

Research on the Innovation of Tourism Public Service: from the Perspective of Data Empowerment

Feng Zhang*, Hailei Zhou

*Qingdao Vocational and Technical College of Hotel Management, No.599, Jiushui East Road,
Qingdao, China*

**Corresponding author*

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Abstract: The COVID-19 epidemic is changing dynamically, human society is evolving to the digital era, and the development of tourism industry is facing a new situation. Tourism is a way of life and is closely related to happiness. In the process of tourism, people not only need the targeted services provided by tourism enterprises, but also the non-profit-oriented public services implemented by the government as the main body cannot be absent. In the new situation, based on the perspective of data empowerment, tourism public services need to be innovative in three aspects, including the construction of digital tourism public facilities and mechanisms, the formulation of policies and operational standards for digital implementation and the training of digital talents. Based on the dual background of COVID-19 and digitalization, this study proposes the implementation path of tourism public service optimization and innovation from the perspective of digital empowerment, which not only enriches the theoretical system of tourism public service, but also has certain practical significance for the implementation of tourism public service under the new situation.

1. Introduction

The tourism industry can not only promote the overall development of the macro economy, but also be closely related to the well-being of people to achieve a better life. Since the merger of the Ministry of Culture and the Ministry of Tourism in china, the topic of the development of the cultural and tourism industry has become a hot spot of high concern in the industry and academia. Generally speaking, scholars have carried out fruitful researches on four topics, namely, the integration of the cultural and tourism industry, the innovation of the cultural and tourism industry, the practical cases of the cultural and tourism industry, and the scientific and technological tourism. First of all, regarding the research on the integration of culture and tourism, Liu Zhiyan conducted a basic research from the three dimensions of theory, practice and future direction of the integration of culture and tourism [1]. Zeng Bowei and An Shuang proposed a top-level design concept for the integration of culture and tourism from the perspective of system and mechanism [2]. Wang Xinran proposed the construction model of public service system from the perspective of cultural and tourism integration [3]. Milman, A., & Tasci, A.D.A. proposed the theme park model of cultural and tourism integration [4]. Secondly, regarding the research on the innovation of cultural tourism industry, Lei Lei proposed a new mode of experiential cultural tourism industry from the perspective of film and television

extension [5], and Ding Ning and Wang Shenghua proposed a new mode of urban cultural tourism development of "traveling with movies" [6]. Riley proposed that film and television tourism is a kind of tourism activity that enhances tourists' perception through cultural products such as films, television, literary works, magazines, records, videos and so on, which leaves a deep influence and shock on tourists, thereby inducing tourists to travel to film and television shooting places [7]. Thirdly, regarding the practical case study of cultural tourism industry, GUI Ladan took Linzhai ancient village in Guangdong Province as a case and proposed the targeted poverty alleviation model of rural tourism integrated with culture and tourism [8]. Wang Shiwei took the Internet celebrity library as a case carrier. From the new concept, new mechanism and new paths, such as three dimensions, it is discussed how to realize the public library's literature brigade [9], the depth of the fusion Liu Yang with the examples of dragon tun transformation and puts forward the logic of brigade fusion [10], and finally, on the combination of tour industry development and technology research, Hu Jiahao from the perspective of supply, it is proposed to combine science and technology with cultural tourism to build a public cultural tourism cloud platform [11]. Liu Yang put forward that the production of digital content and the application of digital content are Pareto optimal for the transformation and upgrading of digital cultural tourism industry [10]. Feng Jiqiang and Xu Yongmin proposed a new mode of service experience, cultural interaction, intelligent management and brand marketing driven by "5G + intelligent cultural travel" [12].

The concept of data empowerment in human resource management. ADAMS proposed that empowerment refers to granting additional rights to employees and giving subordinates greater discretion and control over resource allocation, so as to better serve customers [13]. GOLDSMITH defines empowerment as the allocation of power to disadvantaged members in the organizational system [14]. SPREITZER studied how to motivate employees' active behaviors from the perspectives of organizational empowerment and psychological empowerment [15]. The development of the concept of empowerment has gradually replaced the concept of empowerment, and with the progress of information technology, the object of empowerment has expanded from employees to customers, allowing customers to express their personal needs through network information technology and participate in the process of meeting their needs, so as to achieve value co-creation with enterprises [16]. In terms of data resources, "data resources" is the current "consensus", the data became the basis of production data in the new period [17], data can become research hot topic of enterprise management, through the use of innovative data scenarios and skills and methods to realize data value, finally drive enterprises to realize agile manufacturing [18], promote the industry to realize value transfer [19].

Under the new situation, the development background of the tourism industry has undergone tremendous changes. First of all, due to the global spread of COVID-19, consumers' consumption psychology and consumption habits have undergone great changes. The demand for health and safety has become prominent, and online consumption habits have gradually developed. Secondly, the macroeconomic development strategy has changed, focusing on domestic circulation and supplemented by international and domestic double circulation, which puts forward new requirements for the development of the tourism industry. Thirdly, new technologies characterized by big data, blockchain, cloud computing and artificial intelligence are advancing by leaps and bounds, which objectively provide strong scientific and technological support for the transformation and upgrading of cultural and tourism entrepreneurship.

Therefore, tourism public service must be innovated. Based on the perspective of digital pairs, the use of digital means and technology, strengthen the construction of digital infrastructure, as well as the formulation of digital standards in the industry, and continue to strengthen the training of digital talents.

2. In terms of Public Services, We Will Actively Promote the Construction of Digital Facilities and Mechanisms

In the national governance system, providing high quality public services is an important aspect to reflect the modernization of governance capacity. For the construction of public service of tourism industry development pointed out the direction of quality objectives, the tourism industry needs to actively implement the government of the top design, deployment and make full use of big data, block chain, cloud computing and digital information technologies such as artificial intelligence, design project of public service, optimize service process, improve the quality and level of public service, promote the healthy and high quality development of tour industry.

Making full use of digital information technology to empower public services can fully and efficiently use data, improve the efficiency and effect of data use, so as to achieve high-quality public service supply. Under the escort of digital technology, a large number of data collection, identification, analysis and research of the sentence can be implemented across departments and across levels of sharing and use, and based on the analysis of the data, the model and algorithm, the implementation of the service of intelligent decision-making, improve the efficiency of the government public service, lower operating costs, to achieve a fair and effective management and service. It has not only improved the effect and quality of public services, but also strengthened the cooperation and coordination between various government departments, and generally improved the government's governance capacity and level. At the same time, the active use of digital technology can also help society and civil groups to effectively participate in the supply of public services, realize the visualization of process management, improve the enthusiasm of social capital and groups to participate in public services, and effectively reduce the risk and cost waste caused by information asymmetry.

Governments at all levels should set up the digital of tour industry, through the perfect public service system and mechanism of tour industry, strengthen the brigade at the top of the public service system design, investment budget, within the area on the text brigade public service facilities construction as a whole, the positive reform and construction of scenic spots around the digital public service facilities for community residents and tourists to provide more perfect and convenient digital service facilities, improve the user experience the convenience, tour enhance the people's happiness and satisfaction levels, to optimize enhance service level and efficiency of the department in charge of the text brigade, make the administrative department for text brigade the supply of public services digital backend server.

In addition, the text brigade departments need to strengthen communication and coordination with other government departments, through the establishment of data sharing mechanism and channels, and clear their respective responsibilities and obligations, realize the sharing of data of departments, eliminate information islands and chimney, collect the market of consumer feedback and the needs of the public information, and will feedback the information in a timely manner to the digital system. Facilitate timely of information system is the central focus analysis, and through the intelligent decision-making, optimize the supply of public service, improved the management of the public service level and ability, realize accurate and effective supply of public services, at the same time, need a good data set of safety management, included in the management category, rule by law to protect consumers and merchants to privacy of the subject, through the system and mechanism. Do a good job in data cleaning and protection, avoid the leakage and abuse of data and other governance risks, give full play to the main responsibility of the government in the supply and management of digital public services, so as to better play the role and value of digital technology and provide better quality public services for the public.

3. In terms of Industry Policies and Standards, We Will Accelerate the Formulation of Policies and Operational Standards for Digital Implementation

It is suggested to accelerate the establishment and improvement of policies, regulations and management norms to promote the integrated development of tourism industry and "new infrastructure", so as to provide a good environment for the development of tourism industry digitalization and informatization. Develop new infrastructure to provide optimized data standards, integrate information data and transportation and highway tourism services, clarify data docking standards, transportation and road network supporting tourism products and service standards, etc. For example, the reservation system of tourist attractions has effectively realized the diversion of customers, avoided crowding, and reduced the possible wind direction caused by the epidemic.

In the context of the normalization of epidemic control and control, the capacity control of scenic spots is an important content of the management of scenic spots, and the reservation and queuing management are the pain points and difficulties of the operation of scenic spots. According to the statistics provided by the Ministry of Culture and Tourism, up to now, there are more than 6,000 A-level scenic spots nationwide that can provide online reservation service for customers, accounting for nearly 50% of all A-level scenic spots. Among all 302 5A scenic spots, except some open scenic spots, online time-sharing reservation has been basically realized. The online reservation service rate of 4A-level scenic spots has also exceeded 75%. In the future, all scenic spots should actively implement online reservation service, so as to realize time-sharing tour of scenic spots, do a good job of capacity control during tour, and completely eliminate the health and epidemic prevention risk and stampede risk caused by too many people.

From the perspective of micro scenic spots, as for the operational difficulties of capacity control, scenic spots whose main function is pleasure pay more attention to the problems of reservation and queuing, which not only involve safety issues, but also greatly affect the experience and satisfaction of customers. In response to this problem, Happy Valley Theme Park took the initiative to put a lot of energy and resources into the practice of contactless service concept and digitalized enabling reservation and queuing, and independently developed the "wechat mini program I Happy Valley". Enter Beijing Happy Valley Scenic Spot, open the wechat mini program, with the power of digital technology, you can enjoy project reservation queuing, AR visualization virtual experience and voice navigation services. According to the happy valley group of managers, this small program, digital service by a group of independent investment research and development, customized for their scenic spot, the main use of digital technology, face recognition to log in to confirm your identity, through a click, can achieve the ticket booking, contact without brake machine into the garden, cloakroom use store content ark, tour out of contact number, the contactless service of automatic timing and payment of parking, as well as the whole process experience of pre-tour, in-tour and post-tour, such as online comment service and evaluation, form a complete digital closed-loop of customer service and management in the scenic spot.

Happy Valley's digital wechat mini program has been put into use at Happy Valley theme parks in Nanjing, Shenzhen, Wuhan and Shanghai. Among them, the virtual queuing project was first put online in Shenzhen Happy Valley as early as 2019, and several virtual queuing machines were put into popular projects such as Snowy Eagle. Since the outbreak, and open the epidemic prevention and control of the tourist attractions in the first place, as a result, virtual queue service function has become the popular application of scenic spot operation demand, this function is not only effectively reduce the risk, also improve tourist experience, improve the customer's revisit rate, due to the dynamic repeated outbreaks, it is difficult for citizens to carry out long long travel during the holiday season, therefore. The theme park around the city has become the main destination for citizens to visit again. With the power of digital means, tourists' re-visit experience has also been improved.

4. In terms of Talent Supply and Supporting Facilities, We Will Accelerate the Training of Digital Talents

The transformation and upgrading of the cultural and tourism industry under the digital empowerment cannot be accomplished without the effective participation of specialized talents. The competency model of talents not only includes the basic cultural theory, but also needs specialized knowledge in tourism. In addition, digital literacy and ability are also indispensable.

In the department, in charge of education and brigade under the government departments to coordinate, on the one hand, professional class brigade, colleges and universities need to in-depth industry, research talent competence requirements, active revision of the talent training scheme, reshape the training goal, innovation personnel training mode, reconstruct the course system, strengthening teachers' training, especially to strengthen the cultivation of digitization practical skills; On the other hand, the competent departments and enterprise subjects should take the initiative to carry out continuing education and training for the current staff in terms of the trend of digital transformation and application. At the same time, targeted training of digital ability improvement should be carried out for individual posts, so as to be competent for the transformed positions quickly.

Since higher education entered the stage of popularization in 2002, the government has advocated that higher vocational education should change from the subject teaching mode to the teaching mode of school-enterprise cooperation and combining work with work, highlighting the "vocational" attribute, and putting forward that higher vocational education should take service as the purpose and employment as the guidance. Vocational education "20" in the vocational education as a kind of types, and general education are equally important, at the same time, again the employment guide positioning of vocational education, and put forward higher vocational talents training scheme design "snap" principle, namely the fusion, between production and education cooperation and work-integrated learning and unity, this is the advocacy of higher vocational education must be close to the nature of industry. To achieve zero distance education in the industry, changed its name in the major of higher vocational all the old and the new professional should follow the logic of employment guidance with "snap" the operating principle of the talent training of top level design, hotel management and digital operation is no exception, the change of talent cultivation in under the guidance of employment guidance logic, through on-the-spot investigation, and to look for ideas in the hotel industry. And we need to look for ideas from the perspective of the big accommodation industry, and the name change of hotel management major is based on the corresponding industrial transformation and upgrading.

Therefore, colleges and universities to organize the digital transformation and upgrading of big accommodation industry adequately, need to understand the connotation of the digital transformation of accommodation industry, path, way, scene, equipment and technology, the key to research whether as a result of the digital transformation first led to the change of jobs, including post die, cut and birth, then need to research the change of the specific content. Including the old post job content changes and the change of competency model, new post job content and competency model is what. On the basis of sufficient investigation and research to the talents training target, specification and course for further optimization and adjustment, or modify the talent training scheme is blind, and even irresponsible, perhaps only a simple reference to "neighbors", then eventually made student 3 years can conform to the requirements of the digital age big housing industry? We are responsible for the students that come out of the "neighbor's" program, and it will affect our brand of education.

In recent years, the elements such as demand, investment and technology, driven by China's hotel industry has entered a included traditional star hotel, economy hotel, hotel, apartment, home, digital intelligent hotel and shared accommodation and accommodation forms of accommodation industry era, at the same time, with the new epidemic raged, crown of the lodging industry has also further

accelerate the transformation and application of digital.

As a type of vocational education, its development goal should achieve "double combination", that is, to meet the needs of industry development and personality development. From the perspective of industry development needs, based on the traditional star hotel business mode of talent cultivation system already can not adapt to the requirement of the era of large accommodation industry digital, even "hotel management professional," the name doesn't change, the old talent training mode, course system, teaching mode and methods and teaching team also requires breakthrough refactoring. In the digital era, the training of hotel professionals must be upgraded to the perspective of the hotel industry, so as to reflect the mission and responsibility of vocational education.

First of all, in terms of training objectives, the foundation of "correct service values" will remain unchanged, and the direction of "warmth and wisdom" will be changed.

The 20 years of the new century not only is China's economic boom for 20 years, especially the lodging industry and tourist hotel vocational education rapid development of the golden age, 20 years ago to the school recruit students in international hotel compared with today, one thing has not changed, that is very pay attention to the professional attitude of the inspection, investigation of whether students have correct service values. Indeed, no matter how evolution of accommodation forms, how can digitize fu, remains essentially is the services sector, as professionals, have good service attitude and good service consciousness is the most basic and most important, the lodging industry's digital transformation is not to destroy, but the liberation of people, the people liberated from the repeated multifarious some jobs. To better engage in personalized service work, to provide guests with more warm service. Therefore, professional the renamed still to adhere to the building of student service spirit and service consciousness and the cultivation of habits, related studies have shown that higher vocational hotel's undergraduate students is higher than that in graduate employment rate, with the industry source lies in the service of higher vocational students have a correct values and industry identity, in addition. As the logic of industry service and management pays more attention to data-driven and digital-enabled, it is necessary to strengthen the cultivation of digital literacy in talent training and cultivate students' data sensitivity, so that students can carry out service and management work more "intelligently" and accurately in the future.

Secondly, in the aspect of cultivation concept, we should keep the concept of integration of production and education unchanged and realize the leap from "face" to "Linzi".

The Ministry of Education in 2002, the organization held a national vocational education conference, put forward the vocational education to "take employment as the guidance, for the purpose of service, the path of combining study", the first clear concept of the integration of production and education, on July 10, 2019 the Ministry of Education issued by the "vocational education article 20" once again the "snap" concept of talent training, education integration in the first position. In the world, both the "dual system" in Germany and the "TAFE" model in Australia demonstrate the educational concept of the integration of industry and education. The integration of industry and education is the valuable experience of China's vocational education in the past 20 years, and it is a talisman that has been verified by practice. No matter it is the creation of "order class", teachers' temporary employment in enterprises, the construction of double-qualified teachers' team, the curriculum reform based on working process, or the construction of productive training base on campus, it is a useful attempt to integrate the concept of industry and education. However, due to the concept of cognitive is not enough or limited human, financial and other resources, a lot of fusion education projects stay on the surface, not well further, in the era of digitization large accommodation industry, talent training need to continue to deepen the integration of production and education concept, not only to "face", "lining", to push the integration of production and education concept to deep water area. For example, the construction of industrial college should not only stop at the stage of signing agreements, taking photos and writing press releases, but also carry out the top-level system

design of cooperation mechanism, the development of school-enterprise cooperation courses, the sharing of school-enterprise teaching staff, etc., so as to deepen the concept of the integration of industry and education into the specific units of talent training. For example, teachers' corporate postings should also be designed and implemented in stages and gradually deepened. If the goal of teachers' initial postings is to "understand" the industry and understand the operation of the hotel, the postings plan can be designed as post rotation among various departments of the hotel. The goal of secondary postponement needs to be more "specialized". Teachers enter corresponding departments according to their specialized courses and research fields. After the third time, the target of temporary employment should be more "real", and hold a real management position in the hotel, so as to realize the equal training of responsibilities and rights. In this way, professional teachers will achieve qualitative growth and leap. With this system design, every teacher will become a "double-qualified" expert, which can not only promote the improvement of teaching quality in the school, but also improve the school's popularity and influence in the industry and education circles. Of course, teachers may be poached after the improvement of their level, but the excellent system will cultivate more excellent teachers. After all, only a few will leave, and the total number of excellent teachers is improving.

Finally, in terms of training content, the "explicit" service skills training should be kept unchanged to realize the combination of "explicit" skills and "implicit" higher-order abilities.

In higher vocational talents training scheme design in the template, the goal of training content mostly described as "high quality and high skills", this description for some engineering could be better defined in the major of higher vocational class and operation, but for the hotel management this kind of professional, high skills, how to understand, only refers to the speed of the bed, or the speed of the table, in the past the talent training. Both the food service and room service courses and the National Service Skills Competition attach great importance to the explicit ability of "operational skills" of hotel specialty. With the support of skilled service operation skills, students can indeed get started quickly after internship or employment, but their development potential is not enough, because colleges and universities do not pay enough attention to the cultivation of hidden high-level abilities or do not find good solutions. Ginger and source (2006) for the cultivation of the ability of higher vocational education, puts forward the famous four dimensional model, respectively, is a professional ability, method ability, social ability and key ability, professional ability including to skill for the operation of the object, it is with the person object service ability, as well as in people, things, time and information resources for the object management ability. Method ability is more understood as a transferable learning ability, social ability is understood as leadership level, and key ability is described as thinking mode and logic ability. So it can be seen that in addition to the explicit operational skills, the rest are hidden higher-order abilities. Future digital accommodation industry era, big data and artificial intelligence, etc will accelerate the use of advanced science and technology, more and more skills will be replaced by robot, industry management of business logic and thinking such ability more demanding, more need employees with digital depth resolution ability and the ability to manage operations, hotel management and digital operation need to optimize the curriculum system. Only by innovating teaching methods and strengthening the cultivation and training of students' business logic and management thinking can we improve the quality of talent cultivation and better meet the needs of the industry and the demands of students' individual sustainable development.

In a word, in the era of digital cultural and tourism industry, what the industry needs is not skilled operators or robots, but "warm" and "intelligent" people.

5. Conclusions

As a way of life, tourism not only has the function of leisure, but also is closely related to people's

happiness. The global ravages of the COVID-19 pandemic have had a profound impact on people's psychological structures and needs, just as society's digitalization is accelerating. In this new situation, tourism public service needs to play the role of application, and some innovation.

Based on the perspective of digital empowerment, this study puts forward the innovation work of tourism public services from three aspects: First, accelerate the construction of digital infrastructure and mechanism; Second, the establishment of the tourism industry digital implementation standards and procedures; Third, in order to promote the digital construction of tourism public services, it is necessary to strengthen the training of digital talents.

Based on the dual background of COVID-19 and digitalization, this study proposes the implementation path of tourism public service optimization and innovation from the perspective of digital empowerment, which not only enriches the theoretical system of tourism public service, but also has certain practical significance for the implementation of tourism public service under the new situation.

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References

- [1] Liu, Z.Y. (2019), *Integrated development of culture and tourism: Theory, practice and future direction*. *People's Forum · Academic Frontiers*, (16): 92-97.
- [2] Zeng Bowei (2020), *An Shuang. Thinking on the reform of the integration system and mechanism of culture and tourism during the 14th Five-Year Plan Period*. *Tourism Tribune*, 35 (06): 3-6.
- [3] Wang Xinran (2018). *Construction Path of Public Cultural Service System from the perspective of cultural and tourism Integration*. *Journal of nanjing university of political science*, 34 (02): 139.
- [4] Milman, A., & Tasci, A.D.A., Milman A., Tasci, A.D.A. (2018). *Exploring the experiential and sociodemographic drivers of satisfaction and loyalty in the theme park context*. *Journal of Destination Marketing & Management*, 8: 385-395.
- [5] Lei Lei. *Film Extension (2020): Industry Empowerment of Experiential Cultural and Tourism Integration*. *Film Review*, (07): 12-15.
- [6] Ding Ning, Wang Shenghua (2020). *Integration and creativity: Research on Beijing Location Cultural Tourism Industry*. *Film Review*, (11): 40-46.
- [7] Riley, R., & Baker, D., & Van Doren, C.S. (1998). *Movie induced tourism*. *Annals of Tourism Research*, 919-935.
- [8] Gui Ladan, Tang Wei (2016). *Research on targeted poverty alleviation model of rural tourism integrated with culture and tourism: A case study of Linzhai ancient Village in Guangdong Province*. *Northwest China population*, 37 (02): 64-68.
- [9] Wang Shiwei (2019). *Reflections on the deep integration of literature and tourism in public Libraries*. *Library*, (02): 1-6.
- [10] Liu Yang, Xiao Yuanping (2020). *Logic and Transformation of cultural and tourism Integration: Based on the practice track of Tianlong Tunbao (1998-2018)*. *Enterprise Economics*, (04): 129-137.
- [11] Hu Jiahao (2020). *Research on Service Supply Problems and Countermeasures of Public Cultural Tourism Cloud Platform: A Case study of Hunan Public Cultural Tourism Cloud Platform*. *Library Theory and Practice*, (04): 53-57.
- [12] WANG, Y., WANG, Y., WANG, Y., et al (2020). *A new model for the development of library culture and tourism*. *Library and Information Science*, (04): 79-83.
- [13] ADAMS, R. (2008). *Empowerment, participation and social work*. *New York: Palgrave Macmillan*, 7-9.
- [14] GOLDSMITH, M. (2010). *Empowering your employees to empower themselves*. *Harvard Business Review*, 12 (11): 33-51.
- [15] SPREITZERG (2007). *Giving peace a chance: organizational leadership, empowerment, and peace*. *Journal of*

Organizational Behavior, 28 (8): 1077-1095.

[16] Wu Yishuang, Sheng Ya, CAI Ning (2016). *Research on Large-scale Intelligent Customization Based on Internet -- Qingdao Red Collar Clothing and Foshan Weishang Furniture Case*. *China Industrial Economics*, (04): 127-143.

[17] Han Haiting (2020). *How data can empower digital economic growth*. *New Finance*, (08): 45-47.

[18] Sun Xinbo, Su Zhonghai (2018). *Case study on agile manufacturing driven by data enablement*. *Management science*, 31 (05): 117-130.

[19] Wang Wenqian, Xiao Shuochen, Ding Yan (2020). *Research on Industrial Value Transfer Driven by Digital Empowerment and User Demand: A Case study of Haier Group*. *Scientific management research*, 38 (02): 78-83.