanding of the factors that drive educational innovation.

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