

The Impact of Perceived Characteristics and Personalization on Continuance Intention of Mobile Reading (Postprint)

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Abstract

[Purpose/Significance] Research on continuous usage intention of mobile reading has attracted extensive scholarly attention; investigating the effects of perceived characteristics and personalization can provide valuable guidance for library management reform and service optimization. [Method/Process] Through the construction of a structural equation model, this study empirically examines the influence of perceived characteristics and personalization on continuous usage intention of mobile reading. [Results/Conclusion] The findings reveal that: (1) college students' mobile reading behavior demonstrates certain group characteristics with relatively rational time allocation; (2) perceived characteristics, particularly perceived ease of use, and personalization, especially information system personalization services, exert significant positive impacts on continuous usage intention of mobile reading; (3) satisfaction mediates the relationship between perceived characteristics and continuous usage intention, with perceived monetary value having a substantial influence on mobile reading satisfaction. Finally, corresponding recommendations are proposed regarding process design, content curation, and marketing promotion.

Full Text

Preamble

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The Influence of Perception Characteristics and Personalization on Continuous Use Intention of Mobile Reading

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Abstract

[Purpose/Significance] Research on continuous use intention of mobile reading has attracted widespread scholarly attention. Investigating the influence of perception characteristics and personalization can provide valuable guidance for library management reform and service optimization. **[Method/Process]** This study employs a structural equation model to empirically examine the effects of perception characteristics and personalization on continuous use intention of mobile reading. **[Result/Conclusion]** The findings reveal that: (1) College students' mobile reading behaviors exhibit certain group characteristics, with relatively rational time allocation; (2) Perception characteristics, particularly perceived ease of use, and personalization, especially information system personalized services, exert significant positive effects on continuous use intention of mobile reading; (3) Satisfaction plays a mediating role in the relationship between perception characteristics and continuous use intention, with perceived monetary value having a substantial impact on mobile reading satisfaction. The paper concludes with recommendations regarding process design, content selection, and marketing promotion.

Keywords: mobile reading; perception characteristics; personalization; continuous use intention; college students

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Introduction

With the rapid development of mobile communication technology, mobile reading has become an important choice for people's reading methods, continuously transforming reading behaviors and habits. Statistics show that in 2017, 79.1% of Chinese adults used the internet, with nearly 80% (77.9%) accessing it via mobile phones [1]. Research on national reading preferences also found that 35.1% of people prefer mobile reading [2]. The prevalence of mobile reading has presented new requirements for resource reorganization and service improvement in libraries. However, the effectiveness of mobile reading still needs further investigation and enhancement. Relevant research holds significant theoretical and practical importance and can provide guidance and reference for library management reform and operational optimization.

A comprehensive review of literature on mobile reading behavior reveals that continuous reading intention is a widely concerned topic among scholars, with

accumulated research findings on the influence of perception characteristics on mobile reading continuous use intention. Foreign scholars initially introduced the Technology Acceptance Model [3] and the Continuance Use Model [4] into information systems to conduct in-depth studies on mobile reading behavior. L. Chen expanded the continuance use model by adding dimensions such as information quality, system quality, process quality, and hedonic value, applying it to mobile commerce contexts [5]. T. Zhou found that perceived ease of use significantly influences flow experience [6], while M. Koufaris confirmed through consumer behavior on specific book websites that perceived ease of use, usefulness, control, pleasure, and attention affect immersion experience [7]. M.C. Pattulli et al. discovered through surveys that mobile reading exhibits strong user stickiness [8]. In comparison, domestic scholars have also made progress in continuous reading intention research. Zhang Xuan et al. conducted empirical tests on the application of continuous use models in mobile commerce [9]. Liu Luchuan et al. studied influencing factors and behavioral patterns of continuous use intention, finding that perceived usefulness, switching costs, reading content, and user habits significantly affect continuous use intention [10].

Overall, while scholars have explored the relationship between perception characteristics and mobile reading continuous use intention, producing certain research outcomes, current studies primarily focus on partial dimensions of perception characteristics, and research on the influence of personalization on mobile reading continuous use intention remains insufficient. Therefore, this study integrates measurement scales for perception characteristics and personalization, constructing a structural model to examine their effects on mobile reading continuous use intention. This provides empirical support for theories related to information system continuance use while offering practical references for the healthy development and efficiency improvement of mobile reading.

2. Hypothesis Development and Model Construction

2.1 Relationship Between Perception Characteristics and Continuous Use Intention

F.D. Davis's early research based on the Technology Acceptance Model found that user acceptance of information systems is determined by both perceived usefulness and perceived ease of use [3]. Subsequent scholars conducted extensive research building upon this foundation. A. Bhattacharjee proposed the Information System Continuance Model, concluding through online banking user surveys that continuous use intention is determined by perceived usefulness and satisfaction [4]. Dai Bao et al. demonstrated that perceived usefulness significantly affects WeChat users' continuous use intention [11]. Liao Chenglin et al. studied new customers' perception factors toward websites, finding perceived usefulness has the greatest impact on user experience [12]. Compared to other reading carriers, mobile phones offer better convenience and portabil-

ity, satisfying people's fragmented and scattered reading needs. Lai Junming's empirical research found a positive correlation between perceived ease of use and mobile consumer behavior, indicating that perceived ease of use greatly influences mobile reading user satisfaction and continuous use intention [13].

Additional studies reveal that perception characteristics also include perceived enjoyment and perceived monetary value. Perceived enjoyment represents internal motivation from personal emotions, while perceived monetary value reflects subjective evaluation of information technology service value. Xie Rong et al. suggested that the importance difference between "instrumental expectations" and "informational expectations" motives for mobile reading is insignificant [14], meaning people primarily use mobile reading to conveniently obtain interesting news and information during fragmented time. Xu Guangkui et al. found through statistical surveys that college students' mobile reading mainly focuses on various instant and leisure content [15]. Jiao Yongbing et al. argued that perceived enjoyment plays a positive role in customer adoption of social media, indicating its non-negligible effect on increasing customer satisfaction and adoption intention [16]. S. Heo et al. analyzed the influence of perceived value on mobile social network user behavior, finding that perceived value significantly and positively affects user acceptance of mobile SNS services [17]. Y. Chang et al. discovered that perceived value not only positively influences user satisfaction but also directly affects community members' continuous use intention [18]. Based on this literature analysis, we propose the following hypotheses:

H1: Perception characteristics have a significant positive effect on mobile reading consumer satisfaction.

H2: Perception characteristics have a significant effect on mobile reading consumer continuous use intention.

H3: Satisfaction has a significant effect on mobile reading consumer continuous use intention.

2.2 Relationship Between Personalization and Continuous Use Intention

With the advent of the big data era, meeting users' "personalization" needs has become more meaningful. Information systems collect, organize, and classify resources through various channels to provide and recommend relevant information to users, fully utilizing resource advantages to proactively deliver comprehensive services that meet individual needs. This study analyzes the influence on mobile reading continuous use intention from two dimensions: information system personalized services and reader personalization characteristics.

Information system personalized service refers to delivering appropriate content to appropriate readers at the appropriate time and place. Traditional reading methods (e.g., newspapers) limit content selection for specific categories to single media. Mobile reading, however, provides different dimensional sections

and pushes breaking news, satisfying people's reading psychology of pursuing personal interests while offering new development ideas for mobile reading applications. Wan Anlun et al. believe that the existence and development of various digital reading terminals can bring richer reading experiences to netizens [19]. Wang Weijun points out that mobile information services need to discover and satisfy users' personalized information needs based on changes in contextual states (time, location, tasks, etc.) [20].

Reader personalization characteristics, referencing Y. Lee et al.'s research perspective, are examined from three dimensions: herd mentality, intimacy level with mobile reading operators' services, and familiarity level. Y. Lee et al., considering that cognition and emotion are two primary pathways affecting attitudes and behavioral intentions, proposed a balanced theoretical framework for continuous use intention, demonstrating that continuous use behavior intention is simultaneously influenced by both cognitive and emotional factors [21]. Zhang Ke believes herd mentality is an important cause of college students' mobile phone dependence, while intimacy and familiarity are emotional factors toward continuous use intention that develop over time [22]. Ji Dan found that mobile readers increase intimacy through interpersonal interaction, thereby having positive reading experiences in online communities, while familiarity with mobile services increases continuous use intention [23]. Based on this literature analysis, we propose the following hypotheses:

H4: Personalization has a significant effect on mobile reading consumer continuous use intention.

H4a: Information system personalized service has a significant effect on mobile reading consumer continuous use intention.

H4b: Reader personalization characteristics have a significant effect on mobile reading consumer continuous use intention.

Integrating these research hypotheses, we construct a conceptual model of the relationships among perception characteristics, personalization, and continuous use intention, as shown in [Figure 1: see original paper].

3. Empirical Analysis

3.1 Research Method

Regarding data collection, first, the reading scope was defined to include online novels, literary classics, journals, newspapers, news information, and professional articles. Second, a questionnaire was designed around college students' mobile reading continuous use behavior. The 32 items in the main questionnaire were developed based on extensive literature review and adjusted according to the current state of college students' mobile reading. The questionnaire measurement adopted a five-point Likert scale, with 1, 2, 3, 4, and 5 representing "strongly disagree," "disagree," "neutral," "agree," and "strongly agree," respec-

tively. Third, data were collected through both field distribution and online distribution via Wenjuanxing. The survey was conducted from February to May 2018, lasting four months, with 270 questionnaires distributed. After excluding incomplete and unreliable responses, 254 valid questionnaires were obtained.

For data processing, WarpPLS 5.0 software was used to analyze the collected data. The analysis methods included reliability analysis (Cronbach's α coefficient and composite reliability CR), validity analysis (AVE), structural equation model fitting (partial least squares PLS), and path analysis.

3.2 Descriptive Statistical Analysis

The demographic characteristics of the survey sample show a fairly balanced gender distribution with slightly more males, over 70% in third grade or above, and broad disciplinary coverage, which aligns well with the research objectives. Regarding daily time spent on mobile reading, the proportion of 30 minutes to 2 hours accounts for nearly 60%, demonstrating relatively rational time utilization. Descriptive statistics are presented in .

3.3 Reliability and Validity Tests

To further demonstrate the questionnaire's validity and reliability, reliability and validity analyses were conducted. In WarpPLS, construct reliability examines whether observed variables are consistent with the target latent variables, typically measured using Cronbach's α and CR. Generally, Cronbach's $\alpha > 0.6$ and $CR > 0.7$ indicate high reliability. shows that both Cronbach's α and CR values exceed 0.7, indicating good internal consistency for each latent variable and reasonable composite reliability. To test convergent validity, the average variance extracted (AVE) was examined. AVE values greater than 0.5 are acceptable. The data in show that all AVE values exceed this threshold.

Discriminant validity refers to the degree of differentiation among constructs. We adopted the criterion that the completely standardized correlation coefficient between dimensions should be less than the square root of the AVE of the involved dimensions. The square roots of AVE values on the diagonal are greater than correlations with other factors, indicating the questionnaire meets discriminant validity standards and is suitable for structural equation modeling. See .

3.4 Model Fitting and Path Analysis

Structural model evaluation primarily depends on goodness-of-fit indices. Good model fit is typically indicated by: average path coefficient (APC) and average R-squared (ARS) with p-values less than 0.05, and average variance inflation factor (AVIF) less than 5. In this study, the structural model fitting results show $APC = 0.231$, $ARS = 0.35$, $p < 0.05$, and $AVIF = 1.169$, indicating good model fit. Path analysis results are shown in [Figure 2: see original paper].

The results indicate: First, the four dimensions of perception characteristics have influence coefficients of 0.32, 0.24, 0.26, and 0.40 on mobile reading consumer satisfaction, all statistically significant at the 0.01 level, confirming H1. Perceived monetary value has the strongest positive effect on satisfaction, suggesting that subjective evaluation of service value substantially impacts satisfaction. Second, the four dimensions of perception characteristics have influence coefficients of 0.13, 0.25, 0.12, and 0.18 on continuous use intention, statistically significant at the 0.05 level, confirming H2. Perceived ease of use has the strongest positive effect, indicating that when information technology is complex or difficult, intention to reuse decreases. Third, satisfaction's influence coefficient on continuous use intention is 0.27, significant at the 0.01 level, confirming H3. Fourth, information system personalized service, herd mentality, intimacy level, and familiarity level have influence coefficients of 0.24, 0.14, 0.10, and 0.16 on continuous use intention, significant at the 0.05 level, confirming H4. Information system personalized service shows the strongest positive effect, demonstrating that when consumer needs are met, satisfaction and continuous use intention increase.

4. Conclusions and Implications

Based on survey data from college mobile phone users, this study empirically tested the effects of perception characteristics and personalization on mobile reading continuous use intention. The main conclusions are: (1) College students' mobile reading exhibits certain group characteristics, with usage time increasing by grade level, and similar usage proportions between humanities/management and science/engineering students. (2) Perception characteristics, especially perceived ease of use, and personalization, especially information system personalized services, significantly affect mobile reading continuous use intention. The more useful and easier mobile reading is for college students' study or life, the higher the perceived enjoyment and monetary value, and the stronger the continuous use intention. When mobile reading better meets personalized learning and life needs, students are more inclined to use it. Reading behavior is also influenced by surrounding people, with emotional dependence from past information technology use and familiarity positively affecting continuous use intention. (3) Satisfaction significantly mediates the relationship between perception characteristics and continuous use intention, with perceived monetary value having the greatest impact on satisfaction. When college students obtain more perceived value while meeting reading needs, their satisfaction and continuous use intention increase.

As important carriers and providers of mobile reading services, libraries should consider the following recommendations to fully realize their functions and better serve mobile reading users: (1) Integrate resources and simplify processes to facilitate user perception and use. Libraries should reorganize digital collections and cooperate deeply with mobile reading resource providers to improve

information quality. For specialized materials, functions like annotation and note-taking can be developed to meet advanced reading needs. Reading process design should be logical and simple, continuously optimizing websites and clients to reduce operation difficulty and provide more convenient electronic reading methods. (2) Update content and enhance experience to meet personalized needs. Content quality and quantity are key to quality mobile reading services. Content selection should be reader-oriented, using data mining technology to supplement and improve mobile reading content based on user habits. Current affairs, hot topics, and timely updates should be prioritized. Technically, mobile reading apps should implement features like 3D page-turning, eye-protection mode, multi-format support, reading notes, sharing, and commenting to deliver personalized reading experiences. (3) Conduct precision marketing and considerate service to enhance users' perceived value. Libraries can use large databases to accurately analyze user needs and combine questionnaire surveys to obtain feedback for targeted marketing. Reading resource pricing should adopt differentiated standards based on audience groups. Additionally, Wi-Fi usage options should be incorporated during system development to reduce usage costs and increase perceived value.

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Author Contributions

Zhang Zhong: Conceived the research framework and wrote the manuscript;
He Hong: Supervised writing, revision, and finalization;
Cao Guo: Responsible for data collection, processing, and analysis.

English Title: The Influence of Perception Characteristics and Personalization on the Willingness to Use Mobile Phone Reading Continuously

English Abstract: [Purpose/significance] The research on the willingness to use mobile phone reading has been widely concerned by scholars. The research on the influence of perception characteristics and personalization can provide useful guidance for library management reform and service optimization. [Method/process] This paper constructed a structural equation model to study the effects of perception characteristics and personalization on the willingness to use mobile phone reading continuously. [Result/conclusion] The results show that: (1) College students' mobile phone reading behaviors show certain group characteristics, and the use of time is relative rationality; (2) Perception characteristics, especially perceived ease of use, and personalization, especially information system personalized services, have a significant positive impact on the willingness to use mobile phone reading continuously; (3) Satisfaction plays a mediating role in the relationship between perception characteristics and continued use intention, and perceived monetary value has a greater impact on mobile phone reading satisfaction. Based on the above, this paper provides some suggestions for library from the aspects of process design, content selection and marketing promotion.

Keywords: mobile phone reading; perception characteristic; personalization; willingness to use continuously; college student

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

Source: ChinaXiv — Machine translation. Verify with original.