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Identification and Regulation of Key Influencing Factors of Mobile Library Information Acceptance: Postprint

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Date: 2023-08-27T00:00:00+00:00

Abstract

[Purpose/Significance] Exploring and identifying the key influencing factors of mobile library information acceptance in the scenario era holds significant implications for mobile library service innovation and spatial reconstruction. [Method/Process] Grounded in Information Acceptance Flow Experience Theory, User Cognition Theory, Motivation-Driven Theory, Expectation-Confirmation Theory, User Satisfaction Theory, Self-Efficacy Theory, and Technology Acceptance Theory, and departing from the "Scenario-User-Context" framework of mobile library information acceptance, this study employs the DEMATEL method to concentrate on the relational analysis of factors influencing mobile library information acceptance. [Results/Conclusion] Key influencing factors are identified based on comprehensive influence index rankings, and accordingly, regulatory strategies for mobile library information acceptance and directions for service innovation are proposed.

Full Text

Preamble

Vol. 62 No. 15 August 2018 ChinaXiv Cooperative Journal

Identifying and Regulating Key Influencing Factors of Information Acceptance in Mobile Libraries

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Abstract

[Purpose/Significance] Exploring and identifying the key factors influencing information acceptance in mobile libraries during the scene era holds significant

meaning for service innovation and spatial reconstruction in mobile libraries. [**Method/Process**] Grounded in information acceptance flow experience theory, user cognitive theory, motivation-driven theory, expectation confirmation theory, user satisfaction theory, self-efficacy theory, and technology acceptance theory, this study examines mobile library information acceptance from a "scene-user-context" perspective, employing the DEMATEL method to focus on correlation analysis among influencing factors. [**Result/Conclusion**] Key influencing factors were identified based on comprehensive impact index rankings, and accordingly, regulatory countermeasures for mobile library information acceptance and directions for service innovation were proposed.

Keywords: mobile library; information acceptance; influencing factors; DEMATEL; regulatory countermeasures
Classification Number: G250
DOI: 10.13266/j.issn.0252-3116.2018.15.001

In their article "How Should Libraries Welcome the Scene Era?", Yi Hailun and Li Jing point out that the arrival of mobile internet has endowed the term "scene" with new vitality, defining it as the entire environment in which users currently find themselves, including temporal, spatial, and situational factors [1]. Context represents any collection of information beyond time and space. In the scene era, information acceptance is a purposeful and rule-conforming behavior through which users pursue information value, with its performance depending on the sense of value and pleasure derived from the experience. The sense of value primarily originates from users' perception of resource context usefulness, while pleasure reflects the degree of support that technological, service, mobile, social, and terminal contexts provide for users' information acceptance goals. In mobile library information acceptance, users not only participate in scene-based practical activities but also interact directly with contexts, continuously iterating scenes [2].

Currently, the identification of influencing factors for mobile library information acceptance ultimately converges on scene-based element dimensions and contextual dimensions. Existing studies determine mobile library contexts either through resource, technology, and service discussions, or through resource, technology, service, mobile, social, and terminal discussions. Both approaches have merit: the former argues that technology and service already encompass mobile, social, and terminal aspects, while the latter sees the necessity of separating mobile, social, and terminal contexts from technological and service contexts due to their currently far greater utility. Mobile library users pursue scene-based experience pleasure and value—what we call information acceptance flow experience [3]—which drives scene segmentation in mobile libraries. These segmented scene elements, in turn, act upon contexts, promoting contextual refinement. This validates the inevitability of separating mobile, social, and terminal contexts from technological and service contexts.

Mobile library information acceptance, based on user cognitive theory, achieves adaptation among users, information acceptance behavior, and environment.

Scenes represent the time, space, and place of information acceptance, encompassing both information acceptance scenes and contexts, essentially realizing an adaptation process based on users' information acceptance expectations across the three elements of "scene-user-context." Although recent research on mobile library information acceptance has been abundant, few studies have examined its influencing factors. Despite deepening integration of scene-based elements in mobile libraries, the current "scene-user-context" configuration has yet to achieve its intended effectiveness [4], prompting deeper industry reflection.

This study adopts a "scene-user-context" adaptation perspective, drawing on information acceptance flow experience theory, user cognitive theory, motivation-driven theory, expectation confirmation theory, user satisfaction theory, self-efficacy theory, and technology acceptance theory. Using literature review, questionnaires, and in-depth interviews, we identify factors influencing mobile library information acceptance and employ the DEMATEL method to identify critical factors, proposing regulatory strategies to guide user information acceptance and revitalize mobile library information acceptance for sustainable development.

2. Influencing Factors and Dimensions of Mobile Library Information Acceptance

2.1 Sources of Influencing Dimensions

Current research on mobile library information acceptance influencing factors focuses on three approaches: first, obtaining factor-related data through questionnaires [5]; second, using grounded theory through in-depth interviews [6]; and third, proposing hypotheses based on the technology acceptance model and analyzing continuous usage intention influencing factors through structural equation modeling [7]. These methods are sometimes used in combination, but ultimately aim to identify and regulate key influencing factors to support mobile library service innovation development. The theoretical foundations involved include information acceptance flow theory, motivation-driven theory, user cognitive theory, expectation confirmation theory, user satisfaction theory, self-efficacy theory, and technology acceptance theory. These theories both integrate and complement each other in their influence on mobile library information acceptance [8], as specifically reflected in the influencing factor formation framework shown in Figure 1 [Figure 1: see original paper], which is constructed according to the mobile library information acceptance process sequence.

As shown in Figure 1, following the mobile library information acceptance process sequence, influencing factors include four layers: information behavior stimulation, information acceptance perception, reconciliation iteration, and service innovation. First, the information acceptance stimulation layer: motivation-driven theory stimulates users to generate information behavior, user satisfaction theory guides user information behavior, and users' perception of actual information behavior effects is guided by information acceptance flow theory.

Second, the information acceptance perception layer: based on information acceptance flow theory and user satisfaction theory, this layer guides user information behavior to achieve scene-based context configuration according to user information acceptance expectations, realizing the entire process from need to search to acceptance. User information acceptance behavior proceeds from technology acceptance theory, perceiving information acceptance from perceived usefulness and perceived ease of use. Third, the reconciliation iteration layer: this layer represents the comparison between user information acceptance expectations and reality, manifesting as either positive or negative disconfirmation between expectation and reality. Fourth, the service innovation layer: under self-efficacy theory, this layer both regulates user information behavior and transforms/optimizes the environment (scene and context). Throughout the information acceptance process, an adaptation relationship forms among "scene-user-context." Thus, influencing factors primarily focus on the adaptation degree of mobile library scene-based elements and contextual elements to user information behavior.

2.2 Summary of Influencing Factors

In summary, regardless of research perspective, mobile library information acceptance influencing factors essentially reduce to identifying and determining scene and context dimensions and element indicators. To effectively obtain these factors, we conducted a literature review of existing domestic and international research, with results shown in Table 1 .

Table 1 summarizes mobile library information acceptance influencing factors. Further analysis reveals that resource context influencing factors mainly reduce to perceived usefulness, information quality, and resource factors [49-50]; technology context factors to perceived availability and information acceptance performance expectation [51-52]; service context factors to system flexibility and service quality [53-54]; mobile context factors to perceived usefulness and perceived ease of use; social context factors to social context information acceptance media quality [49,55]; and terminal context factors to self-demand and convenience conditions [56-57]. These influencing factors align with information acceptance flow experience theory, user cognitive theory, motivation-driven theory, expectation confirmation theory, user satisfaction theory, self-efficacy theory, and technology acceptance theory [58], though no existing research has effectively integrated them.

3. Mobile Library Information Acceptance Influencing Factor System

3.1 Analysis and Determination of Influencing Factors

We validated and confirmed the preliminary influencing factors. Based on the factors summarized in Table 1, we designed a questionnaire for a pilot survey of 30 participants. Since mobile library users primarily concentrate among

university faculty, students, and researchers, our survey targeted university library staff, faculty, students, researchers, and mobile library vendors. We distributed 260 questionnaires through Wenjuanxing, professional library QQ groups, WeChat groups, WeChat Moments, and on-site channels, receiving 218 responses and obtaining 200 valid questionnaires (91.74% validity). Using SPSS for analysis, we conducted internal consistency reliability testing with Cronbach's alpha coefficient, where $\alpha > 0.7$ indicates good composite reliability [59]. The overall scale reliability was 0.925, with each dimension exceeding 0.7. Exploratory factor analysis tested structural validity, yielding KMO $= 0.875 > 0.7$ and cumulative explained variance of 78.36%, indicating good structural validity [60].

3.2 Framework Construction of the Influencing Factor System

Based on Table 1's summarized factors and incorporating scene-based elements into mobile library information acceptance, we constructed the influencing factor system shown in Table 2 : (1) Resource context, subdivided into usefulness of organization and usefulness of reorganization; (2) Technology context, subdivided into standardized technology and scene-based technology; (3) Service context, subdivided into standardized service and scene-based service; (4) Mobile context, subdivided into mobile availability and mobile ease of use; (5) Social context, subdivided into standardized social interaction and personalized social interaction; and (6) Terminal context, subdivided into terminal ease of use, availability, and usefulness.

To ensure scientific rigor and rationality, we initially employed the Delphi method, consulting mobile library managers, users, domain experts, and senior users in Jilin, Liaoning, and Henan provinces about their understanding and judgment of influencing factors and evaluation criteria. We also conducted in-depth interviews with vendors of popular domestic mobile libraries. After integrating perspectives from different respondents, we used questionnaires to examine user information needs expectations, search habits, and acceptance preferences.

4. Key Influencing Factors of Mobile Library Information Acceptance

4.1 Factor Identification and Analysis Method

The Decision-Making Trial and Evaluation Laboratory (DEMATEL) method addresses complex social problems with uncertain element relationships by leveraging expert experience. Through expert scoring of numerous factors and application of graph and matrix theories, it constructs a direct influence matrix among system elements. After normalizing this matrix, formulas derive the comprehensive influence matrix and each factor's influence degree and influenced degree, thereby calculating centrality and causality to judge relationship strength [33]. The DEMATEL application process includes [61]: analyzing direct relationships

and strengths among mobile library information acceptance influencing factors; representing these directed relationships through matrices to construct direct influence matrix Xd (where strong relationships = 3, medium = 2, weak = 1, none = 0); normalizing Xd by dividing each element by the maximum row sum; calculating comprehensive influence matrix M = X(I-X)^-1; computing each factor's influence degree (D, row sum of M), influenced degree (R, column sum of M), centrality (D+R, indicating element importance), and causality (D-R, where >0 indicates cause factors and <0 indicates result factors); and plotting causality diagrams with centrality and causality as axes to analyze factor importance and propose recommendations.

4.2 Identification of Key Influencing Factors

To reveal relationships among factors more scientifically and reliably, we invited mobile library vendors, university faculty, students, researchers, library staff, senior users, and domain experts to score relationship strengths. Using average rounding, we constructed direct influence matrix Xd shown in Table 3 .

Using MATLAB R2010a and following the DEMATEL process, we calculated influence degree (D), influenced degree (R), centrality (D+R), and causality (D-R) for each factor in the mobile library information acceptance influencing factor system, ranking the values as shown in Table 4 .

Based on Table 3 data, we plotted the causality diagram with centrality and causality as horizontal and vertical axes, respectively, marking each factor's position as shown in Figure 2 [Figure 2: see original paper].

4.3 Analysis of Key Influencing Factors

Analysis of results reveals several conclusions. First, the mobile library information acceptance influencing factor system is an organic whole where different contextual dimensions interact. Its fusion effect manifests as the ability of users' scenes to provide personalized and precise services. Sub-factors vary significantly in influence intensity, breadth, mechanism, and manner, intertwining to form a complex ecosystem for mobile library information acceptance [62].

Second, among cause factors (causality > 0), the top three sub-factors by influence degree are service targeting (C13), mobile adaptability (C17), and user diversity (C23), all with causality values above 0.9646. According to Pareto's law, these are the critical cause sub-factors. Examining why Chaoxing Learning, currently widely accepted, succeeds reveals three reasons: it allows "private customization" based on user understanding (e.g., collecting special topics, books, journals, newspapers, lectures); it supports various mobile devices (phones, iPads, tablets) with adaptive screen size perception and user-configurable debugging; and it imposes no restrictions on social background, occupation, values, age, or gender, serving all authorized users.

Third, among result factors (causality < 0), the top three by influenced degree

are resource reorganization personalization (C5), service adaptability (C10), and service coordination (C11). C5 has the smallest causality and largest influenced degree, making it most susceptible to influence. Mobile library information acceptance pursues "scene-user-context" adaptation. As users become accustomed to micro-media applications, mobile libraries must reorganize existing resources into more fine-grained content—one reason for Chaoxing Learning's acceptance.

Fourth, sub-factor centrality reflects relative importance. Among 23 sub-factors, interaction adhesiveness (C19) shows the highest centrality, making it the most critical factor. Mobile library information acceptance emphasizes experience, and adhesiveness reflects interaction willingness strength and the fit between interaction needs and information [63]. Chaoxing Learning recognizes this importance, gradually enhancing platform adhesiveness through likes, comments, forwarding, and original content functions to attract sustained usage. Other important sub-factors include service adaptability (C10), service appropriateness (C15), and technology security (C9), all with centrality above 10.058, warranting high attention. These require protecting user privacy while delivering appropriately targeted information at suitable times.

Fifth, at the B-level, the top three cause factors are personalized service (B6), mobile ease of use (B8), and terminal usefulness (B13), all with causality above 0.9646. Mobile library information acceptance pursues personalized information services, particularly supporting any user to accept any information anytime, anywhere, on any device, with functions for liking, forwarding, and commenting on topics of interest. Chaoxing Learning has grasped these essential factors, catering to user expectations, search habits, and acceptance preferences.

Sixth, at the A-level, cause factors are terminal context (A6), mobile context (A4), and social context (A5). Result factors are technology context (A2), resource context (A1), and service context (A3). Improving mobile library information acceptance performance requires focusing on: mobile terminal design and updates for better system function adaptation; mobile contexts that accurately sense user location and changes while enabling any user to access needed information anywhere [64]; and continuous iteration and innovation of technological functions (e.g., embedding mobile visual search, wearable devices) alongside resource reorganization for fine-grained, semantic depth, and dynamic organization based on user cognitive psychology. Additionally, information push should be coordinated, using different context combinations to deliver contextually relevant information at appropriate times, enhancing user experience pleasure.

Seventh, the causality diagram clearly shows that service targeting (C13) has the strongest causality, most significantly influencing mobile library information acceptance, while also maintaining high centrality. This reveals that adaptation is crucial—mobile libraries must focus on using "scene-user-context" adaptation to provide targeted services. Service adaptability (C10) is most important yet most susceptible, meaning it is influenced by other factors. Real-time scene perception and contextual adaptation for scene switching represent the innovation development goal.

5. Regulatory Strategies for Mobile Library Information Acceptance

5.1 Strengthening Adaptation Service Awareness

Among cause sub-factors, service targeting (C13), mobile adaptability (C17), and user diversity (C23) rank highest, exerting maximum influence. Among result sub-factors, resource reorganization personalization (C5) and service adaptability (C10) rank highest. Therefore, mobile libraries should adapt different contextual dimensions according to dynamic scene switching, making users feel they receive VIP services and enjoy extreme product experiences. Implementation strategies include: (1) For Chaoxing Learning, while performing well in resource organization and content adaptation, it needs enhanced user context perception to serve any authorized user anytime, anywhere. (2) For Chaoxing Mobile Library, information reorganization must be further refined to achieve fine-grained, semantic-depth, and dynamic organization based on user needs, manifested as multi-granular hierarchical organization, multi-language heterogeneous resource organization, and user cognitive psychology-based organization [65]. (3) For VIP Mobile Library, which essentially represents a mobile version of VIP Journal Database, it needs enhanced social functions and group discussion features while enriching different contextual dimensions to increase stickiness.

As external environments, user contexts, and scene elements continuously enrich, mobile library information acceptance "context-user-scene" misadaptation will periodically emerge. Mobile libraries should therefore possess self-adaptation functions to continuously optimize various factors, enabling rapid "adaptation-misadaptation-adaptation" spiral running-in effects [66].

5.2 Enhancing Interaction Adhesiveness

Interaction adhesiveness (C19) is the most critical sub-factor affecting information acceptance. Mobile library information acceptance pursues flow experience, using scene-based contextual configuration of different contextual user information acceptance expectations to transform acceptance from "mechanical acceptance" to "emotional acceptance" and then to "intelligent acceptance" [67], forming three-dimensional, multi-level experiences across different acceptance forms. Strategies to enhance adhesiveness include: (1) Global Academic Express (CNKI's mobile APP) has rich social functions (messages, comments, likes, footprints) but lacks group and discussion functions. Integrating some WeChat functions would enhance adhesiveness. (2) VIP Mobile Library has Weibo sharing functionality but lacks group discussion features. Associating with address books could form stable online-offline complementary relationships. Through scene segmentation, users with similar interests could form communities where members ask questions anytime and receive answers, with library staff providing auxiliary responses to build belonging and respect [68]. (3) Self-built mobile libraries currently have fixed functions and serious homogenization.

They should internalize WeChat, Weibo, and QQ functions, enabling users to forward, comment, like, and publish original information on themes, establish temporary discussion spaces for remote multi-person video discussions, and offer special lectures to enhance experience, adhesiveness, and sustained usage intention.

5.3 Improving Personalized Service Capabilities

At the B-level, cause factors are personalized service (B6), mobile ease of use (B8), and terminal usefulness (B13), indicating personalized service is a key user concern. Improvement strategies include: (1) For Chaoxing Learning, enrich mobile sensors and strengthen their functions to enable scene perception through mobile terminals, capturing user search habits and acceptance preferences (e.g., text vs. voice search, frequently browsed themes, downloaded content, communication partners, forwarded/liked/commented themes). (2) For Global Academic Express, break large literature into fine-grained pieces through semantic aggregation, linked data, and quantitative methods to enhance similar literature recommendation. (3) For self-built mobile libraries, use big data mining to dynamically perceive user location and acceptance expectations, thereby adapting contexts to enhance personal VIP experiences through virtual and augmented reality.

5.4 Enhancing Experience Pleasure

At the A-level, cause factors are terminal context (A6), mobile context (A4), and social context (A5), while result factors are technology context (A2), resource context (A1), and service context (A3). Mobile library information acceptance requires all six contextual dimensions, with terminal context being most critical. While current mobile libraries perform well in content adaptation, all suffer insufficient user context perception. Strategies include: (1) Improve location system accuracy for scene identification, as sensors determine context perception degree. (2) Deeply embed big data functions to mine user acceptance expectations, then adapt contexts to identified scenes to enhance experience [70]. (3) During actual acceptance, if users perceive low difficulty but high challenge, they experience boredom, requiring enriched scene functions and improved context-scene configuration. If low difficulty with moderate challenge creates indifference, user cultivation is needed to improve information literacy and acceptance capacity. Regulation involves both adjusting "scene-user-context" configuration and strengthening user cultivation to achieve flow experience and ecological, green information acceptance innovation [71].

5.5 Directions for Information Acceptance Innovation

The causality diagram clearly shows service targeting (C13) has the strongest causality and high centrality, making it most important yet most susceptible. Based on these factors, all mobile libraries should innovate toward: (1) Breaking time-space limitations to enable any information acceptance anytime, anywhere,

using fragmented time. (2) Segmenting scenes to adapt contexts based on user information needs expectations, search habits, and acceptance preferences, promoting personalized and refined acceptance. (3) Integrating WeChat public account functions for seamless online-offline fusion. (4) Flexible information acceptance through reasonable traffic guidance. (5) Building information acceptance communities for collaborative and social acceptance. (6) Enhancing flow experience by incorporating games and bullet comments to enliven acceptance atmosphere and increase user adhesiveness.

Conclusion

This study summarized influencing factors through literature review, constructed an indicator system using the Delphi method from a "scene-user-context" adaptation perspective based on multiple theories, identified key factors using DEMATEL, and proposed regulatory suggestions from cause, result, and key factor perspectives. This establishes a foundation for building mobile library information acceptance quality evaluation indicator systems and provides guidance for context integration, optimization, innovation, and sustainable development.

References

[1] Yi Hailun, Li Jing. How should libraries welcome the scene era? [J]. New Century Library, 2017(5): 36-39.
[2] Wang Fu. Construction of an ecological adaptation model between mobile library context and information behavior [J]. Information Studies: Theory & Application, 2017, 40(11): 80-85, 95.
[3] CHUANG S N, CHAN A T S. Dynamic QoS adaptation for mobile middleware [J]. IEEE transactions on software engineering, 2008, 34(6): 738-752.
[4] SCHOU S. Context-based service adaptation platform: improving the user experience towards mobile location services [C]//International conference on information networking. Busan, South Korea, IEEE, 2008: 1-5.
[5] Dong Wei, Jia Dongqin. Empirical research on usability influencing factors of university mobile libraries from user perspective [J]. Library Work and Study, 2017(4): 58-64.
[6] Ming Junren, Zhang Jun. Research on influencing factors of university mobile library APP user satisfaction [J]. Library Tribune, 2018(4): 1-10.
[7] Ming Junren, Zhang Jun. Influencing factors of university mobile library APP user satisfaction [J]. Library Tribune, 2018, 38(4): 84-94.
[8] MAHA PUTRA D. The influence on factors in attitudes toward acceptance of the information system using technology acceptance model [J]. International journal of scientific & technology research, 2016, 5(4): 231-236.
[9] BOVEE M W. Information quality: a conceptual framework and empirical validation [D]. Kansas: University of Kansas, 2004.
[10] Kan Detao. Research on mobile library services based on reader needs [J]. Library Science Journal, 2013, 35(11): 59-60, 64.

[11] Yang Wenjian. Research on university readers' mobile reading status and library resource service transformation—taking Chongqing as an example [J]. Modern Information, 2014, 34(10): 96-99.
[12] Wu Ruiyuan, Xu Qiang. Analysis of university mobile library service quality influencing factors based on ANP-Fuzzy model [J]. Library Journal, 2017, 36(1): 50-58.
[13] Ming Junren, Zhang Jun, Yang Yanni, et al. Research on mobile library user behavior based on UTAUT [J]. Library Tribune, 2017(6): 70-77.
[14] Huang Wulan, Zhang Tao. Research on mobile library user experience based on structural equation model [J]. Library and Information Service, 2016, 60(21): 6-16.
[15] Hu Changping, Wan Hua. Construction of cross-system service platform for mobile digital library in cloud environment [J]. Journal of the National Library of China, 2013, 22(2): 40-48, 71.
[16] Li Shuning, Yin Liyan. Creating user context-sensitive mobile library services [J]. Library, 2017(4): 76-81.
[17] Tang Meirong, Feng Yongcai. Research on university mobile library service quality evaluation based on LibQUAL+™—taking Xi'an Jiaotong University mobile library as an example [J]. Journal of Academic Library and Information Science, 2017, 35(4): 50-57.
[18] Shi Guohong, Wang Feng. Research on university mobile library service quality evaluation system based on user experience [J]. Information and Documentation Services, 2017(6): 62-67.
[19] Qiu Junping, Yu Houqiang, Lü Hong, et al. Review of foreign research on collection resource visualization [J]. Library, 2017(5): 22-26.
[20] Zhao Rongying, Wei Xuqiu. Analysis of research themes and evolution paths in Chinese mobile library studies [J]. Library, 2017(5): 22-26.
[21] Wang Wentao, Xie Yangqun, Li Jing. Research on university students' usage intention toward function-integrated mobile libraries [J]. Library Tribune, 2014, 34(11): 73-80.
[22] Zhao Yang, Gao Ting. Empirical research on continuous usage influencing factors of mobile library APP [J]. Information Science, 2015, 33(6): 95-100, 125.
[23] Li Yujia, Zhang Xiangxian, Zhang Keyong. Research on mobile library user needs from user experience perspective—based on system dynamics [J]. Library and Information Service, 2015, 59(6): 90-96, 119.
[24] Yu Xinlin. Function construction of mobile digital library based on user characteristics [J]. Modern Information, 2013, 33(2): 56-58.
[25] Wang Hong. Research on library mobile information service under 4G environment [J]. Journal of Xi'an University of Posts and Telecommunications, 2014, 19(4): 121-124.
[26] Ma Zhuo. Research on evaluation of digital library microservice context interaction functions [D]. Changchun: Jilin University, 2017.
[27] Wang Weijun. Research on evaluation of mobile library service capability based on usability [J]. Information Studies: Theory & Application, 2016, 39(1): 100-103.
[28] Yi Hong, Ren Jing. Research on measurement and evaluation of internal

service quality in public libraries [J]. Library Research and Work, 2017(3): 19-24.
[29] Wei Qunyi, Yuan Fang, Jia Huan, et al. Investigation on current status of mobile library services in China—taking national and provincial public libraries as objects [J]. Journal of Library Science in China, 2014, 40(3): 50-63.
[30] Yang Xiaoqiu, Guo Shiming, Dai Rongjia. Discussion on mobile library service quality evaluation research [J]. Information Science, 2015, 33(2): 31-34, 40.
[31] Zheng Dejun, Wang Shuo. Analysis on perceived difference of mobile library service quality [J]. Library and Information Service, 2016, 60(21): 6-16.
[32] Peng Xiaodong, Zou Ni, Wei Qunyi. Review of domestic mobile library user behavior research [J]. Library Science Research, 2016(8): 2-6.
[33] Shi Guohong, Zhao Qing. Analysis of university mobile library service quality influencing factors [J]. Library Journal, 2017, 36(1): 50-58.
[34] Ming Junren. Research on mobile library user acceptance based on TAM model [J]. Library and Information Service, 2014(4): 80-89.
[35] Li Jie, Bi Qiang, Ma Zhuo. Research on development and design strategies of digital library microservice context interaction functions [J]. Information and Documentation Services, 2017(4): 81-89.
[36] Huang Yueshen, Liu Min. Application of Beacon in location-based mobile library services [J]. Library and Information Service, 2015, 59(3): 73-78.
[37] Bi Qiang, Ma Zhuo, Li Jie. Research on internal relationship between digital library microservice interaction context functions and user behavior [J]. Information Studies: Theory & Application, 2017, 40(4): 55-60.
[38] Wang Fu, Chen Xiaohua. Research on multi-dimensional fusion and service aggregation of mobile library information acceptance context [J]. Journal of Intelligence, 2017, 36(6): 173-180.
[39] Zhang Shuai, Guo Shunli. Research on personalized recommendation model for university mobile library based on context awareness [J]. Information Research, 2014(10): 6-11.
[40] Liu Xuan. Review and prospect of social network application research in library field [J]. Journal of Library Science in China, 2016, 42(06): 102-116.
[41] Wang Qiong, Chen Wei. Research on impact of mobile social media on library industry development [J]. Library Journal, 2015, 34(12): 69-76.
[42] Du Pingping, Guo Qi, Li Yuke, et al. Social media-based network discipline information interaction promotion service [J]. Library and Information Service, 2014, 58(2): 84-90.
[43] Chen Chen. Construction of smart library based on big data mining and knowledge discovery [J]. Modern Information, 2017, 37(8): 85-91, 97.
[44] Wei Qunyi, Hou Guinan, Huo Ran. Review of mobile library theoretical research and practical application [J]. Library and Information Knowledge, 2012(1): 80-85.
[45] Bi Qiang, Ma Zhuo, Li Jie. Analysis of core characteristics of digital library microservices [J]. Library and Information Service, 2016, 60(21): 32-38.
[46] Xu Junling. Characteristics and basic principles of university mobile library construction [J]. Library Theory and Practice, 2012(10): 75-77.

[47] Wang Xuelian. Research on information service models of mobile libraries in China [J]. Library Science Research, 2015(1): 88-92.
[48] Zhang Jian. Research on reference consultation service model of libraries in ubiquitous environment [J]. Library, 2014(1): 134-135.
[49] Zhang Mei, Zhao Ying, Xie Caiyun. Research on influencing factors of university employment information system user acceptance behavior [J]. Soft Science, 2012, 26(10): 140-144.
[50] ALLAHYARI A, RAMAZANI M. Studying impact of organizational factors in information technology acceptance in accounting occupation by use of tam model (Iranian Case Study) [J]. Arpn journal of systems & software, 2012, 2(1): 21-3.
[51] BALL D M, LEVY Y. Emerging educational technology: assessing the factors that influence instructors' acceptance of information systems and other classrooms [J]. Journal of information systems education, 2008, 19: 431-444.
[52] LEE C C, LIN S P, YANG S L, et al. Evaluating the influence of perceived organizational learning capability on user acceptance of information technology among operating room nurse staff [J]. Journal of the Taiwan society of anesthesiologists, 2013, 51(1): 22-27.
[53] Le Guoan, Ji Haiying. Research and prospect of Bandura's social cognitive view of self-regulation theory [J]. Nankai Journal (Philosophy and Social Sciences Edition), 2007(5): 118-125, 134.
[54] BANDURA A. Social cognitive theory of mass communication [J]. Media psychology, 2001, 3(3): 265-299.
[55] Zhang Xiaoyan, Xu Yeping. Analysis of influencing factors of contemporary college students' information acceptance habits [J]. Journal of Taiyuan Normal University (Social Science Edition), 2012, 11(4): 137-139.
[56] OLIVER R L. Satisfaction: a behavioral perspective on the consumer [J]. Asia pacific journal of management, 1997, 2(2): 285-286.
[57] Liu Jian, Bi Qiang, Ma Zhuo. Construction and empirical research of digital library microservice evaluation indicator system [J]. New Technology of Library and Information Service, 2016(5): 22-29.
[58] KILSDONK E, PEUTE L W, KNijnenburg S L, et al. Factors known to influence acceptance of clinical decision support systems [J]. Studies in health technology & informatics, 2011, 169(6): 150-154.
[59] Xu Xincheng, Wang Sufen. Relationship between shopping website satisfaction and impulse purchase behavior [J]. Journal of Shandong University of Technology (Natural Science Edition), 2011, 25(6): 53-58.
[60] Xu Kaiying, Cui Wei, Hong Xudong, et al. Research on influencing factors of library mobile reading user adoption behavior [J]. Library and Information Service, 2017, 61(15): 43-50.
[61] Tang Wei. Analysis of key factors in urban-rural road passenger transport integration based on DEMATEL method [J]. Journal of Wuhan University of Technology (Transportation Science & Engineering), 2011, 35(5): 955-958.
[62] CHAN A T S, CHUANG S N. Mobipads: a reflective middleware for context-aware mobile computing [J]. Software engineering IEEE transactions on, 2003, 29(12): 1072-1085.

[63] SAJAKOSKI L T, KOIVULA T, SAJAKOSKI T. A knowledge-based map adaptation approach for mobile map services [M]. Springer, Berlin, Heidelberg: Location Based Services and TeleCartography, 2007.
[64] DINGLER T, BEXHETI A, NIFORATOS E, et al. Workshop on mobile cognition: using mobile devices to enhance human cognition [C]//International conference on human-computer interaction with mobile devices and services adjunct. New York, USA, ACM, 2015: 970-973.
[65] Wang Fu. Research on new OPAC system design based on information resource organization [J]. Library Work and Study, 2015(3): 38-40.
[66] Bi Qiang, Li Jie, Ma Zhuo. Research on interaction balance between users and digital library microservice context [J]. Information and Documentation Services, 2017(5): 82-90.
[67] Wang Fu, Liu Chuan. Research on interdisciplinary characteristics and mechanism of mobile library information acceptance context [J]. Modern Information, 2017, 37(3): 13-20.
[68] ZIV N D. Exploring convergence and innovation on the mobile platform: mobile social media services as a case in point [C]//International conference on mobile business. Barcelona, Spain, IEEE, 2008: 126-133.
[69] Wang Fu. Research on mobile library information acceptance context computing model and its refinement [J]. Library, 2017(7): 99-105, 111.
[70] MALEK J, MALEK J, Laroussi M, et al. A context-aware approach for modeling bijective adaptations between context and activity in mobile and collaborative learning [J]. International journal of interactive mobile technologies, 2008, 2(1): 19-30.
[71] Li Bin. Research on influencing factors of Weibo users' continuous usage intention [D]. Zhejiang: Zhejiang University, 2012.

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

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