

# Research on the Construction of a New Ecological Environment for Tourism Major Education in Higher Vocational Colleges

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## Abstracts

This research aims to explore whether the teaching ability and quality of vocational tourism teachers have an impact on the new ecology of tourism education. Teachers and students in the tourism major of a vocational college in Chongqing, China, were selected as the targets of this research. Based on the relevant literature, two hypotheses are proposed. The data was collected through online questionnaires, and statistical tests were conducted using SPSS22.0 and AMOS24.0 software. The statistical tests included descriptive statistical analysis, reliability and validity testing of test items, model fitting testing, and research hypothesis testing. The research results found that the abilities and qualities of vocational tourism teachers have a positive impact on the new ecology of tourism education. Finally, based on the research findings, corresponding research recommendations were proposed.

**Keywords:** New ecology of education; Vocational colleges; Tourism major;

## Introduction

From the current situation of the training effect of tourism professionals in China's vocational colleges, industry insiders generally believe that this phenomenon reflects the lack of effective utilization of educational resources, which belongs to the category of "learning not for use". It can be considered that the colleges have not cultivated talents that meet market demand; Due to China's relatively advanced tourism market in the international field, graduates majoring in tourism can have a good competitive advantage in the market, but they still cannot fully meet the needs of the tourism industry. This is mainly reflected in the significant gap between the knowledge and skills system of the talents themselves and the real needs of the employers, as well as the lack of practical skills. In a sense, students' personal qualities have not met the standards of market demand, Lack of knowledge of business processes leads to inability to quickly adapt to frontline positions and provide higher quality services (Shen Yuxi, 2018 : 188-189). This means that there is a significant gap between the cultivation of vocational tourism professionals in China and market demand, and it also reflects that the cultivation of vocational tourism management talents in China still needs further improvement and optimization. Based on the characteristics of vocational tourism education itself, ecological principles and methods are applied to the education, teaching, and management of vocational tourism majors, striving for the sustainability of tourism talent cultivation and meeting social needs (Zhang, 2016 : 140-142 ; Wang, 2021 : 1).

This article will explore whether the abilities of vocational tourism teachers and their professional student qualities have an impact on the new education ecology of tourism majors, and propose strategies for building a new ecology of vocational tourism majors.

### Literature review

The research on tourism education in vocational colleges in China has always been a hot topic and focus of research. Taking "vocational colleges", "tourism majors", "educational ecology", and "improving quality and excellence" as the theme names, through the

Document retrieval in Chinese and foreign languages is carried out in the database of CNKI. In the past ten years (from 2011 to 2021), there are 106822 literatures in total, including 36 doctoral dissertations and 2478 master's theses, showing an **overall** upward trend, as shown in Figure 1.

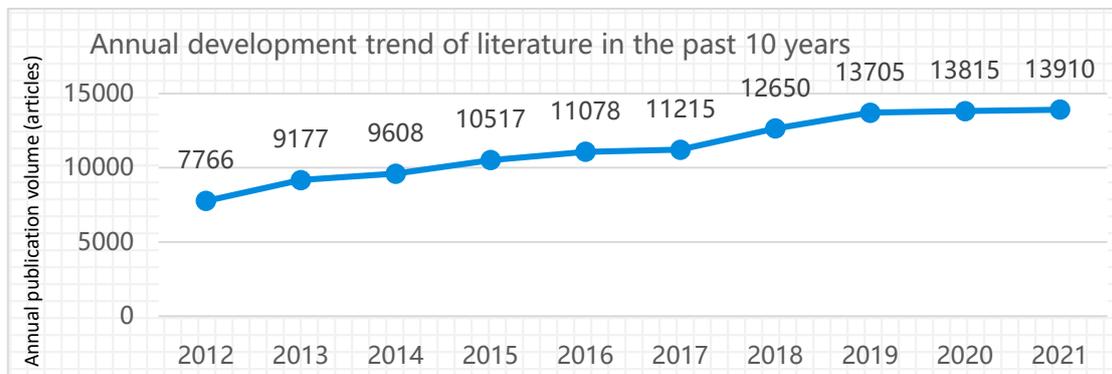


Figure 1: Annual Development Trend of Literature in the Last 10 Years

Source: China National Knowledge Infrastructure

( <https://kns.cnki.net/KNS8/Visual/Center> )

Analysis of the citation situation of tourism education literature in Chinese vocational colleges. As of December 2021, 53 tourism education literature in vocational colleges have been cited more than 100 times. Relevant research mainly focuses on the connotation, concept, essence, value, goals, models, courses, policies, evaluations, and other aspects of tourism education in vocational colleges; Existing research can be divided into seven categories: connotation and value, current situation and countermeasures, goals and models, curriculum and practice, quality and evaluation, comparison and inspiration, and system and system.

Based on existing research, research on improving the quality and excellence of higher vocational education has only begun in 2020. There are few existing literature on ongoing or not yet conducted research on improving the quality and excellence, mainly concentrated in decision-making departments, with strong theoretical and practical significance, lacking empirical and targeted research, quantitative empirical surveys, targeted identification and problem-solving, and very little involvement in tourism related professional education. In view of this, this article conducts research on the new ecology of tourism education in vocational colleges from the perspectives of teacher teaching ability and teacher quality, and proposes suggestions for improving the education, teaching, and management of tourism majors in vocational colleges.

### **Proposing Assumptions**

The new ecology of tourism education in vocational colleges: The new ecology of education refers to the process of forming new educational goals, means, methods, and ecology in the context of informatization and globalization. It emphasizes personalization, diversification, innovation, collaboration, and comprehensive development. On the basis of traditional education models, it strengthens practice, interaction, exploration, and social participation, promoting students' comprehensive development and quality improvement. The new ecology of tourism education in vocational colleges applies the principles and methods of ecology to the teaching and management of tourism education based on the characteristics of tourism education in vocational colleges, striving for the sustainability of tourism talent cultivation and meeting social needs.

In the new education ecosystem, technologies such as intelligence, digitization, and algorithms are widely applied, and educational resource sharing is gradually realized. Students can obtain knowledge and information through various means such as the internet and mobile phones. Teachers mainly guide, inspire, and provide guidance, emphasizing the cultivation of students' learning, innovation, and practical abilities to meet personalized and social needs.

Wang Wei (2021 : 1) pointed out in his research that in the current environment of improving the quality and excellence of vocational education, combined with the actual situation of vocational education in domestic vocational colleges, the focus of education is to explore the construction of the education system in vocational colleges from aspects such as curriculum improvement and evaluation feedback. Mao Qiaoyi's (2021 : 87) Action Plan proposes that vocational colleges should focus on improving quality and increasing the reform of talent cultivation models. Only vocational colleges and professional teachers can organically connect enterprises and students. Entering the stage of improving quality and excellence, it is of great significance for vocational colleges to optimize the existing talent cultivation mode. The shaping of vocational literacy for vocational talents is a topic that needs to be tackled in the new stage of optimizing talent cultivation, and is one of the main problems that need to be solved in the new era of improving quality and excellence. Zhang Kunyuan (2016 : 140-142) pointed out that teachers' professional development refers to the development process of teachers' continuous integration of new knowledge, improvement of professional skills and teaching quality through Lifelong learning in their educational career. The process focuses on autonomy, sustainability and dynamics. Based on the perspective of educational ecology, this paper analyzed the four limitations of current college teachers' professional development, Further utilizing the holistic view emphasized by the education

ecosystem and the optimal state of various ecological factors, methods have been proposed to promote the improvement of teachers' professional level. Liu Xianghui (2016 : 109-111) explored the participation mode of formative assessment and proposed specific measures for assessment based on the consistency between the systematic and holistic perspectives in educational ecology theory and the formative assessment of English classroom teaching, which reflects the integrity of classroom teaching. Li Xiaoxu (2016 : 84-86) pointed out in his research that the basic principles of educational ecology should be applied to actively explore new ideas for the employment model of students in ethnic colleges, that is, to promote the organic combination of Career development as the main line, psychological counseling as the auxiliary, to establish a band driven all-round employment guidance system, and to pay timely attention to psychological deviation and problem debugging in the employment process. This is not only conducive to the full use of university resources and the rational realization of educational goals, It also helps to improve the effectiveness of employment work for college students in ethnic colleges and universities, and has important practical significance. From the above research, it can be seen that education ecology, from the special perspective of ecology, provides a new understanding of education development and promotes a new education ecology.

Based on the above content, this article will propose the following two hypotheses. Teacher's ability: Professional development is greatly influenced by teacher's ability, including course content, teaching methods, and comprehensive quality cultivation. The ability of teachers also determines the development of schools and the overall quality of students. Assumption 1: Teacher's ability has a positive and positive impact on the construction of a new ecological environment for tourism education in vocational colleges.

Teacher quality: Teacher quality affects the overall quality of a school and the depth and breadth of teacher teaching, ultimately affecting the demand of society for professional students. Assumption 2: The quality of teachers has a positive and positive impact on the construction of a new ecological environment for tourism education in vocational colleges.

## **Research Design**

### **1. Objects and Samples**

The researcher has been working in vocational colleges in Chongqing, China for a long time, and his unit is a cooperative unit with the Chongqing Municipal Commission of Culture and Tourism. He has relatively stable and feasible research resources, and can quickly and accurately find suitable subjects for investigation and research. This greatly improves the accuracy and effectiveness of first-hand research data. The survey object of this study is the teaching staff of tourism majors in vocational colleges in Chongqing, China, where the researcher works, including in-service teachers, part-time teachers, teaching guidance secretaries, practical course assistants, and all other teaching related staff.

### **2. Questionnaire Design**

The questionnaire consists of two parts in total. The first part is demographic characteristics information, including age (grade), gender, and other items. The second part is the influencing factors of the scale questionnaire education ecology, divided into two parts: teacher teaching ability and teacher quality. Teacher teaching ability (a total of 5 questions): TA1 In teaching work, I am able to remember task points and key events in teaching well; Before teaching activities, I am able to design teaching objectives based on students' physical

characteristics and teaching content; I am able to effectively apply appropriate teaching modes to carry out teaching activities in TA3; TA4: I have sharp observation and the ability to ask questions; TA5 will raise new questions from different perspectives when communicating with others. Teacher quality (7 questions in total): When SQ1 involves the content of this major, it can quickly detect relevant points; I enjoy practical courses in SQ2 and am passionate about interacting with students; I enjoy using my own teaching plan for SQ3; I often participate in the writing of course standards (or syllabuses) for SQ4; I am able to design a complete project based on the research objectives of SQ5; I can refer to and use analogical methods to find solutions to similar problems in other disciplines for SQ6; I can learn from and apply better teaching methods from other teachers in SQ7 teaching. Education New Ecology (3 questions in total): NE1 industry professionals have excellent practical skills for graduates majoring in tourism at our university; NE2 industry insiders have a good overall evaluation of the quality of our graduates majoring in tourism; NE3 Our college has always had a good source of students majoring in tourism.

The questionnaire measurement items are modified or self compiled from scales from similar studies, with 3 or more items set for each potential variable to ensure the validity of the questionnaire, all measured on the Likert 7 scale.

We have made predictions for the above scale and distributed 20 predictive questionnaires, of which 18 were qualified. The samples were divided into 27 and 73 digits, and the 7 dimensions were subjected to high and low clustering T-tests. The results showed that the p-values of the questions were all less than 0.5 is significant, with significant differences in high and low clusters, indicating that the test items have a certain level of discrimination and need to be retained. 50 questionnaires were officially distributed, and 49 qualified questionnaires were collected, with a recovery rate of 98%.

### **Data analysis**

#### **Descriptive Statistics**

The difference between the male and female Sex ratio of the interviewed teachers is not too big, and there are a little more female teachers. The age of the interviewed teachers is divided into four age groups, namely 20-30 years old, 30-40 years old, 40-50 years old, and over 50 years old; The age of the surveyed teachers is relatively concentrated between 30-40 years old, with the largest proportion, followed by 20-30 year old teachers, followed by 41-50 year old teachers, and there are relatively few teachers over 50 years old. The teaching experience of the interviewed teachers is also divided into four stages, namely 5 years and below, 5-10 years, 10-20 years, and over 20 years; The proportion of teachers surveyed in this study with teaching experience of 5-10 years is the highest, followed by those with teaching experience of 5 years or less, and then 10-20 years. The proportion of teachers with teaching experience of over 20 years is the lowest. The majority of the surveyed teachers have a bachelor's degree, followed by a master's degree or below, and a very small proportion have a doctoral degree. The proportion of surveyed teachers with intermediate professional titles as lecturers is the highest, followed by newly hired teachers with junior professional titles, and the proportion of faculty members with associate and senior positions is the lowest. Overall, the interviewed teachers are relatively young but have some work experience.

2. Reliability, Convergence Validity, and Discriminant Validity Testing

Through factor analysis, it can be concluded that the cumulative variance contribution rate reaches 66.772%, with less information loss, which can better explain the overall variance. Factor analysis is ideal. This model measures the reliability and validity of the scale before hypothesis validation.

As shown in Table 1, the reliability range of each observation variable in this study is greater than 0.7. Therefore, it is considered that all observation variables are acceptable, indicating good reliability. All measurement questions are retained (Robinson, 1991);

As shown in Table 2, the diagonal bold font represents the root of AVE, and the lower triangle represents the Pearson correlation and average of the dimensions. The standard deviation is shown in the table; Robinson believes that Cronbach's Alpha value is greater than 0. The reliability at 7 o'clock is acceptable. Cronbach's Alpha values of all Latent and observable variables in this study are greater than 0.7, which means that the reliability requirements are met (Robinson, 1991). The AVE root values of all dimensions in this study are greater than the correlation between dimensions and other dimensions, indicating differential validity between dimensions.

Therefore, the reliability, convergence validity, and discriminative validity of this model are good.

**Table 1** Reliability Table of Measurement Items

Dimension	Question Reliability	AVE	Dimension	Question Reliability	AVE
Teacher's teaching ability	TA1	.865	Teacher quality	SQ1	.779
	TA2	.742		SQ 2	.748
	TA3	.845		SQ 3	.779
	TA4	.767		SQ 4	.798
	TA5	.816		SQ 5	.764
The New Ecology of Education	NE1	.819		SQ 6	.755
	NE2	.804		SQ 7	.772
	NE3	.815			

**Table 2** Reliability, Convergence Validity, and Discriminant Validity Test Data Table

Dimension	Reliability	Convergent Validity	Discriminant Validity			Descriptive Statistics	
	Cronbach Alpha	AVE	TA	SQ	NE	Average value	Standard deviation
TA	.864	.653	0.808			5.49	.969
SQ	.804	.632	.476	0.795		5.03	1.077
NE	.842	.679	.690	.558	0.824	5.21	1.067

### 3. Analysis of Model Fitting and Hypothesis Testing Results

In the structural equation model, the model fitting index is a statistical indicator that examines the degree to which the theoretical structural model fits the data. In this study, Amos 24.0 software was used to test the fitting degree of this model. Considering that the minimum fit functional Chi G square value of the absolute fit index is easily influenced by the sample size, some scholars suggest using the ratio of the chi square value to its degree of freedom as the standard, and combining the goodness of fit index (GFI), standard fit index (NFI), increased fit index (IFI), and comparative fit index (CFI) as supplements. The value range is between 0 and 1, and the closer it is to 1, the better, The root mean square (RMSEA) of approximation error should be less than 0.05, and the smaller the better (Bagozzi&Yi, 1988: 74-94).

Goodness of Fit Index (GFI) and Adjusted Goodness of Fit Index (AGFI). GFI and AGFI reflect the proportion of covariance that the hypothetical model can explain. The larger the goodness of fit index, the higher the degree of explanation of the independent variable for the dependent variable, and the higher the percentage of changes caused by the independent variable in the total change.

It is generally believed that GFI and AGFI values greater than 0.9 indicate a high degree of fit between the model and the data. Therefore, it can be considered that the model fits the sample data well, and the model has a good degree of fit and can be used for the next step of operation.

Table 3 Results of goodness of fit indicators for structural models

Fit Indicators	Acceptable Suggestions	Fit value of this model
Chi square value and degree of freedom (Chi square/df)	1—5	1.17
Root Mean Square of Approximate Error (RMSEA)	<0.05—0.08	0.03
Normative goodness of fit index (NFI)	>0.9	0.92
Non canonical fit index (NNFI)	>0.9	0.97
Model Comparison Fit (CFI)	>0.9	0.97
Value added fit index (IFI)	>0.9	0.97
Goodness of Fit Index (GFI)	>0.8	0.93

4. Analysis of Hypothesis Testing Results

As shown in Table 4, if the VIF is not greater than 5, it indicates that there is no collinearity between dimensions, and if the R-square is 0.744, it indicates a high degree of explanatory power; The confidence interval range of teacher teaching ability TA and teacher quality SQ does not include 0, and the P-value is less than 0 Therefore, all assumptions are valid. From the Beta value, it can be seen that compared to the impact of teacher quality SQ on the new education ecology NE, the impact of teacher teaching ability TA on the new education ecology NE is relatively greater.

Table 4 Path Analysis Table

model		Unstandardized coefficient		Standardized Coefficient	t	significance	95.0% confidence interval for B		Collinearity statistics	R square
		B	standard error				lower limit	upper limit		
NE	(constant)	.104	.190		.550	.583	-.269	.477		.744
	TA	.324	.049	.320	6.573	.000	.227	.421	2.818	
	SQ	.264	.058	.250	4.584	.000	.151	.377	3.536	

Table 5 Description of Hypothesis Verification Results

Argument	dependent Variable	P	Hypothesis	Is It Established
TA	NE	***	H1	Establish
SQ	NE	***	H2	Establish

Note: Teacher teaching ability TA Teacher quality SQ Education new ecology NE; P \* \* \* < 0.0001, P \* \* < 0.001, P \* < 0.05

Research conclusions and suggestions

1. Research Conclusion

Based on the research objectives, three potential variables were constructed, namely teacher teaching ability, teacher quality, and the new ecosystem of education. Two hypotheses were proposed, and according to path analysis data, it can be inferred that both hypotheses are valid.

Assuming the establishment of H1, it indicates that the teaching ability of vocational tourism teachers will positively affect the social recognition and reputation of students in the field, and even affect their source of students. The impact of teaching ability of vocational teachers on the social recognition of graduates is mainly reflected in the following aspects: 1 Graduates' professional abilities: The knowledge and skills imparted by vocational teachers are the necessary foundation for graduates to pursue their future careers, and the teaching ability of vocational teachers directly affects the level of professional skills of graduates. If

the teaching ability of teachers is insufficient, it will naturally be difficult for graduates' professional abilities to meet the standards, thereby affecting their competitiveness and social recognition in the job market. 2. Communication skills of graduates: Vocational colleges cultivate practical talents, and in addition to professional skills, the communication skills of graduates are also very important. Vocational teachers should not only impart professional knowledge, but also focus on cultivating graduates' communication and teamwork abilities. These abilities also require targeted guidance from teachers in teaching to improve graduates' social adaptability. 3. The reputation of this major: The social recognition of graduates is not only related to their personal abilities, but also to the vocational colleges they graduate from. If the teaching ability of vocational teachers is improved, the professional quality of graduates will also be improved, which will enhance the reputation, reputation, and influence of vocational colleges, and have a positive effect on the improvement of teaching quality and the development of the school in the future.

Assuming the establishment of H2, it indicates that the quality of higher vocational tourism teachers will positively affect the social recognition and reputation of students in the field, and even affect their source of students. The quality of vocational tourism teachers and their research abilities have a positive impact on the social recognition of students in this major, mainly due to the following factors: 1. Improvement of overall professional quality: Vocational tourism majors aim to cultivate practical talents engaged in the tourism industry, with vocational skills as the core of education. As the imparter of professional knowledge and the cultivator of students' professional skills, the quality of teachers directly affects the professional skills, professional literacy, and professional readiness obtained by graduates. If higher vocational tourism teachers have high quality and can focus on professional practice, continuously explore advanced teaching methods and methods, they can provide students with more practical opportunities and experiences, thereby improving the overall professional quality. 2. Enhancing the competitiveness of students in employment: The development of the tourism industry requires high-quality tourism professionals, and students' employment competitiveness is closely related to their professional skills and literacy. If vocational tourism teachers have high quality and can timely grasp the cutting-edge trends of the tourism industry, update teaching content, effectively improve students' social recognition and employment competitiveness, and at the same time, students' employment rate and salary benefits will also be improved. 3. Vocational tourism teachers with strong scientific research capabilities often possess more comprehensive and in-depth domain knowledge and the ability to engage in knowledge innovation, which can continuously improve the knowledge system of the tourism industry and provide more cutting-edge and practical theoretical support for the teaching of vocational tourism majors; Usually, in teaching, it is possible to focus on tapping students' potential, expanding their horizons, encouraging them to explore independently, cultivating their innovative thinking and practical abilities, and leading a group of followers towards the same goal. This higher vocational tourism professional teaching team has stronger vitality and cohesion, giving schools a greater competitive advantage in the education and training market.

## **2. Research recommendations**

In order to meet the needs of national economic and social development, improve the quality of talent cultivation, promote discipline construction and innovation ability, Chinese vocational colleges have taken a series of measures to achieve the goal of continuously improving education and teaching levels, cultivating high-quality talents, and promoting the

connotative development of higher education. To discuss the quality, teaching ability, and research ability of teachers, we can start from the following aspects:

1. The college can attract and retain high-level tourism professional teachers by strengthening the selection and assessment mechanism for teachers. At the same time, we should attach importance to the training of teachers and improve their teaching and management abilities. Strengthen the construction of the teaching team, improve their professional level and educational and teaching abilities, enhance teaching effectiveness, implement teaching evaluation systems, and stimulate the teaching enthusiasm of excellent teachers.

2. Research funding can be appropriately increased to support tourism teachers in carrying out practical, basic, and applied research work. Encourage tourism teachers to participate in academic conferences and exchange activities. Strengthen the practical teaching process, establish practical bases in high-quality tourism resource areas, provide various practical opportunities including cultural heritage protection, tourism planning and design, tourism activity planning, marketing promotion, etc., and provide students with practical and effective training and employment opportunities.

3. Advocating diversified teaching methods, schools can actively promote diversified teaching models for students of different levels and needs, including online and offline teaching, practical teaching, interdisciplinary courses, etc., in order to better promote the development of students' comprehensive qualities and innovative abilities; Establish a sound education quality assurance system, strengthen supervision and inspection of the education and teaching process and management, and ensure the stable improvement of education quality. 4. Assist in expanding the channels of industry university research cooperation. The college can actively cooperate with tourism industry enterprises, local governments, social organizations, and research institutions to carry out in-depth cooperation between industry university research. Based on the needs of the tourism industry, we can jointly explore the development potential of the tourism industry. 5. To enhance teachers' sense of social responsibility, the college should strengthen the education of social responsibility for tourism teachers, cultivate their awareness of paying attention to national strategies and social development, guide them to pay attention to social hotspots and livelihood issues, actively participate in social welfare undertakings, and promote the continuous improvement of the education of higher vocational tourism majors.

In short, to improve the quality, teaching ability, and scientific research ability of tourism teachers in Chinese vocational colleges, it is necessary for schools, teachers, and various aspects of the industry to work together to form a consensus and joint efforts of the entire society.

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