Influencing Factors and Patterns of Digital Academic Resource Adoption Behavior among Humanities Scholars: A Configurational Perspective

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Date: 2023-04-12T12:22:10+00:00

Abstract

Purpose/Significance: Based on fuzzy-set qualitative comparative analysis (fsQCA), this study explores the influence of multi-dimensional factors on humanities scholars' willingness to adopt digital academic resources and the associated configurational paths, providing theoretical and empirical foundations for enhancing scholars' digital academic capabilities, improving digital resource utilization efficiency, and elevating digital academic resource service levels in the humanities domain.

Method/Process: By drawing on the Information Adoption Model, Unified Theory of Acceptance and Use of Technology (UTAUT), and Information Systems Success Model, this study constructs a theoretical model of factors influencing humanities scholars' digital academic resource adoption from three dimensions: information, user, and platform. A questionnaire survey was administered to graduate students and faculty members in Chinese universities, and fsQCA software was utilized to analyze 282 valid responses, thereby identifying configurational paths of interaction among the various factors.

Results/Conclusion: The findings indicate that humanities scholars' adoption of digital academic resources is a product of multi-factor synergy, with five configurational paths identified that can be further categorized into three adoption patterns: "subjective-need-driven information accessibility pattern," "external-influence-driven information quality pattern," and "comprehensive-consideration integrated adoption pattern." The study analyzes how different variables affect digital academic resource adoption outcomes and proposes targeted improvement strategies from the information, user, and platform dimensions.

Full Text

Research on Influencing Factors and Patterns of Humanities Scholars' Digital Academic Resource Adoption Behavior from a Configuration Perspective

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Abstract:
[**Purpose/Significance**] Based on Fuzzy-Set Qualitative Comparative Analysis (fsQCA), this study explores how different dimensions of influencing factors affect humanities scholars' willingness to adopt digital academic resources and identifies the configuration paths. This provides theoretical and empirical foundations for further improving humanities scholars' digital academic capabilities and digital resource utilization efficiency, and for enhancing digital academic resource service levels in the humanities field. [**Method/Process**] Drawing upon the Information Adoption Model, Unified Theory of Acceptance and Use of Technology (UTAUT), and the DeLone and McLean Model of Information Systems Success (D&M), this paper constructs a theoretical model of influencing factors for humanities scholars' digital academic resource adoption from three perspectives: information, user, and platform. A questionnaire survey was conducted targeting master's and doctoral students as well as teaching and research staff in Chinese universities. Using fsQCA software, 282 valid questionnaire responses were analyzed to explore the configuration paths of interaction among various factors. [**Result/Conclusion**] The analysis reveals that humanities scholars' adoption of digital academic resources results from the synergistic effect of multiple factors. Five configuration paths were identified, which can be further summarized into three adoption patterns: "Information Accessibility-Driven by Subjective Needs," "High-Quality Information-Driven by External Influence," and "Comprehensive Consideration-Based Adoption." The study analyzes how different variables influence digital academic resource adoption outcomes and proposes corresponding improvement strategies from the information, user, and platform dimensions.

Keywords: humanities scholars; digital academic resources; information adoption; influencing factors; fsQCA

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1 Introduction

Access to information resources is an essential process in academic research activities. In traditional academic research, humanities scholars' research methods differ from those of experts in other disciplines, exhibiting distinct humanities-

oriented attributes in their information needs [1]. They place great emphasis on primary sources such as academic journals, audio recordings, personal collections, museum originals, manuscripts, and books. They rely primarily on library catalog searching and browsing as their main information-seeking methods and depend heavily on print book resources [2]. With the advent of the digital era, digital scholarship has emerged and matured, and digital academic service platforms have developed sophisticatedly, breaking through the limitations of traditional academic research. Consequently, humanities scholars' approaches to accessing information resources have transformed in response to the digital wave, with information-seeking channels expanding from personal collections, personal networks, and libraries to rich online resources, giving rise to the concept of digital academic resources.

Digital academic resources refer to digital resources with academic content as their primary focus, mainly involving document types such as electronic journals, e-books, electronic dissertations, and open-access academic resources, providing vast amounts of literature for research users [3]. Digital academic resource adoption behavior refers to actions such as collecting, excerpting, tracking, and citing academic information after screening and evaluation. In the new research environment, digital academic resources have become increasingly important for humanities research, and users' demand for digital resources has grown more urgent. However, limitations exist in digital academic resources within the humanities field, including expensive e-book resources, poor openness, low image quality, insufficient authority, and poor interactive experiences [4]. Overall, while digital academic resources provide convenient ubiquitous access to knowledge, they also suffer from issues such as mixed quality, vast quantity and variety, and severe quality stratification, which trouble users' academic information adoption behaviors. Digital information acquisition capability constitutes an important foundation for humanities scholars to conduct digital academic research [5]. There is an urgent need to re-examine humanities scholars' academic resource usage and adoption behaviors in the digital academic environment to enhance their digital academic capabilities and academic resource utilization efficiency.

Against the backdrop of the prevailing digital humanities research paradigm, attending to the actual needs and authentic voices of humanities scholars has become increasingly important. Digital humanities, as a "productive academic practice" resulting from the fusion and collision of digital technology and humanities research, has gradually matured in its overall development. However, it suffers from a common problem of overemphasizing technology while neglecting the humanities, overlooking the extension and interpretation of humanities disciplinary values and connotations. This often causes humanities scholars to lose their voice in digital humanities research, reducing the humanities to a mere appendage of technology. Humanities disciplines serve as the interdisciplinary origin of digital humanities, and humanities scholars constitute the primary research community in the digital humanities paradigm. The development of digital humanities practice and theory cannot proceed without the participa-

tion of humanities scholars [6]. From the perspective of humanities scholars, investigating the influencing factors of their digital academic resource adoption behavior can help promote the adoption of digital academic resources, improve the construction level of digital academic resources, enable digital technology to better serve humanities disciplines, and inject vitality into digital humanities research.

2 Literature Review

Information adoption refers to the process in which users independently search for, screen, evaluate, and adopt information based on their own information needs. Research on information adoption, both domestically and internationally, is generally well-developed, with topics primarily focusing on the information adoption characteristics, adoption motivations, and influencing factors of adoption willingness and behavior in specific groups or specific types of information. As an important type of academic information, digital academic resources merit attention in adoption research.

In existing information adoption research, study objects primarily involve consumer information, tourism information, or health information, with relatively few studies focusing on academic information adoption. Only Chen Weidong examined academic new media users' information encountering behavior, emphasizing passive information acquisition and analyzing the adoption behavior of accidentally encountered information among academic new media users [7]. Rong Ziyue investigated the influencing factors of social media users' academic information adoption behavior, identifying key influencing factors and mechanisms of social media users' information adoption behavior [8]. These studies primarily rely on academic new media information, including academic communities and academic apps, with scarce mention of digital academic resources. In terms of research methodology, existing studies mostly employ questionnaire surveys and interviews for data collection, using structural equation modeling for data analysis to verify the necessity of influencing factors of information adoption behavior. However, they remain at the descriptive level of influencing factors without delving into theoretical mechanisms and lack consideration of configuration paths among influencing factors. Regarding model construction, most studies are based on widely used information adoption models such as the Information Adoption Model and Technology Acceptance Model, supplemented by semi-structured interview results. They emphasize establishing influencing factors of user information adoption from information and user dimensions but lack consideration of platform factors. Simultaneously, they overlook internal disciplinary differences in academic information adoption and fail to conduct targeted research for specific groups and audiences.

In terms of disciplinary scope, humanities scholars mainly refer to scholars in traditional literature, history, art, and philosophy disciplines who study the

relationship between humans and culture, encompassing various scholars with internal differences in thinking and research methods. Research on humanities scholars' academic information behavior mostly focuses on information needs and information-seeking behavior, involving research habits, information interaction, tool usage, and resource preferences and selection. Xiao Peng et al. analyzed the characteristics of humanities scholars' information needs and tool usage in the digital environment, summarizing the impact and challenges of digitization on humanities research paradigms and research behaviors [9]. Wang Xiuling, based on survey results of reader needs at the Chinese Academy of Social Sciences Library, summarized the information behavior habits and needs of humanities and social sciences researchers [10]. Jia Mingxia et al. employed semi-structured interviews and critical incident technique to conduct contextualized exploration of humanities scholars' digital hoarding behavior [11]. Duan Qingyu et al. used grounded theory to code the digital humanities academic motivations and needs of literature and history graduate students, deconstructing the multidimensional elements of their digital humanities academic processes [12]. Overall, existing research on humanities scholars' academic information behavior lacks attention to digital academic resource adoption behavior and lacks data support and empirical analysis.

Based on the achievements and limitations of existing research, this paper attempts to address the following questions: First, what are the influencing factors of humanities scholars' digital academic resource adoption? Second, what are the paths and patterns of humanities scholars' digital academic resource adoption? To explore these research questions, this paper, grounded in humanities scholars' needs for accessing digital academic resources, re-examines humanities scholars' academic resource adoption behavior within the context of the digital academic environment and digital humanities development. From three perspectives—information, user, and platform—it investigates the influencing factors affecting humanities scholars' adoption of digital academic resources, constructs a theoretical model of influencing factors for humanities scholars' digital academic resource adoption, employs Fuzzy-Set Qualitative Comparative Analysis (fsQCA) to explore the configuration paths of interaction among various factors, and proposes corresponding service improvement recommendations and strategies based on the adoption patterns derived from data analysis results. This aims to provide more high-quality and convenient digital academic resources for humanities scholars.

3 Model Construction of Influencing Factors for Humanities Scholars' Digital Academic Resource Adoption

Drawing upon the Information Adoption Model (IAM) [13], Unified Theory of Acceptance and Use of Technology (UTAUT) [14], and the DeLone and McLean Model of Information Systems Success (D&M) [15], this study extracts indicators such as information quality, information usefulness, source credibility, so-

cial influence, system quality, and service quality. Simultaneously, based on existing literature on information adoption behavior influencing factors as a supplement, and combined with the actual characteristics of humanities scholars' digital academic resource adoption, digital academic resource platforms, and user features, variable dimensions are renamed. From three dimensions—information, user, and platform—this paper constructs a configuration model for humanities scholars' digital academic resource adoption, as shown in [Figure 1: see original paper].

Information Dimension:

(1) **Information Quality (IQ)**, derived from the Information Adoption Model, evaluates the quality of various digital academic resources including academic journals, ancient books, and personal collections. In this paper, it represents whether digital academic resources are detailed and complete, whether organizational structure and logical expression are clear, whether used materials are accurate and error-free, and whether they are primary sources. Humanities scholars' research emphasizes reference to and use of original manuscripts and ancient books, and the digital transcription and publication of these resources inevitably involve issues of information accuracy and completeness.

(2) **Information Usefulness (IU)**, derived from performance expectancy in UTAUT, refers to the degree to which individuals feel a system can improve their work performance, enhance their productivity, and improve their research efficiency. In this paper, it refers to the extent to which humanities scholars believe that adopted digital academic resources align with their research topics or interests, can assist in academic accumulation, help understand academic frontiers, inspire academic writing, or satisfy reading interests, thereby contributing to improved learning and research levels.

(3) **Information Credibility (IC)**, derived from source credibility in the Information Adoption Model, represents the authenticity and reliability of information content and its source. In this paper, it refers to humanities scholars' recognition and support for the source channels, professionalism, scholars, and authority of academic platforms of digital academic resources. Qiu Ziheng's [16] study on Chinese literature scholars at Fu Jen Catholic University noted that scholars recognize the convenience of online resources but question their accuracy, demonstrating that information credibility is an important influencing factor affecting humanities scholars' adoption of digital academic resources.

User Dimension:

(4) **Prior Knowledge (PK)** is a collection of an individual's cognitive structure and self-efficacy. Self-efficacy refers to an individual's subjective judgment of whether they want to engage in a certain behavior in a specific context [17]. An individual's cognitive structure also significantly impacts information adoption behavior, as it is crucial for understanding and judging information. In this paper, prior knowledge includes scholars' ability to clearly understand their

own academic resource usage needs, proficiently master information acquisition methods, and have knowledge of renowned scholars and academic resource platforms in their field.

(5) **Subjective Norm (SN)**, derived from community influence in UTAUT, is defined as the degree to which individuals believe they should use a new system under others' influence, representing a comprehensive factor of external social influence. Interaction within communities affects users' perceptions of new systems and technologies. In this paper, subjective norm refers to the influence on individuals from friends, colleagues, and classmates using digital academic resources, encompassing both peer influence and social impact.

(6) **Personal Innovation (PI)** measures the degree to which individuals are willing to accept change and adopt new systems and processes. Users' acceptance of new technologies or systems largely depends on their personal innovativeness. When individuals are willing to accept new things and possess certain acceptance capabilities, they exhibit higher adoption willingness for new technologies [18]. Humanities scholars' traditional academic research methods heavily rely on print literature, making it difficult to transform ingrained research paradigms in a short time. The level of personal innovation is an important consideration affecting their adoption of digital resources.

Platform Dimension:

(7) **Platform Availability (PA)**, derived from system quality in the D&M model, represents the objective quality and technical assessment of the system itself, measuring characteristics such as reliability, scalability, and integrity of information systems. In this paper, platform availability refers to whether service platforms and databases carrying massive digital academic resources are conveniently usable, stable and smooth to browse, have low usage barriers and thresholds, are safe and reliable to use, and are accessible anytime and anywhere.

(8) **Platform Usability (PU)**, derived from service quality in the D&M model, information system service quality should include dimensions such as personalization, usefulness, empathy, and efficiency, representing whether platform functions are complete and usage is convenient. In this paper, it refers to whether platforms and databases, in addition to providing core services of massive digital academic resources, possess auxiliary functions such as facilitating academic exchange, having simple and clear information search methods, enabling tracking of related information content, providing clear structural navigation, and offering note-taking functions.

(9) **Platform Visibility (PV)** represents the reputation and influence of digital academic resource platforms, referring to public evaluation of product or service quality, reflection of users' existing usage experiences, and a signal of product or service influence [19]. From semi-structured interviews,

it was learned that influenced by factors such as platform influence, reputation, and credibility, some humanities scholars tend to select and adopt resources from more well-known platforms under equivalent resource conditions. Therefore, platform visibility is included in the influencing factor model.

(10) **Adoption Behavior (IA)** refers to users' behavior of independently searching for, screening, evaluating, and adopting information based on their own information needs. In this paper, it refers to humanities scholars' behavior of downloading, saving, sharing, recommending, and actually using digital academic resources they recognize. This paper no longer uses the mediating variable of behavioral intention but instead combines behavioral intention and usage behavior as humanities scholars' adoption behavior, thus treating adoption or non-adoption as the outcome variable of the digital academic resource adoption conceptual model.

presents the influencing factors and outcome variables for humanities scholars' digital academic resource adoption.

4.1 Research Method

The data analysis method employed in this paper is Qualitative Comparative Analysis (QCA), which adopts holistic and systems theory perspectives to explore complex relationships and mechanisms among variables. QCA is a configuration analysis method based on set theory and Boolean algebra, used to explain configuration phenomena where conditional factors are interdependent and concurrently produce results in practice. It emphasizes continuous dialogue between empirical data and relevant theories and is suitable for constructing causal relationships for research topics from small, medium, and large datasets [20], including three types: crisp-set, fuzzy-set, and multi-value.

Fuzzy-Set Qualitative Comparative Analysis is a branch of QCA that can explore which configurations of conditional elements lead to the occurrence of expected results and which configurations result in the absence of results. fsQCA is suitable for handling complex interdependencies among multiple factors. It can not only clarify the necessary relationship between individual conditions and result achievement but also explore the sufficiency of multiple coexisting configurations related to the same outcome variable. In determining case tendencies, it uses precise assignments between (0,1) as membership scores for cases, making it more precise than the other two relatively coarse classification methods in qualitative comparative analysis.

4.2 Questionnaire Design

This paper developed a standardized scale as a measurement tool and used questionnaire surveys for data collection. The questionnaire mainly consists of three parts: research introduction, user demographic characteristics, and scale items.

The research introduction briefly states the purpose, significance, basic concepts, and privacy protection matters of the research project. To understand the demographic characteristics of this survey, the questionnaire includes questions about participants' gender, age, education, disciplinary background, and other relevant information. In the scale section, a 5-point Likert scale was used to verify the feasibility and effectiveness of the theoretical hypothesis model of influencing factors for humanities scholars' digital academic resource adoption, with numbers 1 to 5 representing "strongly disagree," "disagree," "uncertain," "agree," and "strongly agree," respectively.

For scale item design, this paper referenced relevant measurement items from existing studies to design a scale suitable for this study on influencing factors of humanities scholars' digital resource adoption behavior. After initial questionnaire completion, a pre-test was conducted. Based on reliability and validity test results of the pilot sample data and feedback from respondents, the questionnaire structure was further adjusted, and the language expression of some measurement items in the scale was revised and improved to ensure accuracy and completeness. The final scale includes 10 dimensions with a total of 35 measurement items, detailed in the Appendix.

4.3 Data Collection

The survey targets of this study primarily include graduate students, teachers, and researchers in humanities disciplines at universities, with questionnaires distributed and collected through online channels. In terms of disciplinary scope, humanities scholars mainly refer to scholars in traditional literature, history, and philosophy disciplines who study the relationship between humans and culture. However, since philosophy research paradigms mostly involve self-reflection and relatively less reliance on external digital resources, the data collection targets of this paper only include literature and history scholars, excluding philosophy scholars. Regarding student participants, the survey targets master's and doctoral students majoring in literature and history nationwide. For teachers and researchers, the survey targets faculty and researchers in literature and history disciplines at all 985 universities and at institutions where Chinese language and history departments rank B or above in the fourth round of disciplinary evaluation results. Through these limitations, the study ensures that collected data originates from populations with genuine humanities research capabilities and experience, aligning with the research topic and improving data quality.

The questionnaire survey was conducted from March 28, 2022, to April 8, 2022, receiving 302 questionnaires that met the aforementioned requirements. To ensure questionnaire data quality, 20 questionnaires with completion times less than 120 seconds or greater than 1000 seconds or with identical item scores were removed, resulting in a final valid dataset of 282 questionnaires, with an effective rate of 93.7%. presents the basic sample characteristics.

In terms of sample distribution related to demographic characteristics, the overall sample distribution is relatively balanced. Among the 282 participants, the number of participants with literature and history backgrounds shows a relatively small gap. Male participants account for 64% and female participants for 36%, with relatively more male participants. Humanities scholars aged 26-50 constitute the main subjects of this study, with the largest number of samples in this interval, accounting for 79% of the total sample, which aligns with the actual age distribution of graduate students, humanities teachers, and researchers. In terms of education, the sample proportions of master's students, doctoral students, lecturers, associate professors, and professors all hover around 20%, with a reasonable internal composition distribution. The data can relatively comprehensively represent different educational levels.

4.4 Reliability and Validity Tests

All variables and items in this paper originate from classic theories and relevant literature. To further verify the scientific nature of the questionnaire, SPSS 20 was used to conduct reliability and validity analyses of questionnaire variables. Currently, the most commonly used method for questionnaire reliability analysis is Cronbach's α coefficient method. According to Nunally's [21] theory, when the reliability coefficient is between 0.7 and 0.8, the internal consistency of the questionnaire is acceptable, and when the reliability coefficient is greater than 0.8, the scale demonstrates good consistency. After reliability testing, the overall Cronbach's Alpha value of this paper's scale is 0.92, and the composite reliability (CR) of each factor is greater than 0.7, indicating good scale reliability and high internal consistency. Regarding questionnaire validity, according to Kaiser et al. [22], a KMO value greater than 0.7 indicates good validity. This paper's KMO value is 0.887, and Bartlett's sphericity test shows significance at $P=0.000<0.05$, indicating good structural validity and good correlation among items. In terms of convergent validity, the composite reliability (CR) of each factor is greater than 0.7, and the lowest average variance extracted (AVE) value is 0.416, which exceeds the minimum acceptable value of 0.36, meeting basic validity requirements and indicating good convergent validity. Since QCA methods acknowledge correlations among variables and focus on analyzing interactive configuration effects, requirements for validity can be appropriately relaxed [23]. In summary, the scale demonstrates good construct reliability and validity, and the model can reflect authentic and effective results.

5.1 Data Calibration

Variable membership values in fuzzy-set qualitative comparative analysis represent users' attitudinal tendencies and require qualitative calibration that meets practical needs. In this paper, both outcome variables and antecedent variable constructs were measured using a five-point Likert scale, with each variable measured by the total score of its scale items [24]. Based on the continuous characteristics of antecedent condition data and recommendations from previous studies, the direct assignment method was used to select calibration anchors at (0.95, 0.5, 0.05), meaning 95% of the set represents full membership, 50% represents the maximum fuzzy membership point, and 5% represents full non-membership [25]. Specific values are shown in . To avoid the influence of cases falling at intermediate values that are difficult to classify, data values showing 0.5 after calibration were manually modified to 0.501 [26].

5.2 Necessary Condition Analysis

The purpose of single-variable necessity testing is to explore whether a single necessary condition exists in cases when the outcome occurs, thereby preliminarily determining core conditions in configurations. Necessity testing was conducted on the data. As shown in , the consistency of all nine antecedent conditions and their "negations" did not reach 0.9, indicating that no single condition can be considered a necessary condition for humanities scholars' adoption of digital academic resources.

5.3 Configuration Analysis

Based on this, a truth table of all possible condition combinations between antecedent variables and outcome variables (2^9 combinations) was constructed, obtaining logical remainders without case representation. The raw consistency threshold was set to 0.8 [27], and truth table rows with PRI below 0.7 were manually changed to 0. Due to the relatively large number of cases, truth table configurations with a result of 3 were selected for the next step of combination, retaining 75% of cases. After conducting configuration minimization calculations through the fsQCA program, three types of solutions are typically generated: the parsimonious solution that fully incorporates logical remainders, the intermediate solution that incorporates partially meaningful logical remainders, and the complex solution that does not incorporate logical remainders. The intermediate solution is generally used to determine final configuration results, with the intermediate and parsimonious solutions jointly determining core and peripheral conditions in configurations. Configuration analysis was conducted

on case data using the fsQCA program, followed by stability testing with the consistency threshold increased to 0.85. Total consistency and total coverage increased slightly, but configuration results remained unchanged. Final configuration results are shown in .

presents the antecedent condition configuration results. The table shows that seven configurations leading to continuous adoption were generated, indicating that adoption behavior is multidimensional and complex. The consistency of individual configurations all exceeds 0.95, and the overall configuration consistency is 0.93, indicating that they constitute sufficient conditions for the outcome, with significant configuration effects. The overall coverage is 0.50, indicating that the seven configurations can explain more than half of the cases. Configurations with the same core conditions were categorized. Since S1a and S1b, and S2a and S2b share consistent core conditions, they form two second-order equivalent configurations. Additionally, since the core conditions of S2c and S2d are largely similar to those of S2a and S2b, the results are summarized into three humanities scholars' digital academic resource adoption patterns comprising five configuration paths, as shown in [Figure 2: see original paper].

Pattern 1: Information Accessibility-Driven by Subjective Needs. The antecedent configuration for Pattern 1 is "Information Credibility × Prior Knowledge × Platform Availability." This pattern centers on information credibility, prior knowledge, and platform availability, indicating that when information credibility is high, prior knowledge is rich, and platform usage barriers are low, humanities scholars will prioritize their own judgment and needs in adopting digital academic resources.

The peripheral conditions for S1a are high information quality, high information usefulness, high personal innovation, and high platform usability, indicating that besides meeting core conditions, attention must also be paid to improving information quality and usefulness, enhancing personal innovation capabilities, and perfecting platform auxiliary functions. This configuration covers 37% of cases, with 4% of cases explained exclusively by this configuration. The peripheral conditions for S1b are high information usefulness, high subjective norm, high personal innovation, high platform usability, and high platform visibility, indicating that regardless of information quality, humanities scholars will tend to adopt certain digital academic resources when information is useful and credible, influenced by platform visibility and peer recommendations.

Pattern 2: High-Quality Information-Driven by External Influence. The antecedent configuration for Pattern 2 includes three variants: "Information Quality × Prior Knowledge × Subjective Norm" or "Information Quality × Prior Knowledge × Platform Visibility" or "Information Quality × Prior Knowledge × Subjective Norm × Platform Visibility." This pattern centers on information quality, prior knowledge, and external influence variables (subjective norm and platform visibility), indicating that when information quality is high and needed by scholars, and when influenced by others' recommendations or high platform visibility, humanities scholars will adopt digital academic

resources.

Compared with Pattern 1, this pattern places greater emphasis on external factors such as others' resource recommendations and the reputation of resource-hosting platforms, reflecting that academic exchange and sharing within academic communities help promote humanities scholars' adoption of digital academic resources. Both S2c and S2d use "~Platform Availability × ~Platform Usability" as peripheral conditions, indicating that if digital academic resource quality is guaranteed and the resource is truly needed by scholars, when recommended by others or published on influential platforms, scholars will still adopt the resource even if the platform has high usage barriers and lacks complete auxiliary functions. Digital academic resource platforms should therefore emphasize platform construction.

Pattern 3: Comprehensive Consideration-Based Adoption. The antecedent configuration for Pattern 3 is "Information Quality × Information Credibility × Prior Knowledge × Subjective Norm × Platform Availability × Platform Visibility." This pattern includes the most core conditions, with peripheral conditions being information usefulness and platform usability. Regardless of personal innovation level, adoption will occur based on humanities scholars' own information needs. This pattern is also the most universal in traditional research, comprehensively considering internal incentives and external conditions without showing obvious preference tendencies in influencing factor considerations.

Notably, information usefulness and personal innovation appear in every path, and prior knowledge appears as a core condition in all patterns, indicating that these factors are important for promoting humanities scholars' digital academic resource adoption. Information usefulness emphasizes help for scholars' own research and interests, prior knowledge emphasizes scholars' clear understanding of their needs and complete cognitive structures, and personal innovation indicates scholars' capability to accept new technologies and resources. These are all variables focusing on scholars' subjective perspectives, demonstrating that humanities scholars, who excel in speculative and evidential research methods, exhibit strong subjective initiative and purposefulness in the digital academic resource adoption process.

Information quality, information credibility, subjective norm, platform availability, and platform visibility appear in various forms as core conditions, peripheral conditions, or irrelevant conditions, indicating that humanities scholars' consideration of these influencing factors in digital academic resource adoption is context-specific. It may also suggest that humanities scholars sometimes overlook the importance of information quality and credibility, platform availability, and visibility when adopting digital academic resources.

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6 Discussion and Implications

Based on the patterns and configuration research results of humanities scholars' digital academic resource adoption, this section discusses and reflects on three dimensions—information resources, user subjects, and platform construction—to improve humanities scholars' willingness and effectiveness in adopting digital academic resources and to facilitate their smooth conduct of digital academic research.

6.1 Information Dimension: Strengthen Information Resource Construction and Ensure Resource Quality and Authority

Humanities scholars exhibit strong purposefulness when acquiring and adopting information for research. Information needs constitute an important driving force affecting their academic resource adoption. High-quality information resources are not only the objects and core of their academic resource adoption but also catalysts that stimulate humanities scholars' information needs. Efforts should be concentrated on information resource construction to build diversified digital academic resources that are rich in content, detailed and complete, accurate and error-free, logically coherent, structurally rigorous, and visually clear. This ensures information resource quality and avoids misleading research due to low information quality. The forms of digital academic resources should be enriched to allow users to choose according to their needs, supplementing textual resources with originally digitized images to facilitate textual research and error correction. Through methods such as author identity verification or institutional certification, authoritative primary sources should be provided to humanities scholars as much as possible to ensure information resource credibility and authenticity. This provides solid guarantees for humanities scholars to obtain needed information resources in the internet environment, effectively preventing experts and scholars from spending excessive time on screening and correcting non-productive materials, and creating fundamental conditions for assisting academic research, achieving academic accumulation, understanding academic frontiers, satisfying reading interests, and inspiring academic writing.

6.2 User Dimension: Cultivate User Information Literacy and Bridge the Digital Divide

Prior knowledge appears as a core condition in all configuration results, indicating that humanities scholars need certain information acquisition capabilities when conducting academic research to ensure improved adoption efficiency, enabling them to precisely extract needed academic information from massive information resources. In the digital academic resource adoption process, humanities scholars often overlook the influence of factors such as information quality and subjective norm, requiring comprehensive improvement of users' information literacy to draw their attention to and emphasize key factors in academic information resource adoption. Humanities scholars should continuously accumulate academic experience and knowledge, focus on cultivating

information literacy and enhancing digital academic capabilities, clarify their own needs for acquiring academic resources, understand renowned scholars and academic resource platforms in their fields, and proficiently master digital academic resource retrieval methods. Meanwhile, traditional humanities scholars should be encouraged to accept the new research paradigm of digital humanities, emphasize the importance of academic exchange and dissemination, fully utilize massive digital academic resources, engage in digital academic research as a supplement to traditional academic research methods, and bridge the digital divide caused by differences in personal innovation levels.

6.3 Platform Dimension: Improve Platform Function Construction and Enhance Information Service Quality

As carriers of digital academic resource information, the completeness of platform functional services is closely related to scholars' information adoption selection behaviors. Research results show that even when platform availability and usability are poor, humanities scholars still demonstrate high adoption willingness because digital academic resources meet their needs. However, chaotic website systems increase the difficulty of resource acquisition. In open-ended questionnaire items, some respondents commented that some academic resource platforms frequently experience resource browsing lag, expensive fees, and incomplete auxiliary functions. Digital academic resource service platforms should assume social responsibility, strengthen the collection and integration of academic resources, simplify retrieval procedures, lower platform usage barriers, improve their own platform functional integrity, ensure platform resource accessibility and system stability. Platforms should also provide functional extended services, offering auxiliary functions such as information recommendation, information navigation, information tracking, and note-taking to enhance information service quality and levels, helping users accurately complete knowledge discovery and inspire research thinking amid vast resources. Others' recommendations, suggestions, and behaviors influence humanities scholars' adoption behavior. Platforms should therefore, while strengthening academic resource construction, emphasize the importance of knowledge interaction, add literature review and resource sharing functions, build good academic interaction platforms for scholars, create free and convenient reading and exchange environments, and improve academic resource dissemination efficiency. Additionally, platforms should pay attention to copyright issues when collecting digital academic resources to avoid inhibiting humanities scholars' willingness to adopt platform academic resources due to knowledge monopolies that affect their reputation.

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7 Conclusion

Based on the Information Adoption Model, Unified Theory of Acceptance and Use of Technology, and Information Systems Success Model, this paper con-

structs a theoretical model of influencing factors for humanities scholars' digital academic resource adoption from three dimensions—user, information, and platform. Using fsQCA, it explores conditions influencing humanities scholars' adoption of digital academic resources, ultimately generating five configuration patterns comprising seven configuration paths and three adoption modes: Information Accessibility-Driven by Subjective Needs, High-Quality Information-Driven by External Influence, and Comprehensive Consideration-Based Adoption.

The results indicate that internal incentives such as information usefulness, prior knowledge, and personal innovation appear in every path, demonstrating that these are important factors promoting humanities scholars' digital academic resource adoption. Information quality, information credibility, subjective norm, platform availability, and platform visibility appear in various forms across configuration paths, revealing the complexity of digital academic resource adoption conditions. Prior knowledge appears as a core condition in all five patterns, reflecting that humanities scholars have very clear information needs and strong purposefulness in adopting digital academic resources. When information quality is guaranteed, external factors such as subjective norm and platform visibility are important variables affecting humanities scholars' digital academic resource adoption. When at least one variable from each of the three dimensions—information, user, and platform—is satisfied, humanities scholars are more likely to adopt digital academic resources.

This study has several limitations that future research should address. First, the study only discusses patterns of humanities scholars' adoption of digital academic resources but does not explore reasons for their non-adoption or limited adoption. Second, due to space limitations, the study does not compare adoption behavior differences within sciences and across different educational levels. Future research can expand the sample scope and add more dimensional configuration core conditions to increase the comprehensiveness and universality of conclusions and conduct extended exploration based on this paper.

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Appendix: Scale for Influencing Factors of Humanities Scholars' Digital Academic Resource Adoption

Information Quality (IQ)
IQ1: The digital academic resources I adopt are detailed and complete
IQ2: The digital academic resources I adopt have clear organizational structure and logical expression
IQ3: The materials used in the digital academic resources I adopt are accurate and error-free
IQ4: The digital academic resources I adopt are primary sources

Information Credibility (IC)
IC1: The content of the digital academic resources I adopt is authentic and

reliable
IC2: The authors/compilers of the digital academic resources I adopt need to have high influence
IC3: The authors/compilers of the digital academic resources I adopt need to have relevant disciplinary backgrounds

Information Usefulness (IU)
IU1: The digital academic resources I adopt are relevant to my research topics
IU2: The digital academic resources I adopt can assist me in academic accumulation
IU3: The digital academic resources I adopt can help me understand academic frontiers
IU4: The digital academic resources I adopt can inspire my academic writing
IU5: The digital academic resources I adopt can satisfy my reading interests

Prior Knowledge (PK)
PK1: I clearly understand my needs for digital academic resources to be used
PK2: I have knowledge of renowned scholars and academic resource platforms in my field
PK3: I can proficiently master methods for retrieving digital academic resources

Subjective Norm (SN)
SN1: Suggestions and behaviors of authoritative scholars in academia affect my adoption of digital academic resources
SN2: Suggestions and behaviors of classmates affect my adoption of digital academic resources
SN3: Suggestions and behaviors of teachers affect my adoption of digital academic resources
SN4: Academic community promotion and recommendations of certain digital resource publishing platforms affect my usage

Personal Innovation (PI)
PI1: I am very willing to accept new things, new viewpoints, new products, and new technologies
PI2: Obtaining digital academic resources makes me feel curious and fresh

Platform Availability (PA)
PA1: Compared with direct online use, I prefer platforms that require downloading independent clients
PA2: I tend to use platforms that allow convenient reading without network access
PA3: Compared with paid resources, I prefer to use free resources
PA4: I tend to choose platforms with higher stability

Platform Usability (PU)
PU1: I will choose platforms that facilitate academic exchange
PU2: I will choose platforms with simple search methods
PU3: I will choose platforms that facilitate tracking of related content

PU4: I will choose platforms with clear navigation 脉络
PU5: I will choose platforms that provide note-taking functions

Platform Visibility (PV)
PV1: High platform influence affects my adoption of digital academic resources
PV2: Good platform reputation affects my adoption of digital academic resources

Adoption Behavior (IA)
IA1: I will download and save information content that I recognize
IA2: I will recommend information content that I recognize to others
IA3: I will organize and integrate information that I recognize and apply it to my academic research

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Author Contributions:
Zhan Yuting: Collected and analyzed research data, wrote and revised the paper
Liang Mengli: Collected and analyzed research data, revised the paper
Wang Xiaoguang: Designed research topic and framework, provided theoretical guidance

Note: Figure translations are in progress. See original paper for figures.