

# Survey and Analysis of Popular Science Tourism and Perception with in University Towns: Guangzhou Higher Education Mega Center

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## ABSTRACT

Popular science tourism is one of the many forms of science popularization that is effective and simple to implement. Universities are often an important destination on existing popular science tourism itineraries. This has prompted many scholars to consider the importance and status of universities in science tourism, as well as whether or not their relationship with the city remains as fragmented as previously.

**Keywords:** Tourism; Satisfaction; Science; Transport facilities

## INTRODUCTION

In the minds of many, the connection between the university and the city in which it is located is typically severed, a clear-cut piece of land separating the institution from the city. In recent years, with rapid economic, social, and technological development, most emerging technologies have frequently made their way into people's lives in various convenient forms and piqued their interest in these technologies. As a result, the status of the popularization of science has progressively increased and gained prominence. Popular science tourism is one of the many forms of science popularization that is effective and simple to implement. In addition, it has a high capacity and reaches a broad audience. Therefore, the future development of popular science tourism holds great potential. Universities, which are at the forefront of scientific and technological development, are the most important contributors to the development of popular science tourism since they constitute the birthplace of the latest technologies and have the necessary personnel and resources to conduct science tourism. For these reasons, universities are often an important destination on existing popular science tourism itineraries. This has prompted many scholars to consider the importance and status of universities in science tourism, as well as whether or not their relationship with the city remains as fragmented as previously.

## LITERATURE REVIEW

In the current debate on the relationship between universities and cities, as well as that between universities and science tourism, there is a general consensus that universities are an organic part of cities and that the boundaries between universities and cities will become blurred in the future; moreover, the latest technologies created in universities will be marketed to the general public in various forms and in an enriched manner, along amenities will be improved. This trend is reflected in some universities. Take the University of Washington in Seattle as an example [1-3], which in recent years has progressively become an integral part of the landscape of the city with close ties to the surrounding community and the city center. It is now a hub of weekend recreation for city residents and an essential part of science tourism in the Seattle region. On campus, the university has established a vast space where the public can experience the latest technologies, making a visit to the University of Washington a must-see travel destination on science tourism itineraries in the Seattle area. Meanwhile, the University of Technology Sydney, located in the heart of Sydney, exhibits comparable traits and prospective tourism benefits [4]. The campus was designed with no distinct boundaries with the surrounding community (i.e., there are no specific walls or railings). Therefore, the school provides a recreational space for

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**Received:** 28-Nov-2022, Manuscript No. JTH-22-20489; **Editor assigned:** 01-Dec-2022, PreQC No. JTH-22-20489 (PQ); **Reviewed:** 15-Dec-2022, QC No. JTH-22-20489; **Revised:** 22-Dec-2022, Manuscript No. JTH-22-20489; **Published:** 29-Dec-2022, DOI:10.35248/2167-0269.22.S2.005.

**Citation:** Wu D, Zhang Y, Guo W, Pan W, Li Z, Liang Y, et al (2022) Survey and Analysis of Popular Science Tourism and Perception with in University Towns: Guangzhou Higher Education Mega Center. J Tourism Hospit. S2:005.

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the local community, where advanced technology can initially be practiced and popularized. In addition, it provides a space where technological publicity can be combined with actual technological improvements while also allowing more people to use the University of Technology Sydney as an important tourism destination, particularly for popular science tourism [5].

## DISCUSSION

It can be concluded that the potential and role of universities in tourism, and even in science tourism, has been clearly summarized in past studies. In terms of their future role, the following is noteworthy [6]. On the one hand, there will be a trend towards clustering of universities in the future, which will be exemplified by the gradual formation of university towns containing several universities in various regions; on the other hand, there are currently many specific issues to consider when developing science tourism in universities: the configuration of catering, staffing, accommodation, and transport facilities; the impact of science tourism on the usual teaching environment, and existing campus infrastructure. Co-operation between universities, governmental departments, and tourism companies will become an important driving force for the development of scientific tourism in university towns in the near future.

Consider Guangzhou University Town as an example. Since its planning and design in 2000 and its opening in 2004, 10 universities have engaged in popular science tourism initiatives. Teachers and students of the School of Geography and Remote Sensing of Guangzhou University have conducted popular science tourism activities in the past, which the municipal, provincial, and national governments have recognized and supported in recent years. In 2014, the School of Geography and Remote Sensing of the Guangzhou University was designated a land and resources science popularization base in Guangdong Province, and in 2016, the Ministry of Land and Resources declared it a land and resource science popularization base (experimental scientific research). In 2016 and 2019, it was recognized as a science popularization base in Guangzhou. In 2018, the Astronomy Hall of Guangzhou University (Rock and Mineral Herbarium) was declared a youth science and technology education base in Guangdong Province [7]. In 2019, it was named the most popular science popularization base in Guangzhou Province (among a total of 20 bases). In 2020, it was designated as a Guangdong science popularization education base. Throughout the year, a base receives various visiting requests from science popularization professionals as well as research and visiting groups.

In the 2020 annual assessment of science and technology popularization bases in Guangzhou, several popular science tourism bases established by universities such as Sun Yat-sen University, Southern Medical University, South China Agricultural University, and Guangzhou University stood out as high-quality popular science tourism resources [8]. The South China University of Technology, Guangzhou University, and Guangdong Provincial Hospital of Traditional Chinese Medicine were named to the 2021-2025 national science popularization education accreditation list released by the China Association for Science and Technology in 2022. Guangzhou University organized the application for the "Guangzhou University Environmental and Ecological Civilization Science Popularization

Base" (website), marking the first time that the university has been recognized as a national science popularization education base [9]. This base integrates popular science resources from the life sciences, geographic sciences, remote sensing, and other provincial and municipal popular science bases, reflecting its environmental and ecological advantages.

Universities acted independently in the past, but in recent years, micro-sized research tour operators and popular science tourism companies have proliferated, bringing new growth to the popular science tourism industry in the Guangzhou University Town. The Guangzhou University Town Science Tourism Public Welfare Organization (Guangzhou University Town Science, Education, and Cultural Tourism Service Center, We chat public account: GZDXCB) was established in March 2022, connecting the service demands of science tourism with more than ten colleges and universities, and initially forming a science popularization supply, demand, and enterprise collaboration. The purpose of the service was to thoroughly investigate and utilize the rich historical and cultural assets of Guangzhou University Town, as well as other abundant resources such as science, education, culture, tourism, and sports. This investigation aimed to do the following: (1) support the organic integration of historical and cultural heritage and the development of cultural tourism; (2) drive the construction of a demonstration area for science, education, and cultural tourism in Guangzhou University Town; and (3) promote the image of Guangzhou University Town (Figure 1).



**Figure 1:** Representatives from 12 universities and leaders of 8 science, education, and cultural tourism venues in Guangzhou University Town attended the seminar commemorating the opening of the science, education, and cultural tourism demonstration area in Guangzhou University Town.

In August 2022, the Guangdong Provincial Department of Culture and Tourism acknowledged and approved our scientific research investigation. We conducted a series of evaluations and research, including a suitability evaluation and a holiday satisfaction survey of Guangzhou University Town as a popular science tourism destination, and we discovered problems in long-term observation [10].

In this study, several factors that may affect the value of popular science tourism at various locations in the university town were selected, and after improvement, a judgment matrix was then developed to determine the weight of each level of the indicator. In addition, the Analytic Hierarchy Process (AHP) was used to

design the scientific tourism evaluation system in order to establish a comprehensive evaluation system for the scientific value of each university and scenic spot in the university town. It was found that the most influential factors affecting the attraction of popular science tourist attractions were the number of scientific resources presented by the attraction, the accessibility of the area where it was located, and the complexity and proximity of supporting facilities (such as catering) to the attraction. On this premise, some recommendations were made for improving the suitability of popular science tourism in Guangzhou University Town.

## CONCLUSION

In addition, in consideration of the satisfaction of popular science tourism in Guangzhou University Town, we also conducted a survey on the satisfaction of popular science tourism in Guangzhou University Town during the National Day holiday (2022.10.1-2022.10.7) and provided tourism managers of Guangzhou University Town with policy recommendations based on the results. The significance of the research was in understanding the demands of tourists, developing tourism products to meet those demands, improving management services, and promoting the sustainable and healthy development of popular science tourism in university towns. In this study, SPSS and the structural equation model were used as research tools, the customer satisfaction index model (ACSI) was used as the core theory, and factors of popular science tourism were added to examine tourist satisfaction in popular science tourism destinations in Guangzhou University Town. After our 7-day survey, we found that respondents showed high satisfaction with the existing state of popular science tourism in Guangzhou University Town but that some shortcomings existed. First, Guangzhou University Town was rich in popular science tourism resources, which were deeply coveted by city tourists. Second, the prices of various products and services in Guangzhou University Town were reasonable, resulting in high tourist satisfaction. Finally, the popular science tourism scenic spots in Guangzhou University Town could expand relevant knowledge, and these spots were well-known among students and parents. The shortcomings were as follows: first, there was a lack of adequate safety facilities at a number of scenic spots in Guangzhou University Town, which included uneven roads and a lack of security in guardrail design; second, the infrastructure of public toilets or restrooms in Guangzhou University Town was inadequate (e.g., there were too few public restrooms in the university town); third, parking and public transportation in Guangzhou University City were not convenient.

## ACKNOWLEDGEMENTS

This research was funded by 2022-2023 research project on culture and tourism statistics, "Evaluation of Guangzhou Higher

Education Mega Center popular science tourism suitability and investigation and analysis of their holiday tourism satisfaction", Department of Culture and Tourism, Guangdong Province (No. 8), by The Department of Education of Guangdong Province, under the "2020 Research Project under the Thirteenth Five-Year Plan, Special Research area on the Construction of Guangdong-Hong Kong-Macao Greater Bay Area" and "The Silk Road", entitled Evaluation of Popular Science Tourism Sites in University Towns-Taking Guangzhou University Town as an Example" (No. 2020GXJK199), by 2022 Tertiary Education Scientific research project of Guangzhou Municipal Education Bureau (No. 202235269), by 2021 Curriculum Ideological and political education construction project "land use planning" of Guangdong Institute of teaching management of colleges and universities (No. x-kcsz2021158), by 2022 Guangdong province undergraduate university on-line open course steering committee research (No. 2022ZXKC367), and under the 2022 Guangzhou Higher Education teaching quality and teaching reform project teaching team project(No. 2022JXTD001).

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