

Analyzing Issues in Cultivating Talent for Archaeology and Cultural Heritage

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Abstract

This paper analyzes the primary challenges in talent cultivation encountered during the recent development of archaeology and cultural heritage studies in Chinese mainland. Since the inception of scientific excavation at Yinxu in 1928, the discipline of archaeology has achieved significant advancements, particularly in disciplinary development, methodological innovation, and interdisciplinary collaboration. Building on this foundation, the study examines the current status of these fields with respect to disciplinary progress, talent cultivation, and graduate employment. Despite this vigorous growth, talent cultivation faces persistent challenges, including an insufficient number of qualified faculty, curricula misaligned with societal needs, regional disparities, and declining recruitment quotas within archaeological and cultural heritage institutions. To address these issues and adapt to evolving workforce demands, we propose that universities strengthen faculty development and optimize curricula; governments enhance support for central and western regions to promote balanced educational resource allocation; and closer collaboration between archaeological/cultural heritage institutions and academic institutions be encouraged. Implementing these measures is expected to foster the sustainable development of archaeology and better address growing societal demands for heritage conservation and archaeological research.

Keywords

Archaeology Talent Cultivation Program Development.

1. Introduction

Since the initiation of scientific excavation at Yinxu in 1928, Chinese archaeology has undergone nearly a century of development[1]. As the cradle of Chinese archaeology, the excavations at Yinxu not only laid a solid foundation for the discipline's advancement but also continue to play a vital role in disciplinary development, methodological innovation, and talent cultivation. The scientific excavations at Yinxu hold groundbreaking significance, having not only supplied a substantial cohort of professionals to Chinese archaeology's research and educational framework but also fueled sustained momentum for the discipline's scientific and pedagogical advancement. With the implementation of cultural development strategies, the archaeological and cultural heritage field has gained increasing prominence, with talent cultivation—in particular—receiving an unprecedented level of attention. The rapid advancement of archaeology and cultural heritage studies has driven continuous refinement of related disciplines within the educational framework, with talent cultivation demonstrating positive developmental momentum. However, while the discipline progresses, systemic challenges persist in talent cultivation, including insufficient qualified faculty and misalignment between specialized curricula and practical demands. Grounded in the vigorous growth of archaeology

and cultural heritage studies, this paper analyzes existing issues in talent cultivation and proposes targeted pathways to enhance its sustainable advancement.

2. Organization of the Text

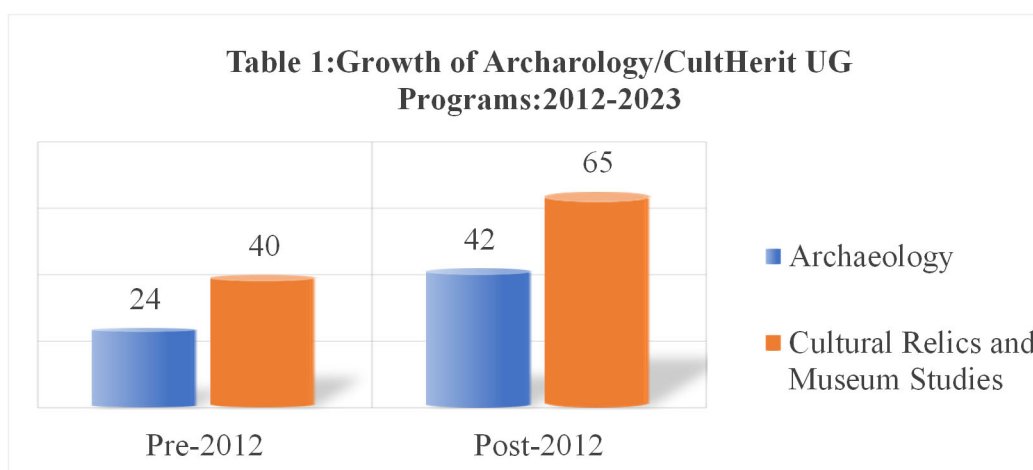
2.1. Current Status of Program Development and Talent Cultivation in Archaeology and Cultural Heritage

In recent years, advancements in technology and enhanced interdisciplinary collaboration have progressively transformed archaeology into a field characterized by multidisciplinary integration. As emphasized in the 928 Key Instructions: "Archaeological research must continually broaden its perspectives and deepen interdisciplinary convergence." This directive has not only catalyzed the refinement of archaeological sub-disciplines and the growth of related fields but also accelerated the development of specialized domains such as Oracle Bone Scholarship, Archaeological Science, and Cultural Heritage Conservation.

2.1.1. Evolution of Archaeological Studies

In recent years, program development in archaeology and cultural heritage and museology has demonstrated substantial growth. According to surveys, 42 universities currently offer undergraduate programs in archaeology, while 65 institutions provide undergraduate degrees in Cultural Relics and Museum Studies. This represents a 75% and 62.5% increase respectively since 2012. Notably, between 2012 and 2023, 18 new archaeology programs and 25 new Cultural Relics and Museum Studies programs were established, with significant expansion into regional institutions.

Furthermore, the growth trajectory is evidenced by increased postgraduate authorization: 24 new master's/doctoral programs have been approved since 2020. In 2023 alone, five universities—including the University of Science and Technology Beijing, Shanghai University, and Hunan Normal University—launched doctoral programs in cultural heritage, propelling disciplinary advancement in these fields. See Figure 1 for detailed distribution.



2.1.2. Advancement of Oracle Bone Studies Programs

As a vital branch of archaeology, Oracle Bone Scholarship holds significant status within Chinese academia. This prominence was further elevated by the Commemorative Message from the General Secretary marking the 120th anniversary of the discovery and research of oracle bone inscriptions, which underscored the discipline's scholarly importance. With technological advancements, particularly the application of digital technologies, Oracle Bone Scholarship has now entered a new phase of innovative development. Numerous academic institutions,

including the Chinese Academy of History, Palace Museum, and Fudan University, have established dedicated research centers for Oracle Bone Scholarship, significantly advancing specialized scholarship in this field [2]. The establishment of oracle bone databases—such as Yinqi Wenyuan, HandaShuku, and ZhuiyuLianzhu—has not only provided invaluable resources for academia but also created accessible public learning platforms, thereby advancing the democratization of Oracle Bone Scholarship.

2.1.3. **Advances in Cultural Heritage Conservation and Scientific and Technological Archaeology**

Amid heightened public awareness of cultural heritage conservation, preservation and restoration have emerged as pivotal domains within the cultural heritage field. Since 2010, conservation and restoration education in Chinese mainland has undergone significant expansion [3]. Concurrently, scientific and technological archaeology has gained momentum, driving innovation in archaeological research through advanced methodologies such as geophysical prospection, remote sensing, and DNA analysis. Notable initiatives like the Xia-Shang-Zhou Chronology Project exemplify how these scientific approaches have revealed profound historical insights and substantially enriched the scope of archaeological inquiry [4].

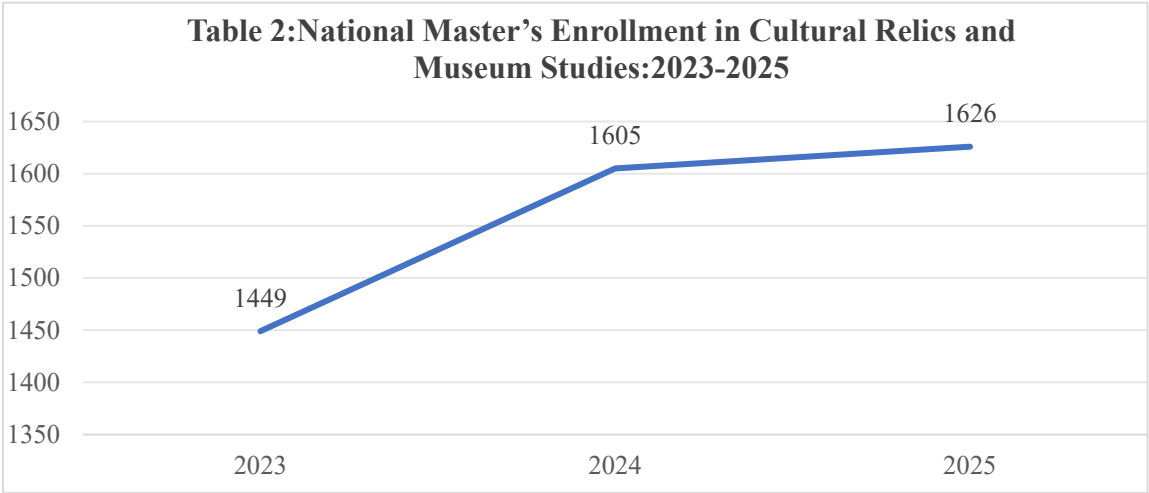
2.2. **Sustained Growth in Talent Cultivation**

2.2.1. **Growth in Undergraduate Enrollment**

In recent years, undergraduate enrollment in archaeology and Cultural Relics and Museum Studies programs has shown consistent annual growth, particularly in central and western China. The 2023 enrollment reached approximately 2,500 students for archaeology and over 6,000 for Cultural Relics and Museum Studies, marking increases of 60% and 85% respectively since 2012. Universities are increasingly prioritizing curricula that enhance practical competencies in conservation and collection management [5]. For example, Anyang Normal University's archaeology program collaborates with the Institute of Archaeology, Chinese Academy of Social Sciences to offer specialized courses including Museum Artifact Conservation and Field Collection Management, strengthening students' professional readiness for cultural institutions.

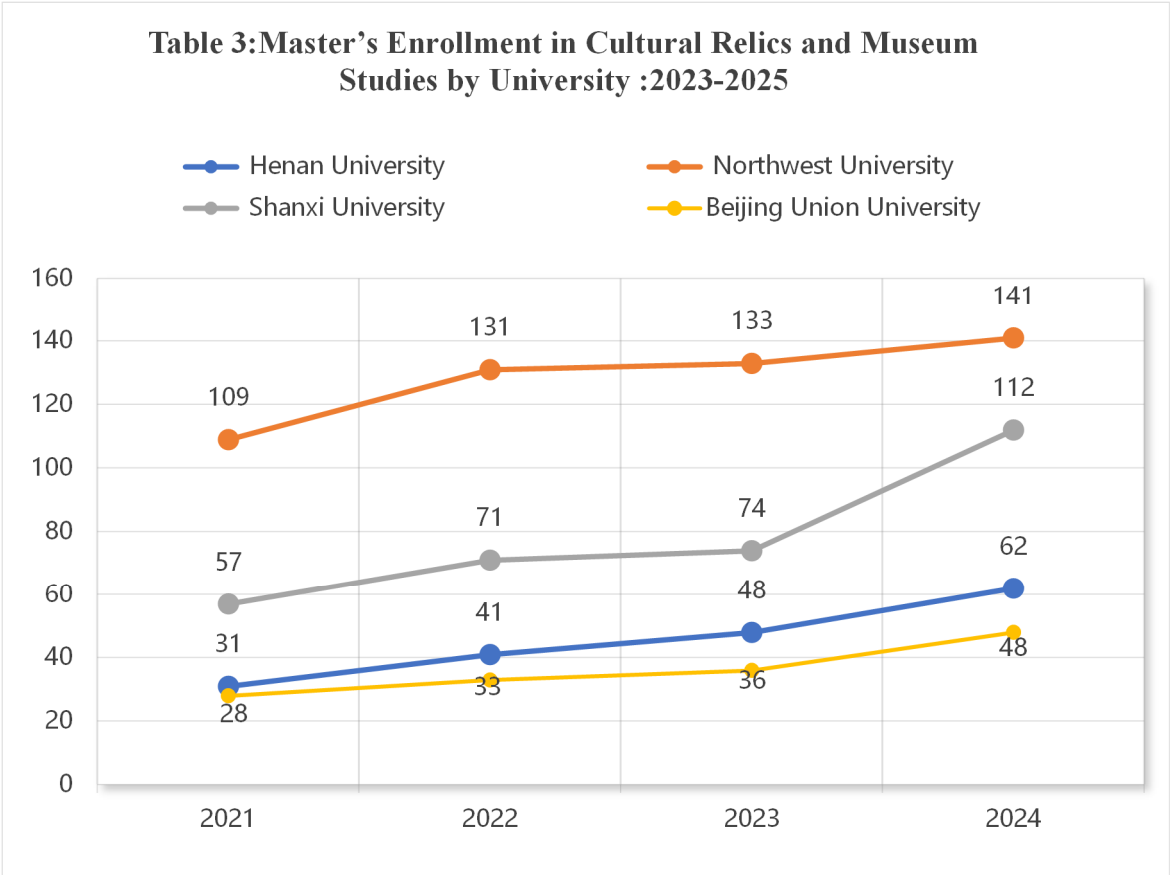
2.2.2. **Growth in Graduate Enrollment**

Beyond undergraduate programs, graduate enrollment in archaeology and Cultural Relics and Museum Studies has also demonstrated sustained growth. Taking master's programs in Cultural Relics and Museum Studies as an example, enrollment increased from 1,449 students in 2023 to 1,605 in 2024, representing a growth rate of 10.77%. As detailed in Table:



The growth in master's enrollment for archaeology and Cultural Relics and Museum Studies programs is not coincidental, but intrinsically linked to the rising prominence of these disciplines within China's higher education system. Advances in archaeological science and cultural heritage conservation techniques have intensified societal demand for specialized professionals, propelling more institutions to establish authorized master's degree programs in these fields.

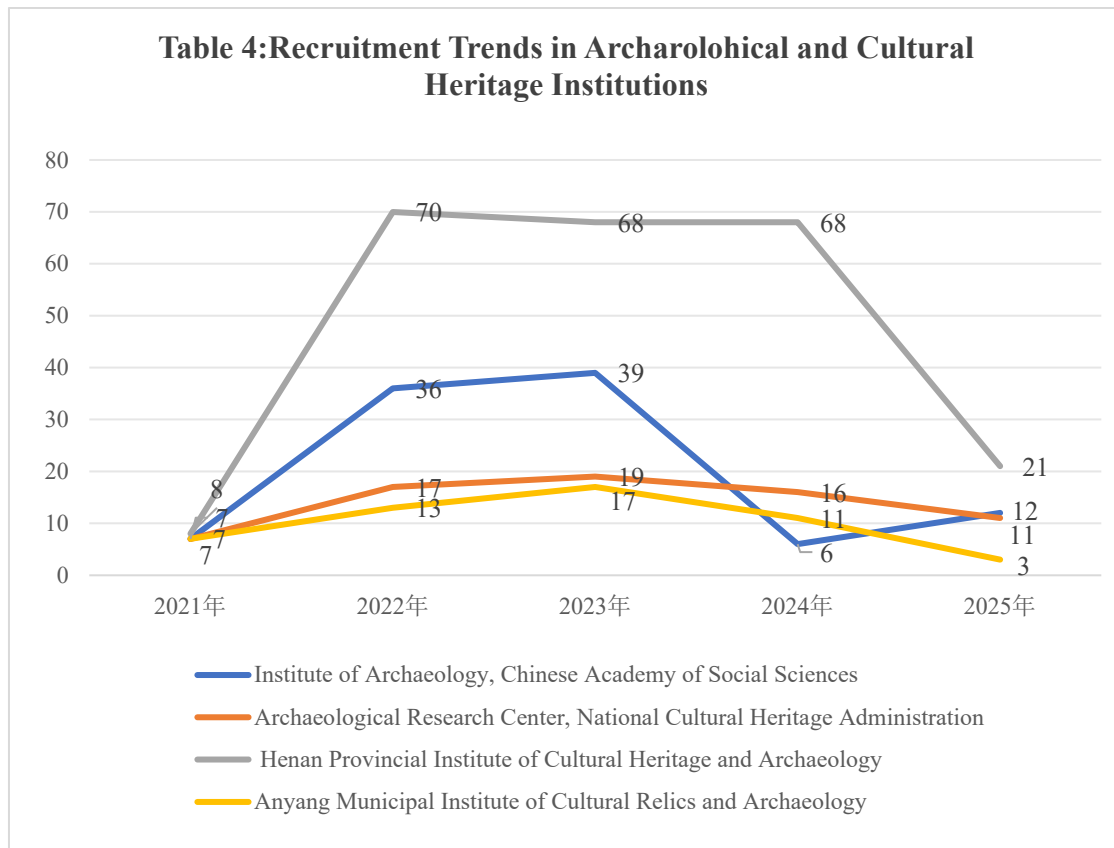
The growth in graduate enrollment is demonstrated through university-specific admissions data, as detailed below:



The statistical evidence presented above clearly demonstrates a consistent year-on-year increase in graduate enrollment across universities, reflecting sustained quantitative growth in talent cultivation. This trajectory underscores the necessity for Cultural Relics and Museum Studies graduate education to advance beyond mere quantitative expansion toward qualitative enhancement, thereby providing higher-level professional support for cultural heritage conservation and the interpretation of Chinese civilization.

2.2.3. Employment Landscape for Archaeological Talent

The employment landscape for archaeology graduates demonstrates a positive growth trajectory, particularly evidenced by the year-on-year increase in recruitment quotas at archaeological and cultural heritage institutions. This trend reflects heightened prioritization of cultural heritage conservation and archaeological research, as detailed in Table:



In recent years, the demand for highly skilled professionals within archaeological and cultural heritage institutions has steadily increased. This is particularly evident in the rising need for talent specializing in information technology and interdisciplinary technical fields. For instance, recruitment at the Institute of Archaeology, Chinese Academy of Social Sciences (IA-CASS) not only focuses on attracting specialists in traditional archaeology but also places significant emphasis on candidates with backgrounds in information technology and digital documentation techniques.

However, while the employment landscape for archaeology graduates showed positive growth trends two years ago, marked by increasing recruitment numbers—especially reflecting the heightened demand for highly skilled personnel within archaeological and cultural heritage institutions—the number of positions being offered has declined over the past two years. This shift appears to be associated with a gradual saturation in talent demand within the archaeological sector. Consequently, although the archaeology job market previously underwent a period of expansion, the current recruitment volume is progressively decreasing.

2.3. Analysis of Existing Challenges

In recent years, alongside the rapid development of Chinese archaeology and increasing interdisciplinary integration, significant progress has been made in the cultivation of archaeological professionals. Nevertheless, the current talent training system continues to face challenges that constrain further disciplinary advancement. Specifically, the primary issues confronting archaeology programs include: limited faculty resources, a misalignment between curricula and societal needs, and significant regional disparities.

2.3.1. Insufficient Faculty Resources

With the rapid development of archaeology in China, student enrollment in archaeology programs has continuously increased. However, the relative stagnation in faculty resources has emerged as a primary constraint on further disciplinary advancement. This is primarily

manifested in the discrepancy between the expanding enrollment scale in university archaeology departments and the failure to proportionally enhance both the quantity and quality of teaching staff.

Currently, many higher education institutions face a critical shortage of faculty resources, particularly in delivering courses related to key domains such as museology and cultural heritage conservation, where there is a pronounced lack of instructors with practical field experience and specialized backgrounds. This deficiency has contributed to the fragmentation of curricula, wherein course content frequently lacks both depth and systematic coherence, rendering it misaligned with the evolving demands of the discipline and prevailing societal development trends.

Furthermore, the mismatch in disciplinary backgrounds presents a substantial challenge. Many instructors possess academic qualifications that do not fully align with contemporary curricular demands, particularly in interdisciplinary domains where there is a critical shortage of versatile specialists capable of integrating archaeological methodologies with modern scientific technologies.

For instance, instruction in emerging fields such as digital archaeology and archaeological science urgently requires faculty with expertise in information technology. However, most current archaeology instructors in higher education institutions remain predominantly trained in traditional field archaeology, rendering them inadequately equipped to address these evolving needs.

This deficiency not only deprives students of exposure to advanced technological applications but also impedes innovative development within the discipline.

2.3.2. Curricula Misaligned with Societal Needs

Currently, numerous traditional archaeology curricula fail to integrate modern technologies, resulting in graduates frequently exhibiting insufficient professional preparedness. This disconnect has intensified as technological advancements and pervasive digitalization continuously elevate occupational requirements within archaeology, creating an urgent demand for interdisciplinary practitioners equipped with multifaceted competencies.

To bridge this gap, academic institutions must proactively reform curricula by: Incorporating courses in digital documentation techniques, site conservation science, and archaeological data analytics; Strengthening collaborations with scientific research entities; Expanding applied learning opportunities to cultivate high-caliber professionals meeting future vocational imperatives.

2.3.3. Regional Disparities in Educational Provision

Despite increased enrollment in archaeology programs at central-western Chinese universities in recent years, persistent deficits in educational resources and research infrastructure have widened interregional disparities in talent cultivation. This imbalance in educational provisioning restricts student access to critical research facilities and fieldwork opportunities in these regions, thereby constraining academic development and impeding the acquisition of essential professional competencies. Resolving this exigency necessitates coordinated governmental-societal efforts, specifically through enhanced fiscal support to institutions in less-advantaged regions to advance infrastructure for archaeology and cultural heritage conservation programs, thus elevating educational quality. Concurrently, establishing cross-regional collaborative frameworks between eastern and western universities can facilitate resource sharing and pedagogical knowledge exchange, fostering synergistic advancement in scholarship and equitable talent development.

2.3.4. Declining Recruitment Quotas in Archaeological and Cultural Heritage Institutions

In previous years, archaeological and cultural heritage institutions demonstrated growing demand for high-caliber professionals, with particularly significant increases in recruitment for IT and interdisciplinary technical expertise. This trend reflected the discipline's evolution toward greater diversification and technological integration. However, recent years have witnessed a marked decline in recruitment quotas across these institutions. This paradigm shift likely stems from multiple factors, including approaching saturation in archaeological and cultural heritage talent pools, leading to slowed hiring. As positions become incrementally filled and qualification standards elevate, institutions now face more stringent selection processes.

To address these challenges, both heritage institutions and academic programs must prioritize quality over quantity in talent development, focusing on cultivating innovative professionals with cross-disciplinary competencies. Strengthened collaboration between institutions and universities is essential to establish structured internship and training mechanisms, ensuring robust talent pipelines and adaptability to evolving industry demands.

3. Conclusion

While Chinese mainland has made significant strides in talent cultivation for Cultural Relics and Museum Studies, persistent challenges remain. To address current disciplinary issues, this study proposes the following strategic recommendations:

Firstly, Higher education institutions should strengthen faculty development through the strategic recruitment of interdisciplinary practitioners, particularly by collaborating with technology sectors to onboard instructors with expertise in contemporary digital methodologies, thereby enhancing pedagogical diversity. Concurrently, universities must demonstrate institutional commitment to continuous professional development programs, enabling faculty to master emerging technologies and cross-disciplinary competencies essential for addressing evolving educational demands.

Secondly, In curricular reform, universities must proactively realign programs to better address societal needs, particularly by integrating modules in digital archaeology and archaeological science—emerging fields critical for synthesizing traditional pedagogy with technological innovation. This curricular expansion will provide students with diversified skill sets essential for cultivating versatile professionals possessing cross-disciplinary competencies. Concurrently, enhancing practice-oriented pedagogy through structured internships and mentored research projects is imperative to elevate professional capabilities during experiential learning, thereby boosting job market readiness.

Thirdly, Addressing regional disparities necessitates concerted governmental-societal interventions to prioritize resource allocation toward higher education institutions in central-western China, which requires implementing structural mechanisms for infrastructure enhancement and faculty development to advance balanced regional educational advancement.

Fourthly, To mitigate sectoral contractions in heritage institution recruitment, a tripartite approach should be adopted: forging institutional synergies between archaeological entities, universities, and research institutes; establishing talent pipeline mechanisms for sustainable personnel provisioning; and developing structured practicum platforms to ensure long-term competency-based talent cultivation.

The collective implementation of these measures will effectively mitigate current challenges in training archaeological and cultural heritage professionals, thereby sustaining the disciplinary progression of archaeology and Cultural Relics and Museum Studies through structured advancement frameworks.

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References

- [1] Anyang Team, Institute of Archaeology, Chinese Academy of Social Sciences. 1987. Excavation Report of Yinxu (1958–1961) [in Chinese]. Beijing: Cultural Relics Press.
- [2] LIU, Yiman (Interviewee) & GAN, Yifan (Interviewer). 2021. "Keeping the Flame Alive: A Century of Inheritance and Development in Oracle Bone Studies—An Interview with LIU Yiman, Research Professor at the Institute of Archaeology, Chinese Academy of Social Sciences" [in Chinese]. Life & Partner no. 30: [14–16].
- [3] HUANG, Tianwei. 2019. "Current Status of Undergraduate Training in Movable Cultural Relics Conservation" [in Chinese]. Chinese mainland Cultural Heritage Science Research no. 2: [20–23].
- [4] ZHAO, Rui. 2023. "Current Landscape and Emerging Trajectories of Interdisciplinarity in Archaeology" [in Chinese]. Time Report (Benliu) Literature Edition no. 10: [119–121].
- [5] CHANG, Lili. 2023. "Current Status and Reflections on Undergraduate Training in Archaeology under the New Liberal Arts Framework: A Content Analysis of University Curricula" [in Chinese]. Cultural Relics in Southern Chinese mainland no. 5: [257–262].