Determinants of Students' Performance in Higher Vocational Colleges under the Vocational Skill Evaluation System in Hangzhou, China

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Abstract

Purpose: The purpose of this paper is to explore the relationship between student experience, academic culture, employability, compatibility with online mode, innovation, new opportunities, knowledge management process, and performance. **Research design, data, and methodology:** This study encompasses 500 students from ten higher vocational schools in Hangzhou, China, aiming to investigate and comprehensively evaluate participants' adaptability, abilities, and skill advantages in their academic performance. Data collection utilized purposive, quota, and convenience sampling methods, with a questionnaire as the primary tool. The data were analyzed using Structural Equation Modeling and Confirmatory Factor Analysis techniques to assess model fit, reliability, and construct validity. **Results:** Academic culture has a crucial impact on student experience. Academic culture, student experience, employability, compatibility with online mode, and innovation have crucial impacts on performance. Knowledge Management processes have a crucial impact on innovation. Nevertheless, Knowledge management process has no significant influence on performance **Conclusions:** To achieve the dissertation's objectives, seven hypotheses were tested. Therefore, the third-party evaluation system of vocational education used by industrial enterprises has established a more scientific evaluation model, which can help students find their own learning direction and skill expertise, as well as the rules of skill formation and training, to improve their career performance.

Keywords : Academic Culture, Employability, Innovation, Knowledge Management Process, Performance

JEL Classification Code: E44, F31, F37, G15

1. Introduction

The educational evaluation of science education should be regarded as a crucial component so that students can avoid the simple evaluation of scores and take the promotion of all-around human development and adaptation to social and economic development as the fundamental criterion for evaluating the quality of education. The National E-commerce Vocational Education Teaching Steering Committee actively tried to participate in the third-party evaluation system of vocational education for industry enterprises. It took the lead in conducting the joint examination of e-commerce skills in e-commerce majors in vocational schools (Darling-Hammond et al., 2020).

The preliminary purpose of this paper is to establish a relatively scientific evaluation model that can conduct large-scale evaluation, facilitate students to explore their independent learning motivation and skills, guide students to learn independently, better professional teaching, and find the effect of skill formation and training through the continuous accumulation and tracking of evaluation data. This paper will conduct a statistical analysis of the data results to help colleges and universities understand the law of talent training, meet enterprises' employment needs, and construct universities' professional characteristics. It is necessary to let students understand work adaptability, workability, and work competitiveness, understand their comparative advantages, better match with work, enhance

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students' learning motivation, and improve their learning efficiency. The paper aims to seek out the cause-and-effect relationship between academic culture, student experience, employability, compatibility with online mode, new opportunities, innovation, KM processes, and performance in higher education institutions in Zhejiang, China. The dissertation mode integrates the main and dissertation theories from different perspectives to examine the relationship. So, the details of the lens's depth of field are as follows:

1. To inspect the crucial impact of academic culture on student experience.

2. To inspect the crucial impact of academic culture on performance.

3. To inspect the crucial impact of the student experience on performance.

4. To inspect the crucial impact of employability on performance.

5. To inspect the crucial impact of compatibility with online mode on performance.

6. To inspect the crucial impact of new opportunities on performance.

7. To inspect the crucial impact of innovation on performance.

8. To inspect the crucial impact of the knowledge management process on performance.

9. To inspect the crucial impact of the knowledge management process on innovation.

The population of this paper intends to inspect students of E-commerce majors from 10 vocational colleges in Hangzhou, China, and to inspect the elements that affect their performance under the vocational skills assessment system in Hangzhou. Here are six independent variables: academic culture, employability, compatibility with online mode, new opportunities, KM processes, two intermediaries: student experience, innovation, and a dependent variable: performance. We used the Quantitative methods to collect and analyze data. The sample includes students from different majors in 2021 and 2022. From June to July 2023, the questionnaire will be allocated online to the students. Fifty samples were tested on a pilot basis before a larger population distribution to ensure the reliability and consistency of each item. One thousand questionnaires were completed to determine the causal relationships between the variables and to measure the previously presented hypotheses. The study used Confirmatory factor analysis (CFA) and structural equation model (SEM) to analyze the data. The results of this paper identify important variables that affect performance, as well as variables that indirectly or directly affect performance. Based on the research results of the paper, the significance and suggestions of the research results of the paper are proposed.

This paper's findings will help people deepen the integration of education and industry, understand the effects of skill formation and training, and understand the main role behind the results. On the one hand, the school can better cultivate talents, improve the curriculum system standards, guide the accurate matching of personnel and positions, and strengthen the evaluation of professional construction. On the other hand, the education sector can promote a closer match between the industry's talent needs and vocational education.

2. Literature Review

2.1 Academic Culture

Academic culture is essential to a university and is the foundation for its survival and development. Developing a university's academic culture determines whether the society can recognize it and have a high social reputation. Academic culture is a scientific conclusion or theoretical generalization based on systematic and detailed investigation and research of professional or cultural knowledge of a certain discipline. For example, deep interpretation of the emotional world and aesthetic psychology, exploration of human philosophy and history, analysis of economic laws, guidance of market operation, revelation of the meaning of life, and standardization of the construction of social ethics and morality. The development status and level of academic culture are the core content and main symbols of the university's progress (Dai, 2007).

Academic culture contains academic, teaching, and academic operations. Academic culture is the core of quality teaching and education, a crucial field for colleges and universities. The awesome academic culture is crucial for schools to get a student-oriented learning way to stimulate students to study. Academic culture has presented benefits to universities, such as attraction and better student services. The academic culture in higher education institutions (HEIs) includes great attention to faculty development, cutting-edge teaching, and learning pedagogy, bringing a new student experience (Pandita & Kiran, 2020).

The impact of traditional teaching and academic culture has affected the effective development of teaching and academic work in educational institutions, including the lag of educational concepts, the imbalance of teacher evaluation systems, the lack of evaluation standards for teaching and academic achievements, and the lack of achievement exchange platforms. (Guo, 2022). Thus, this study points out hypotheses:

H1: Academic culture has a significant influence on student experience.

H2: Academic culture has a significant influence on performance.

2.2 Student Experience

In recent years, higher education institutions, as service industries, have received a high level of attention in meeting the needs of their students (Deshields et al., 2005). If you compare students to consumers, education is like an investment. The student experience lies in their exploration and growth in education, as well as their expectations of educational returns (Lawrence & Sharma, 2002). The main consumers of education are students, who need access to knowledge/information (Sinclair & Zairi, 1995).

The "student experience" includes participation, learning assessment and satisfaction, experiences, paper-based learning, and an international perspective (Pandita & Kiran, 2020). However, the latest student-oriented approach to teaching is very different, and it allows students to manage their learning by engaging in class discussions and problem-solving opportunities. This approach interactively improves learning, inspiration, self-learning, critical thinking, and student satisfaction (Elliott & Reynolds, 2014; Frambach et al., 2014; Hillyard et al., 2010).

Many first-year students would enlist in the military to serve their country. After two years of compulsory military service, they will return to university classrooms to continue their studies. These students have developed good organizational and discipline skills in the military, which is also a very valuable experience. These students can be active in classroom instruction and class management, and their self-control influences other students (Zhang & Li, 2018). Thus, this study points out a hypothesis:
H3: Student experience has a significant influence on performance.

2.3 Employability

Theoretical connections exist between employment and education, particularly in constructing "employability" (Shilpa et al., 2015). Professional identity has been identified as a crucial factor influencing employability (Pandita & Kiran, 2020), playing a role in sustaining employment. However, the relationship between professional identity and employment is intricate.

The prioritization of employability can be achieved through comprehensive surveys of regional and industry trends, talent requirements, and job specifications. Utilizing this information, universities can develop core competencies for learners and establish a dynamic marketing curriculum with specialized courses, as demonstrated by Wang et al. (2022).

A 2014 study highlighted the significant concern among young Indians about the shortage of employable skills (Khare, 2014). The study emphasized that untrained employees require more professional knowledge, and there

is often an underestimation of one's skill level among students. Consequently, addressing the high demand for graduate employment becomes a top priority.

Students' employability is a crucial indicator impacting the overall performance of higher education institutions (Shilpa et al., 2015). Organizers should pay close attention to students' employability, recognizing its significant influence on the school's reputation (Pandita & Kiran, 2020). Thus, this study points out a hypothesis:
H4: Employability has a significant influence on performance.

2.4 Compatibility with Online Mode

The rapid advancements in digital education technologies have facilitated the widespread incorporation of hybrid and fully online teaching in universities. Online learning (OL) offers several key advantages, such as cost-effectiveness and increased accessibility (Beishuizen, 2008). In 2020, the COVID-19 pandemic prompted a significant shift towards internet-based education, making it the "new normal" for colleges and universities. While this transition ensured the continuity of teaching and learning, some argue that the groundwork for digital education, integrated over a decade, laid the foundation for this rapid change (Kaplan & Haenlein, 2016). Although hybrid models are prevalent in Australia, the UK, Italy, and Singapore, fully online teaching and the introduction of digital teaching for the first time have impacted many educators and higher education institutions (Dhawan, 2020).

The pandemic has compelled students to gradually adapt to the technological aspects and convenience of online teaching. Students can easily access pre-recorded video lessons, enhancing the core value of the online learning model. However, compared to in-person learning, the interaction between teachers and students is reduced, and technical glitches can occasionally affect the efficiency of online learning (Bhaskar & Nima, 2021). Thus, this study points out a hypothesis:
H5: Compatibility with online has a significant influence on performance.

2.5 New Opportunities

Many people's cultural practices and daily activities have changed due to COVID-19, such as personal, organizational, outdoor, and community events (Al-Kumaim et al., 2021).

The online mode offers more options for learning. The cost of infrastructure for universities and the cost of learning for students have been reduced by virtual teaching. Online courses also establish the academy's "green image" by reducing its environmental carbon footprint. Additionally, when students adjust to online learning, they may choose to

continue with their dissertation or earn their degree online (Bhaskar & Nima, 2021).

The pandemic has directly affected all areas of life, including education. E-learning became a good option. Student motivation, satisfaction, engagement, and attitudes toward online learning need to be noticed by schools and teachers (Crawford et al., 2020). In addition, in online learning courses, students who strongly desire to learn will gain confidence, a sense of accomplishment, and satisfaction through self-directed learning and will involuntarily influence their friends (Patricia Aguilera-Hermida, 2020; Rahayu, 2018). WBL is an online learning medium with reasonable educational objectives (Astuti et al., 2020), including learning via the Internet (such as web pages) to satisfy the requirements of students (Zhang, 2020); it also offers simple, easy-to-use and affordable access to information anytime, anywhere (Cahyana & Supatmi, 2019; Valverde-Berrocoso et al., 2020). Thus, this study points out a hypothesis:

H6: New opportunities have a significant influence on performance.

2.6 Innovation

Innovation is crucial to achieving organizational prosperity in today's emulative and blended business environments (Obeidat et al., 2016). Innovation is equally crucial in higher education, as it satisfies global pressures and rapidly changing social needs (Elrehail et al., 2018). Simultaneously, an engine of economic and social progress (Al-Husseini & Elbeltagi, 2016). Several paperers named innovation as follows (Costa & Monteiro, 2016) like the innovation of administration and technology (Al-Hakim & Hassan, 2016), thorough and step-by-step innovation (Chahal & Bakshi, 2015), and innovation of product and procedure (Al-Sa'Di et al., 2017). However, learned men such as Jaskyte (2004) and Obendhain and Johnson (2004) Believe that educational institutions should also innovate because it can improve the quality and performance of teaching. True transformational leadership positively influences innovation in higher education (Al-Husseini & Elbeltagi, 2016; Elrehail et al., 2018). Building on the previous thesis, innovation is an important approach to new curricula, textbooks and methods, academic projects, and dissertation projects. Advances in new incentive and reward systems and new technologies and equipment can promote innovation in the educational process (Rehman & Iqbal, 2020). Thus, this study points out a hypothesis:

H7: Innovation has a significant influence on performance.

2.7 Knowledge Management Process

Numerous scholars have conceptualized Knowledge Management (KM) as activities to enhance organizational competitiveness and performance. These activities involve storing, sharing, collecting, organizing, creating, and identifying knowledge (Ali et al., 2016; Obeidat et al., 2016; Sadeghi & Rad, 2018). Viewed from the perspective of knowledge resources, organizations increasingly rely on their knowledge assets (Zack et al., 2009) to attain superior performance (Al-Hakim & Hassan, 2016) and gain a competitive edge (Shujahat et al., 2019). This empirical and theoretical paper (Ologbo et al., 2015; Shujahat et al., 2018) aligns with knowledge-based theory, asserting that companies effectively managing knowledge resources generally outperform their counterparts.

Knowledge management infrastructure encompasses culture, technology, and organizational structure, fostering the flow of knowledge within an organization (Ahmed, 2017; Chang & Chuang, 2011; Ho, 2009). Knowledge management procedures, or practices, refer to the exchange of information and knowledge among organizational participants (Razzaq et al., 2018) and represent an organization's ability to generate, share, and utilize knowledge (Gharakhani & Mousakhani, 2012; Humayun & Gang, 2013; Obeidat et al., 2016). Thus, this study points out hypotheses:

H8: Knowledge management process has a significant influence on performance.

H9: Knowledge management process has a significant influence on innovation.

2.8 Performance

The primary objective of knowledge management and innovation initiatives is to enhance the overall performance of an organization (Ahmed, 2017), emphasizing organizational development and progress (Rehman & Iqbal, 2020). Abualoush et al. (2018) define organizational performance as the evaluation of new methods and technologies, problem-solving, innovation, leadership and member relationships, advancements in products and procedures, organizational efficiency, and the quality of work. Goals and metrics serve as the foundation for assessing organizational performance (Akhavan et al., 2014), with each organization setting specific objectives and evaluating its performance to achieve the desired outcomes (Masa'deh et al., 2016).

In higher education institutions, organizational performance measurement encompasses factors such as paper citations, scholarly publications, curriculum development, graduate student productivity, student satisfaction and responsiveness, and dissertation rankings. This study specifically assesses the organizational

performance of educational institutions based on essay ranking, essay productivity, responsiveness, curriculum development, and student satisfaction (Rehman & Iqbal, 2020). The definition of organizational performance, consisting of seven items from the works of Zangoueinezhad and Moshabaki (2011) and Iqbal et al. (2019), is employed to measure the construct. An example item from the tool is "Compared with the main competitors, our university's paper productivity is better" (Rehman & Iqbal, 2020).

3. Research Methods and Materials

3.1 Research Framework

The conceptual framework of this paper comprises seven variables. Following the recommendation of Hair et al. (2006), the variables are categorized into three types: mediating variables, independent variables, and dependent variables. Independent variables can influence another variable (Clark-Carter, 2018). The dependent variable serves as the focus of the study (Jackson, 2006) and represents the variable under investigation (Weale, 2010). This paper's independent variables include academic culture, employability, compatibility with the online mode, new opportunities, and KM processes. Mediating variables are positioned between the independent and dependent variables (Gray, 2016). This paper introduces two mediating variables: student experience and innovation. The singular dependent variable in this study is performance.
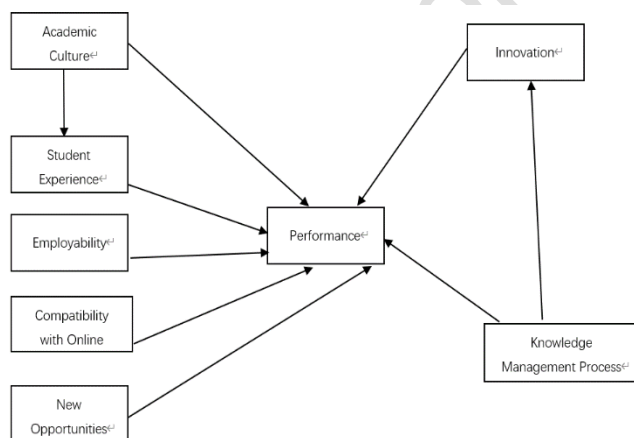

Figure 1: Conceptual Framework

H1: Academic culture has a significant influence on student experience.

H2: Academic culture has a significant influence on performance.

H3: Student experience has a significant influence on performance.

H4: Employability has a significant influence on performance.

H5: Compatibility with online has a significant influence on performance.

H6: New opportunities have a significant influence on performance.

H7: Innovation has a significant influence on performance.

H8: Knowledge management process has a significant influence on performance.

H9: Knowledge management process has a significant influence on innovation.

3.2 Research Methodology

This paper employed quantitative methods, utilizing questionnaires as the primary research tool. Respondents were invited to complete online questionnaires through platforms like Wenjuanxing (Tomii et al., 2021). Quantitative methods were chosen due to their ability to collect data based on variables, focusing on quantitative relationships within a research object. These methods involve normative scientific approaches to quantify specific aspects. The data collection tool, a questionnaire, was administered using Wenjuanxing, a widely used online survey platform in China (Mei & Brown, 2017).

Prior to data collection, researchers conducted an Item-Objective Congruence (IOC) assessment and a pilot test. A panel of three experts evaluated the IOC, with all items surpassing the acceptable threshold of 0.6. In the pilot test involving 35 participants, Cronbach's alpha reliability was employed. Following Tavakol and Dennick's guidelines from 2011, a measurement tool is considered suitable for use when the Alpha coefficient equals or exceeds 0.60, indicating acceptable structural quality.

Convergence accuracy was checked through Confirmatory Factor Analysis (CFA) using the collected data. The model's overall fit was evaluated to ensure its validity and reliability. Finally, Structural Equation Modeling (SEM) was employed for in-depth data analysis.

3.3 Population and Sample Size

This study evaluated the adaptability, ability, and skill advantages of students majoring in e-commerce across ten higher vocational colleges in Hangzhou. The investigation targeted vocational school students enrolled in e-commerce and cross-border e-commerce programs during 2021, and they were participants in the vocational skills assessment system.

The research population included vocational school students specializing in e-commerce, and the study followed

the recommendation of Israel (1992) to maintain a sample size between 200 and 500 for accuracy and reliability in analyses such as multiple regression, covariance analysis, or logarithmic, linear analysis (Anderson & Gerbing, 1984; Walliman, 2010). In this context, the sample size was 500 students, contributing to the comprehensive assessment of students' adaptability, ability, and skill advantages across the vocational colleges in Hangzhou.

3.4 Sampling Technique

The research employed a three-step sampling approach, encompassing purposive, stratified random, and purposive and convenient sampling.

Step 1: Purposive Sampling

This stage focused on the key specialties within the major e-commerce groups, specifically e-commerce and cross-border e-commerce. These specialties are highly prominent in the vocational skills evaluation system, and the study included students from 2021 to 2022. These subjects represent core majors across the ten universities, with many students enrolled in these programs.

Step 2: Quota Sampling

The population was stratified into four groups, and a proportional stratified sampling technique was applied to determine sample sizes representative of each stratum. The two main groups were students specializing in e-commerce and cross-border e-commerce from the 2021 and 2022 cohorts. The distribution of students across these groups is detailed in Table 1. For the 2021 enrollment, the researchers selected samples from each major based on the specified sample size and the proportion of students in each category.

Step 3: Purposive and Convenient Sampling

Convenient sampling, a non-probabilistic method, was incorporated to identify target respondents meeting specific criteria, such as availability, accessibility, and willingness to participate. This approach focuses on respondents who are readily available and willing to engage, making it particularly useful when resources like time and funds are limited.

Table 1: Sample Units and Sample Size

Two Main Subjects	Enrolled in 2021	Proportional Sample Size
Electronic Commerce	3078	471
Cross-Border Electronic Commerce	247	29
Total	**3325**	**500**

Source: Constructed by author

4. Results and Discussion

4.1 Demographic Information

The researcher surveyed 500 participants, and the demographic data is presented in Table 2. The survey results show that in terms of gender structure, 51% of the respondents were male, and 49% were female. Regarding age level, the largest percentage of respondents was 20-22 years old at 48.8%, 18-19 years old at 25.2%, and 22 years old and above at 26%.

Table 2: Demographic Profile

Demographic and General Data (N=500)		Frequency	Percentage
Gender	Male	255	51.0%
	Female	245	49.0%
Age	18-19 years old	126	25.2%
	20-22 years old	244	48.8%
	More than 22 years old	130	26.0%

Source: Constructed by author

4.2 Confirmatory Factor Analysis (CFA)

To inspect the structure of variables and factor sequences, evaluate the SEM model, confirmatory factor analysis (CFA) shall be utilized (Lei & Wu, 2007), and examine whether the data can meet the assumptions (Fox, 2010). Suhr (2005) proposed that CFA can be utilized to test the relationship between observed and potential variables.

Factor loadings exhibit a greater value than 0.30 and a p-value lower than 0.05. The construct reliability is greater than the cut-off point of 0.7, and the average variance extracted was greater than the cut-off point of 0.5.

Table 3: Confirmatory Factor Analysis Result, Composite Reliability (CR) and Average Variance Extracted (AVE)

Variables	Source of Questionnaire (Measurement Indicator)	No. of Item	Cronbach's Alpha	Factors Loading	CR	AVE
Student Experience (SE)	Lawrence and Sharma (2002)	6	0.951	0.728-0.802	0.892	0.579
Academic Culture (AC)	Pandita and Kiran (2020)	5	0.962	0.698-0.829	0.867	0.568
Employability (EM)	Pandita and Kiran (2020)	3	0.949	0.649-0.800	0.746	0.498
Compatibility with Online Mode (COM)	Beishuizen (2008)	4	0.870	0.695-0.759	0.834	0.558
New Opportunities (NO)	Al-Kumaim et al. (2021)	4	0.858	0.681-0.852	0.849	0.585
Innovation (I)	Mckeown (2008)	4	0.952	0.754-0.795	0.851	0.590
Knowledge Management Process (KMP)	Al-Hakim and Hassan (2016)	4	0.954	0.764-0.828	0.872	0.631
Performance (P)	Ahmed (2017)	4	0.975	0.753-0.802	0.864	0.613

The square root of the average variance extracted demonstrates that all correlations exceed the corresponding correlation values for each variable, as indicated in Table 4. Furthermore, model fit indicators such as GFI, AGFI, NFI, CFI, TLI, and RMSEA were employed in the confirmatory factor analysis (CFA) testing.

Table 4: Goodness of Fit for Measurement Model

Fit Index	Acceptable Criteria	Statistical Values
CMIN/ DF	< 5.00 (Al-Mamary & Shamsuddin, 2015)	1096.4/499 or 2.197
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.889
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.868
NFI	≥ 0.80 (Wu & Wang, 2006)	0.889
CFI	≥ 0.80 (Bentler, 1990)	0.936
TLI	≥ 0.80 (Sharma et al., 2005)	0.928
RMSEA	< 0.08 (Pedroso et al., 2016)	0.049
Model Summary		In harmony with empirical data

Remark: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = Goodness-of-fit index, AGFI = Adjusted goodness-of-fit index, NFI = Normed fit index, CFI = Comparative fit index, TLI = Tucker-Lewis index and RMSEA = Root mean square error of approximation.

Convergent and discriminant validity were confirmed as the values presented in Table 5 surpass the acceptable thresholds. This ensures the adequacy of both convergent and discriminant validity. Furthermore, the obtained model measurement results reinforced discriminant validity and validated subsequent structural models.

Table 5: Discriminant Validity

	SE	AC	EM	COM	NO	I	KMP	P
SE	**0.761**							
AC	0.464	**0.754**						
EM	0.393	0.369	**0.706**					
COM	0.514	0.398	0.414	**0.747**				
NO	0.497	0.484	0.378	0.409	**0.765**			
I	0.525	0.445	0.395	0.447	0.405	**0.768**		
KMP	0.533	0.480	0.438	0.480	0.503	0.430	**0.794**	
P	0.612	0.514	0.456	0.484	0.490	0.588	0.496	**0.783**

Note: The diagonally listed value is the AVE square roots of the variables
Source: Created by the author.

4.3 Structural Equation Model (SEM)

Structural Equation Modeling (SEM) scrutinizes the relationships between observable and latent variables (Beran & Violato, 2010). Compared to regression analysis, SEM offers greater precision by addressing errors in testing the linear relationships between variables (Gonzalez et al., 2008). SEM integrates regression and factor analysis, enhancing the accuracy of depicting relationships among diverse variables. The goodness-of-fit indices for the Structural Equation Model (SEM) are assessed, as delineated in Table 6. To ensure a good fit, the Chi-square/degrees-of-freedom (CMIN/DF) ratio should not exceed 3, and GFI and CFI should be above 0.8, according to recommendations by Sica and Ghisi (2007). Utilizing statistical software for model adjustment and calculations in SEMs, the fit index results indicated a favorable fit: CMIN/DF = 2.624, GFI = 0.850, AGFI = 0.806, NFI = 0.883, CFI = 0.923, TLI = 0.906, and RMSEA = 0.057. These values align with acceptable benchmarks, as detailed in Table 6.

Table 6: Goodness of Fit for Structural Model

Index	Acceptable	Statistical Values Before Adjustment
CMIN/DF	< 5.00 (Al-Mamary & Shamsuddin, 2015)	1402.777/475 or 2.953
GFI	≥ 0.85 (Sica & Ghisi, 2007)	0.850
AGFI	≥ 0.80 (Sica & Ghisi, 2007)	0.806
NFI	≥ 0.80 (Wu & Wang, 2006)	0.858
CFI	≥ 0.80 (Bentler, 1990)	0.901
TLI	≥ 0.80 (Sharma et al., 2005)	0.883
RMSEA	< 0.08 (Pedroso et al., 2016)	0.062
Model Summary		In harmony with Empirical data

Remark: CMIN/DF = The ratio of the chi-square value to degree of freedom, GFI = Goodness-of-fit index, AGFI = Adjusted goodness-of-fit index, NFI = Normed fit index, CFI = Comparative fit index, TLI = Tucker-Lewis index and RMSEA = Root mean square error of approximation.

4.4 Research Hypothesis Testing Result

Paperer uses the hypothesis to exhibit the presumption through paper. This paper's hypothesis presumes the relationship between independent variables and dependent variables. Assumptions are suggested by statements or paper questions, which require further support or overturn assumptions through paper (Mourougan & Sethuraman, 2017). Based on the conceptual construct of the paper, nine hypotheses are suggested and verified in Table 7, and the testing result is shown in Table 7

Table 7: Hypothesis Results of the Structural Equation Modeling

Hypothesis	(β)	t-Value	Result
H1: AC→SE	0.506	9.760*	Supported
H2: AC→P	0.210	3.918*	Supported
H3: SE→P	0.384	6.859*	Supported
H4: EM→P	0.188	3.994*	Supported
H5: COM→P	0.091	2.210*	Supported
H6: NO→P	0.096	2.219*	Supported
H7: I→P	0.366	6.955*	Supported
H8: KMP→P	0.027	0.553	Not Supported

Hypothesis	(β)	t-Value	Result
H9: KMP→I	0.438	8.790*	Supported

Note: * p<0.05
Source: Created by the author

The result from Table 7 can be refined that:

H1 shows that student experience positively impacts academic culture, and academic culture plays a mediating role between comprehensive performance and student experience, creating a new experience for college students (Pandita & Kiran, 2020). As for **H2**, academic culture is a vital way to influence schools to get good performance and significantly affects performance (Pandita & Kiran, 2020). **H3** has shown that academic culture compromises the relationship between overall performance and student experience (Pandita & Kiran, 2020). With academic culture in the middle, the student experience is the most important indicator to improve performance (Anderson et al., 1994; Owlia & Aspinwall, 1997; Pandi et al., 2013). Student experience is important for overall performance, and the effect is more evident when academic culture is in the middle(Pandita & Kiran, 2020). **H4** has proven that students' employability is an important part of influencing the overall performance of higher education (Shilpa et al., 2015). Students' employability needs the organizers' focus as it influences the school's performance.

H5 has proven that the convenience and affordability provided by online courses are a major push for bettering the educational system's comprehensive performance. The educational system's performance was influenced by compatibility with the online model (Bhaskar & Nima, 2021). **H6** has shown that COVID-19 leads most people to change cultural customs and daily activities, like organizational, personal, outdoor, and community activities (Al-Kumaim et al., 2021). New opportunities still exert a crucial impact on performance. **H7** has shown that innovation exerts a critical influence on performance and partially mediates the impact of knowledge-based leadership on organizational performance. The findings suggest that higher education managers ensure the successful implementation of the knowledge management process by demonstrating knowledge-based behaviors. This enables them to manage their knowledge assets effectively, enhance process and product innovation, and achieve higher organizational performance (Rehman & Iqbal, 2020). Jaskyte (2004), Obendhain and Johnson (2004), and other scholars believe that higher education institutions must focus on innovation to enhance education quality and performance. **H8** has shown that not all knowledge management processes significantly impact the public sector's innovation, quality, and operational performance.

Moreover, the system-oriented knowledge management system strategy could not significantly impact knowledge management procedure capability, organizational performance, and creativity. **H9** has proven that the knowledge management process is more critical to innovation (Obeidat et al., 2016), which impacts innovation and achieves excellent organizational performance by influencing innovation (Al-Sa'Di et al., 2017). The knowledge-based perspective (KBV) believes effective knowledge management will affect innovation (Grant, 1996).

5. Conclusion and Recommendation

5.1 Conclusion and Discussion

Then, the questionnaires were created and distributed to the target sample of students. Confirmatory Factor Analysis (CFA) was carried out to measure and test the validity and reliability of the conceptual model. Hence, the elements influencing student experience, performance, and Innovation were tested by applying the structural equation model (SEM).

The results of the study are described as follows. First, the impact of academic culture on the student experience is clear. An academic culture can guarantee high-quality teaching and education. One way the benefits can be brought to the university is by influencing the employee experience, such as increasing retention, staff engagement, productivity, and student services. Second, academic culture has a significant impact on performance. Creating the future can be accomplished through a well-developed academic culture. Cultivating more independent students requires a student-centered approach. An academic culture will benefit the university through student participation in decision-making and influencing the staff experience, such as increased attractiveness and improved student performance. Third, student experience affects students' academic performance. The student experience is critical to overall performance, and this effect is even more pronounced when academic culture is used as a medium (Pandita & Kiran, 2020). Student experience is a good motivator to inspire students to learn, which can make teaching more effective with half the effort.

Fourth, employability exerts a crucial impact on performance. Fifth, Compatibility with online mode exerts a significant influence on performance. Online courses supporting "student-led" exploration and cognitive challenges support better learning outcomes (Stevens et al., 2021). Sixth, new opportunities exert a vital influence on performance. Seventh, Innovation exerts a significant influence on performance. Higher education institutions shall innovate to better the quality and performance of education. Eighth, KM processes have no crucial influence on performance. Ninth, Knowledge management processes exert a significant influence on Innovation. The results show that university managers can effectively regulate knowledge assets and implement knowledge management procedures,

thereby improving processes and product innovation and achieving better organizational performance (Rehman & Iqbal, 2020).

5.2 Recommendation

Performance is significantly influenced by employability. The Flexible Human Resource Management System (FHRMS) profoundly positively affects employees' innovative performance, with employability acting as a mediating factor. Organizational competence governs both employees' employability and innovation performance. Recognizing human resource management systems as mediators, organizations enhance employees' innovative performance through improved employability. Compatibility with the online mode strongly impacts performance. Specially designed online courses facilitating "student-led" exploration and cognitive challenges contribute to better learning outcomes (Stevens et al., 2021). New opportunities do not significantly affect performance. However, innovation has a notable impact on performance. Higher education institutions should prioritize innovation to enhance the quality and performance of education. Knowledge management (KM) processes do not significantly influence performance, but they play a crucial role in driving innovation. The results suggest that managers in higher education institutions can effectively manage knowledge assets, demonstrate knowledge-oriented behaviors, implement successful knowledge management procedures, and consequently enhance both process and product innovation, leading to improved organizational performance (Rehman & Iqbal, 2020).

5.3 Limitation and Further Study

This study could have been improved, such as sample bias and insufficient sample size. In this paper, a multi-stage sampling method is used. The sample area does not cover all universities in the province, so the sample may not be comprehensive, and there are problems related to selection bias. In addition, it may not be possible to obtain enough samples during sample sampling due to practical issues, which can lead to problems with biased results and insufficient sample size. The entire field studied in this article does not cite enough variables, and the relationships between these variables shown in this article are not sufficient to support error-free results. In the future, the authors will cite more data and wider coverage and strive to improve the data analysis as completely as possible to support the results of the following papers.

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