

A Preliminary Study on the Career Competency of AI-integrated workplaces in Nanjing Tourism Industry: A Moderating Effect of Organizational Culture

Ningling Yu ^{1, 2, a, *}, Norhanim Binti Dewa ^{2, b}

¹ Nanjing Engineering Vocational College, Jiangsu, China

² Graduate School of Business, SEGI University, Kota Damansara, Selangor, Malaysia

^a yuningling@163.com, ^b norhanimdewa@segi.edu.my

ABSTRACT

As Artificial Intelligence (AI) continues to merge with the tourism industry, AI-integrated workplaces place higher demands on employee occupational competence. However, existing research has paid insufficient attention to how AI factors affect occupational competence and the moderating role of organizational culture in this process. Taking the tourism industry in Nanjing as a background, this study initially explores the impact of factors such as AI training on occupational competence and analyses the moderating effect of organizational culture. Preliminary analysis of the questionnaire data reveals that factors such as AI training significantly enhance occupational competence; organizational culture has a significant moderating effect that. After preliminary testing, the reliability validity and correlation values have met the criteria. There is a positive correlation between the variables. The study enriches the theoretical framework of occupational competence in the smart tourism industry, and future research can be extended to more industries and regions, and explore the dynamic influence mechanism.

KEYWORDS

A Preliminary Study; AI-integrated workplaces; Career Competency; Organizational Culture; Nanjing Tourism Industry

1. INTRODUCTION

In recent years, local governments at all levels in China have formulated policies to actively promote the development of smart tourism, and the construction of smart cities and smart scenic spots has injected new vitality into the tourism industry. By integrating big data, cloud computing and mobile Internet technologies, smart tourism provides tourists with one-stop services, including online booking, navigation, attraction information query and personalized recommendations. This new tourism model not only improves tourists' satisfaction, but also significantly enhances the management efficiency and competitiveness of tourism enterprises.

In the context of the rapid development of smart tourism, the professional competence of practitioners has become the core competitiveness of the industry's development. The widespread application of AI technology has challenged the traditional tourism service model, and practitioners need to master the operational skills of digital tools, as well as the ability to analyze and process big data. For example, in AI-driven personalized recommendation systems, employees not only need to understand the logic of the technology, but also need to provide more targeted services in conjunction with

tourists' needs[5]. Therefore, the improvement of professional competence is directly related to the service quality and competitive advantage of enterprises.

1.1. Research Background

1.1.1. Background of Industry

Artificial Intelligence (AI) technology has been increasingly used in the field of smart tourism, bringing a transformative impact to the industry, and some scenarios have already been widely applied, such as with AI-powered real-time translation devices, tourists can easily communicate with people in foreign-language countries. This technology not only improves the ease of communication, but also reduces the reliance on expensive tour guide services, making outbound travel more approachable. Based on big data analysis of Artificial Intelligence (AI), tourism companies can gain insight into consumer behavior and provide personalized tourism product recommendations. In scenic spots, intelligent tour guide robots have begun to be promoted and applied. These robots are able to provide voice explanation, route planning and real-time interactive services, creating a smarter travel experience for tourists.

In addition, the application of AI technology requires practitioners to have strong adaptive ability and ethical awareness. In the face of the ever-changing technological environment, practitioners need to maintain the ability to learn and quickly master the use of new technologies. Meanwhile, as the controversy over privacy protection and fairness of AI technology increases, practitioners need to understand the related ethical issues and practice ethics in their services [6]. It can be said that the improvement of professional competence is not only necessary to adapt to technological change, but also an important guarantee to promote the sustainable development of smart tourism.

1.1.2. Background of Location

In recent years, Nanjing, as one of the typical cities for the development of smart tourism in China, has actively promoted the construction of smart tourism based on its rich cultural heritage and modern technology. The Nanjing Municipal Government has integrated tourism resources through a digital platform and launched projects such as the 'Nanjing Smart Culture and Tourism Cloud', which provides tourists with a full range of online services, including scenic area information queries, online booking and personalized recommendations [1]. In addition, Nanjing has organized intelligent equipment, such as face recognition access control systems and intelligent guide robots, in some scenic spots to enhance visitor experience and management efficiency. These initiatives have not only facilitated the digital transformation of Nanjing's tourism industry, but also attracted a large number of tourists, further consolidating Nanjing's competitiveness as a major tourist destination [2, 3].

However, the development of smart tourism in Nanjing also faces some challenges. First, some small and medium-sized tourism enterprises lack financial and technical support to integrate into the smart tourism ecosystem. Second, the privacy protection of tourists' data and information security issues has raised public concerns, limiting the full promotion of smart tourism technologies. In addition, despite the wide application of AI technology in smart tourism, the lack of unified technical standards and ethical norms in the industry has led to uneven service quality [4]. Therefore, how to balance technological innovation and management norms has become a key issue in the development of smart tourism in Nanjing.

1.2. Literature Review

In this section, we start discussing our theory followed by research hypotheses, and moderating role of organizational culture. The study is based on five different theories: Intelligent Career Theory (ICT) [7], Social Cognitive Career Theory (SCCT) [8], Lifelong Learning Theory (LLT) [9], Career Competence Theory (CCT) [10] and Technology Acceptance Model (TAM) [11]. This study

examines the occupational competency of employees in AI-integrated workplaces in the tourism industry in Nanjing.

1.2.1. Intelligent Career Theory (ICT)

Intelligent career theory emphasizes three core dimensions of career development: skills (knowing how), motivation (knowing why) and networks (knowing whom), which together determine an individual's ability to adapt in a dynamic career environment [12]. In recent years, research has shown that the composition of occupational competencies is undergoing a transformation with the proliferation of AI technologies, where employees not only need to acquire new skills, but also need to understand the significance of technology and build diverse social networks to access resources [13]. In the context of smart tourism, this theory provides a theoretical basis for exploring how AI training, awareness and application can enhance employee professional competence.

In this study, 'knowing how' corresponds to the implementation of AI training and application to help employees acquire skills in the operation and application of the technology; 'knowing why' emphasizes the enhancement of employees' awareness and acceptance of the technology through AI awareness; and "knowing why" emphasizes the enhancement of employees' knowledge and acceptance of the technology through AI awareness. 'Knowing why' emphasizes the enhancement of employees' knowledge and acceptance of the technology through AI awareness, while "knowing whom" enhances teamwork and resource sharing through the support of organizational culture. This perspective helps to understand how AI factors combine to enhance professional competence.

1.2.2. Social Cognitive Career Theory (SCCT)

Social Cognitive Career Theory (SCCT) is based on social cognitive theory and suggests that an individual's career behaviors are driven by self-efficacy, outcome expectations, and personal goals [14]. This theory proposes that self-efficacy is an individual's belief in his or her ability to perform a certain task, while outcome expectancy is an individual's anticipation of the possible results of the behavior, which together determine whether the individual takes action and the intensity and persistence of the action. In recent years, with the rapid penetration of AI technology in the workplace, studies have shown that AI has a profound impact on employees' occupational psychological states and behavioral choices [15].

Especially in the smart tourism industry, the application of AI technology has significantly changed the way of work and improved work efficiency, while at the same time; it also puts forward higher requirements on employees' technology acceptance and career adaptability. For example, when employees have a clear perception of the functions and advantages of AI technology, they are more likely to believe that they are able to complete their work tasks with technical support and to expect positive results from the technology. This positive psychological mechanism not only enhances employees' motivation to learn but also promotes them to demonstrate higher levels of professional competence in a technology-driven environment.

Organizational culture plays a key moderating role in this process. An innovative culture can provide a supportive environment that encourages employees to try new technologies and take on challenges. Such a culture not only reinforces employees' expectations of the outcomes of AI technologies but also further enhances their self-efficacy through the provision of resources and training opportunities, highlighting the importance of building a positive organizational culture in driving occupational competency in the smart tourism industry.

1.2.3. Lifelong Learning Theory (LLT)

In 1965, Paul Lengrand introduced Lifelong Learning Theory through his UNESCO-supported report. It was the report that the first systematic presentation of the concept of lifelong learning, and Lengrand appealed that education is not limited to institutes but also should be throughout a person's life to maintain the professional development through continuous learning. Lifelong Learning Theory (LLT) emphasizes the need for individuals to adapt to new challenges and remain competitive through

continuous learning in a rapidly changing and technology-driven professional environment [16]. This theory states that learning is not only a core driver of individual development but also a key strategy for organizations to maintain a competitive advantage in a dynamic market [17]. In recent years, technological changes in the tourism industry, particularly the widespread use of artificial intelligence, have further exacerbated the need for lifelong learning capabilities among employees. Employees need to continually update their skills, adapt to new technologies and adjust their working styles to meet the high level of professional competence required by the smart tourism industry.

Through continuous AI training, employees can not only master the latest technology operation skills but also understand the logic behind the technology and application scenarios so as to integrate the technology with practical work more effectively. In addition, AI training can also help employees improve their problem-solving, innovation, and cross-disciplinary collaboration skills, which are important factors in dealing with complex technological environments in the smart tourism industry [18]. Therefore, continuous training has become an important way to enhance employees' professional competence and plays an irreplaceable role in smart tourism.

Artificial intelligence (AI) training is not only the process of technical knowledge transfer but also a key part of building a learning organizational culture. By establishing a continuous learning mechanism, organizations are able to provide dynamic learning opportunities for their employees, enabling them to adapt quickly in the face of new technologies and new business needs. This learning culture can also motivate employees to actively seek knowledge updating and skill enhancement, creating a positive career development cycle [19]. In the smart tourism industry, this dynamic learning mechanism is highly compatible with the rapidly changing technological environment and provides continuous motivational support for employees' career competence.

1.2.4. Career Competence Theory (CCT)

As Artificial Intelligence (AI) becomes more deeply integrated into various industries, it may have positive or negative impacts, it may ease or intensify intense industry competition, and it may solve old problems or raise new ones. Therefore, for a more socially beneficial direction in the future, this requires not only sound laws and common standards, but also an effective framework of ethical principles to guide specific actions. The ethical framework proposed by Cows and Morley [16] will provide important guidance for positive societal outcomes of Artificial Intelligence (AI), allowing AI to move from having good principles to good practice [25].

Career competence theory divides competency into three dimensions: knowledge, skills and attitudes, and considers occupational competency to be the core ability of employees to demonstrate adaptability and creativity in complex work environments [7]. With the rapid development and wide application of artificial intelligence technology, the composition of occupational competence is evolving towards integration and dynamism. This change requires that employees not only need to possess professional knowledge and technical competence but also need to demonstrate a high degree of adaptability, learning ability, and professional responsibility at the attitudinal level [26].

Artificial intelligence training can help employees master the latest technological knowledge and understand the practical application scenarios of the technology, thus enhancing their professional knowledge reserves and technical operational capabilities. At the same time, through the practical application of AI technology, employees can accumulate practical experience and develop the ability to solve complex problems. The application of AI technology in the smart tourism industry requires employees to be able to use relevant tools proficiently and quickly adapt to technological changes, thus enhancing their skill levels [27].

Organizations can stimulate employees' motivation to learn and teamwork by establishing incentives, providing ongoing training opportunities, and creating a positive work atmosphere. Such a culture not only reinforces the positive effects of AI factors on career competency but also promotes the continuous growth of employees in a rapidly changing technological environment [28].

1.2.5. Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) suggests that user acceptance of technology is primarily influenced by Perceived Usefulness and Perceived Ease of Use [25]. This theory provides the theoretical foundation for this study to explore how the use of AI technologies in the smart tourism industry affects the professional competence of employees. In an AI-driven work environment, perceived usefulness reflects employees' recognition of AI technology in enhancing productivity and improving service quality, whereas perceived ease of use determines employees' willingness to apply the technology in their actual work[29]. Recent studies have shown that perceived usefulness and ease of use not only directly affect employees' attitudes towards new technologies, but also indirectly enhance occupational competence by increasing technological confidence and reducing the learning curve [40].

This study applies the TAM model to the smart tourism industry to analyze how AI awareness, training and application enhance employees' knowledge, skills and attitudes through perceived usefulness and ease of use. AI awareness enhances employees' confidence in the technology and makes it easier for them to perceive the value of the technology, while AI training enhances employees' acceptance and adaptability to new technologies by reducing the complexity of technology use. In addition, organizational culture, as a moderating variable, provides a more open and friendly environment for employees by supporting technological innovation and collaboration, further reinforcing the role of the core elements of the TAM model in occupational competency enhancement. This framework provides an important theoretical basis and practical guidance for the effective implementation of AI technologies in smart tourism [42].

Table 1. Factors of Theory

| Theory | Factor |
|---------------------------------|---------------------------------------------------------------------------------------------------------|
| Intelligent Career Theory (ICT) | 1. Artificial Intelligence Awareness Raising, 2. Technical Training and Organizational Culture |
| Social Cognitive Career Theory | 1. Self-efficacy 2. Outcome Expectations 3. Personal Goals |
| Lifelong Learning Theory | 1. Learning Motivation 2. Learning Environment 3. Continuous learning |
| Career Competency Theory | 1. Knowledge 2. Skills 3. Attitude 4. Personal |
| Technology Adoption Model | 1. Perceived Usefulness 2. Ease of use 3. Attitude Toward Using 4. Behavioral Intention to Use |
| *Source: Collation by author | |

1.2.6. Research Gap

Despite the growing body of literature on Artificial Intelligence (AI)-integrated workplaces in the tourism industry, several critical gaps remain, particularly concerning career competence and organizational culture in the context of smart tourism. Most studies on smart tourism emphasize technological innovations, such as AI-driven tools and their impacts on customer experience or operational efficiency [2, 5]. However, the implications for workforce adaptability and the required career competencies to integrate these technologies effectively have not been extensively explored. While organizational culture is acknowledged as a critical element in technological adoption across

industries [4], its specific role in moderating the relationship between AI applications and career competence in the smart tourism sector has not been adequately studied. This leaves a gap in understanding how different cultural environments influence employees' ability to adapt to and use Artificial Intelligence (AI) technologies.

Existing research on smart tourism often focuses on national or global trends [3], with limited attention to regional contexts. Nanjing, as a leading city in China's smart tourism development, offers unique insights due to its blend of rich cultural heritage and advanced technological infrastructure. However, there is a lack of empirical studies addressing the city-specific challenges and opportunities related to career competence and Artificial Intelligence (AI) integration. While some studies discuss ethical issues related to Artificial Intelligence (AI) in tourism [6], they primarily focus on customer-facing challenges, such as data privacy and algorithmic bias. There is minimal research addressing how ethical considerations shape employees' training, awareness, and application of AI technologies, which are crucial for sustainable development in smart tourism.

1.3. Hypothesis Development

Artificial intelligence (AI) technologies (including training, awareness, application, and ethical considerations) are widely recognized as having a profound impact on employees' professional competence [10, 13, 14, 16]. According to the Technology Acceptance Model (TAM) and Ability-Motivation-Opportunity (AMO) theories, the effective application of technology requires employees to have the appropriate skills and awareness [15, 20]. In smart tourism, AI training can improve employees' skills, AI awareness and ethical considerations can shape their attitudes towards technology acceptance, and the practical application of AI directly tests employees' adaptability. Thus, the following hypotheses were formulated and the research hypothesis model shows below Fig2:

H1: There is a significant positive impact on AI training and career competency.

H2: There is a significant positive impact on AI awareness and career competency.

H3: There is a significant positive impact on AI application and career competency.

H4: There is a significant positive impact on AI ethical considerations and career competency.

H5: Organizational culture plays a moderating effect between AI training and career competency.

H6: Organizational culture plays a moderating effect between AI awareness and career competency.

H7: Organizational culture plays a moderating effect between AI application and career competency.

H8: Organizational culture plays a moderating effect between AI ethical considerations and career competency.

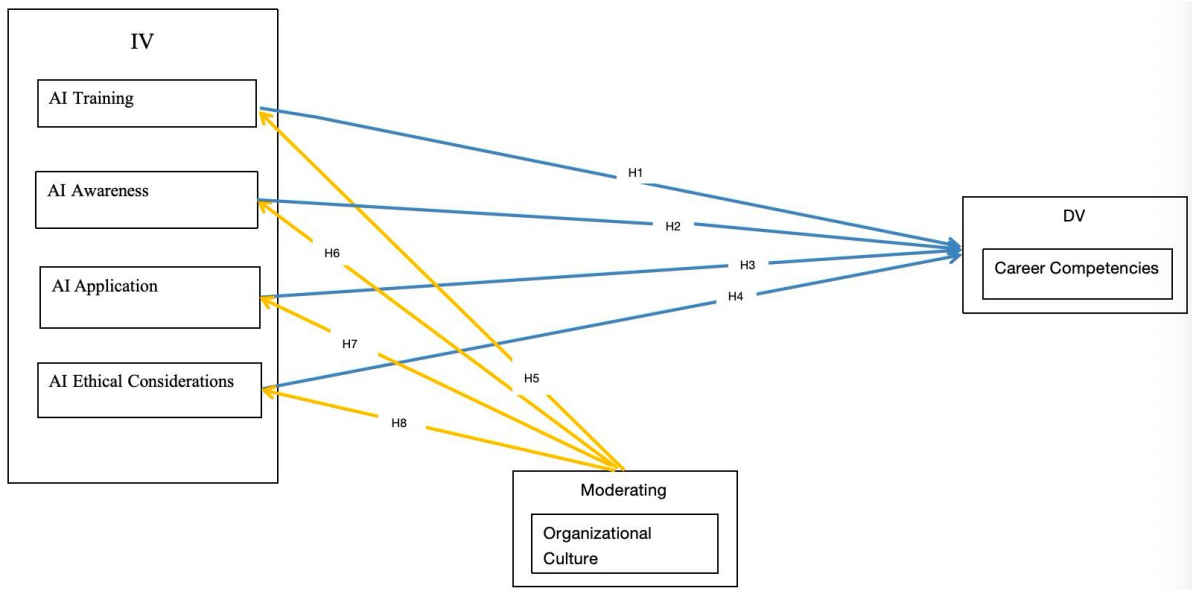


Figure 1. Research Hypothesis Model

2. PRELIMINARY STUDY

This study adopts a quantitative research method to investigate the impact of AI-related factors (including AI training, AI awareness, AI application and AI ethical considerations) on occupational competence and to analyze the moderating role of organizational culture, using practitioners in the smart tourism industry in Nanjing as the study population. The research design is based on hypothesis testing, combining questionnaire surveys and structural equation modeling (SEM) analyses to ensure the scientific validity and rigor of the study [62].

Table 2. Table of Theoretical Influence on the Study

| Variable | Theory | Source |
|---------------------------|------------------------------------------------------------|-----------------------------------------------------------|
| AI Training | Career Competence Theory Technology Acceptance Model | Cheetham, G., & Chivers, G. (1998) Davis, F. D. (1989) |
| AI Awareness | Social Cognitive Career Theory Lifelong Learning Theory | Bandura, A. (1986). Field, J. (2020) |
| AI Application | Technology Acceptance Model Career Competence Theory | Davis, F. D. (1989) Cheetham, G., & Chivers, G. (1998) |
| AI Ethical Considerations | Social Cognitive Career Theory Lifelong Learning Theory | Bandura, A. (1986). Field, J. (2020) |
| Learning Ability | Lifelong Learning Theory Social Cognitive Career Theory | Field, J. (2020) Bandura, A. (1986) |
| Organizational Culture | Career Competence Theory Social Cognitive Career Theory | Cheetham, G., & Chivers, G. (1998) Bandura, A. (1986) |
| Career Competencies | Lifelong Learning Theory Career Competence Theory | Field, J. (2020) Cheetham, G., & Chivers, G. (1998) |

*Source: Collation by author

The preliminary research is a key element of any study and helps to enhance a suitable sampling strategy. In this study, data were collected through a structured questionnaire, which was designed in eight sections covering AI-related factors, occupational competencies, organizational culture, and demographic information. The scales were selected with reference to the existing high-quality literature and suitably modified to improve applicability according to the characteristics of the smart

tourism industry [63]. After obtaining the data from the preliminary study, preliminary analyses were conducted using IBM SPSS 27, which consisted of analyses of demographic variables and tests of reliability and validity. Internal consistency will be determined by assessing Cronbach's alpha reliability coefficients and correlation analyses between independent and dependent variables.

2.1. Study Sample

A quantitative survey was used for this study. This study adopted a quantitative survey methodology. 'Wen Juan Xing' is the most widely used online provider of one type of national data collection service in China, which can provide a wide and diverse data sample. We initially used Wen Juan Xing data collection service in November 2024, and the online survey was conducted in Chinese. After obtaining respondents' consent to participate in the study, we inquired about respondents' profiles and other topics, and used screening questions to ensure that respondents were suitable for the survey. The measurement scale was based on previous surveys by scholars, as shown in Table 3 below. Participants were required to answer all questions in order to participate in the survey, which prevented missing data. Finally, 30 valid responses were collected from the pre-survey, which were reviewed and verified. Therefore, SPSS27.0 technique was used to analyze the data in this study.

2.2. Demographic Profile

In this survey of respondents, more women (53 per cent) than men (47 per cent) participated. The age of the respondents covered all working stages. The largest number of respondents was 25 and 40 years old, both accounting for 17 per cent respectively, and both of these age groups are our targets' sample, which fully demonstrates that the sample selected for this preliminary survey matches the study very well and that the data from the preliminary survey are authentic and reliable. Descriptive data analysis is shown in Table 3:

Based on the results of the above analyses, it can be seen that the characteristics of the logarithmic values of the demographic variables reflect the distribution of the pairs of respondents in this survey. Among them, the mean value represents the concentration trend, and the standard deviation represents the fluctuation. According to the results of frequency analysis of each variable pair, it can be seen that the distribution basically meets the requirements of the sample survey pair.

Table 3. Frequency Analysis of Demographic Variables

| Variables | Options | Frequency | Percentage | Average Value | Standard Deviation |
|-------------------------------|-----------------|-----------|------------|---------------|--------------------|
| Genders | Male | 14 | 47% | 1.53 | 0.51 |
| | Female | 16 | 53% | | |
| Age | 18 | 1 | 3% | 27.17 | 6.51 |
| | 20 | 1 | 3% | | |
| | 21 | 1 | 3% | | |
| | 22 | 3 | 10% | | |
| | 23 | 3 | 10% | | |
| | 25 | 5 | 17% | | |
| | 26 | 4 | 13% | | |
| | 27 | 1 | 3% | | |
| | 28 | 2 | 7% | | |
| | 29 | 1 | 3% | | |
| | 30 | 5 | 17% | | |
| | 40 | 2 | 7% | | |
| 50 | 1 | 3% | | | |
| Number of years of graduation | 1-3 years | 12 | 40% | 2.17 | 1.18 |
| | 3-5years | 7 | 23% | | |
| | 5-7years | 5 | 17% | | |
| | above 7 | 6 | 20% | | |
| Working Positions | office staff | 6 | 20% | 2.07 | 0.69 |
| | tour guides | 16 | 53% | | |
| | others | 8 | 27% | | |
| Years of working | 1-3 years | 17 | 57% | 1.93 | 1.26 |
| | 3-5 years | 5 | 17% | | |
| | 5-7 years | 1 | 3% | | |
| | above 7 | 7 | 23% | | |
| Monthly Income | less than 1,000 | 2 | 7% | 3.43 | 1.19 |
| | 1,000-3,000 | 3 | 10% | | |
| | 3,000-6,000 | 11 | 37% | | |
| | 6,000-10,000 | 10 | 33% | | |
| | 10,000-20,000 | 2 | 7% | | |
| | above 20,000 | 2 | 7% | | |

*Note: the analysis of demographic variables from SPSS v 27.0

3. RESULTS

3.1. Results of Reliability and Validity Testing

The reliability and validity tests conducted on the variables showed that all the variables and items in this study were reliable and valid. This is shown in Table 4:

Table 4. Reliability and Validity Analysis Results

| Variables | Reliability | Validity |
|-----------------------------------------------------------------|-------------|----------|
| AI Training | 0.96 | 0.765 |
| AI Awareness | 0.968 | 0.904 |
| AI application | 0.969 | 0.859 |
| AI Ethical Considerations | 0.959 | 0.798 |
| Organizational Culture | 0.97 | 0.785 |
| Career Competencies | 0.98 | 0.781 |
| *Note: the results of reliability and validity from SPSS v 27.0 | | |

The overall standardized reliability coefficient is 0.96. The range of values for the reliability coefficient is between 0 and 1, with the closer to 1 the higher the reliability. The result of this analysis is 0.96, which is relatively good reliability. The results of the exploratory factor analysis above show that the KMO test coefficients for each variable are between 0 and 1. The coefficients of the KMO test take values between 0 and 1, and the closer they are to 1 indicate that the questionnaire's validity is about as good as it can be.

3.2. Results of Correlation Testing

Correlation analysis says the most commonly used analysis method in correlation studies, this time using SPSS version 27.0 correlation analysis plate analysis procedures. This is shown in Table 5:

Table5. Correlation Analysis Results between Variables

| Variables | CC | AE | AP | AA | AT | OC |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|------|------|------|----|
| CC | 1 | | | | | |
| AE | .894 | 1 | | | | |
| AP | .880 | .882 | 1 | | | |
| AA | .899 | .864 | .900 | 1 | | |
| AT | .790 | .683 | .728 | .858 | 1 | |
| OC | .928 | .888 | .865 | .935 | .812 | 1 |
| *Note: the results of correlation analysis (Pearson Correlation) from SPSS v 27.0, Career competency=CC; AI ethical considerations=AE; AI application=AP; AI awareness=AA; AI training=AT; Organizational culture=OC | | | | | | |

Based on the results of the correlation analysis above, it can be seen that all the variables are significantly correlated at 99% level of significance and the correlation coefficients are all greater than 0, so they are all positively correlated. For example, the correlation coefficient between career competency and AI training is 0.790, which is a positive correlation. By analogy, correlations between all other variables can be explained.

4. CONCLUSIONS

The preliminary research results of showed that the study's reliability and validity were at a reasonable level, and the correlation analyses between the variables showed good results, which provided data support for the follow-up study.

Existing research has mostly focused on the effect of technology in promoting the development of smart tourism, while less attention has been paid to the professional competence of employees. This study fills the theoretical gap in the field of smart tourism by combining Artificial Intelligence (AI) technology with occupational competence. This study introduces organizational culture as a

moderating variable and confirms its effect between Artificial Intelligence (AI) technology application and professional competence, providing a new theoretical perspective for future research.

By clarifying the relationship between Artificial Intelligence (AI) technology and occupational competence, the study provides a practical path for balanced development within the tourism industry and helps to build a healthier smart tourism ecosystem. The results of this study will help Nanjing smart tourism enterprises better identify the skill needs of employees, optimize Artificial Intelligence (AI) training and career development planning, and enhance enterprise competitiveness. This study can provide data support for the Nanjing municipal government to formulate relevant policies, especially in the areas of vocational education, technology promotion and ethical code building.

This study systematically surveys the impact of Artificial Intelligence (AI) factors (including AI training, AI awareness, AI application and AI ethical considerations) on the occupational competence of employees in the smart tourism industry through empirical analyses, and further reveals the moderating role of organizational culture in this relationship. The preliminary findings show that AI training, AI awareness, AI application and AI ethical considerations have a direct positive effect on occupational competence.

Preliminary findings suggest that organizational culture plays a significant moderating role in the relationship between AI training, AI awareness, AI application and AI ethical considerations and professional competence. In addition, the inclusiveness and adaptability of organizational culture is important for employees to embrace new technologies and realize their career potential. This suggests that shaping a good organizational culture while advancing AI technology is an important strategy to ensure that the dividends of the technology are maximized.

The conclusions not only deepen the theoretical knowledge of the impact of Artificial Intelligence (AI) technology on occupational competence, but also provide practical references for enterprises to implement Artificial Intelligence (AI) strategies in the smart tourism industry. In the future, enterprises need to focus on improving employee competence through systematic training and technology guidance, as well as shaping an organizational culture that supports technological innovation, in order to achieve sustainable development under human-machine cooperation.

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