Research on the Interaction Mechanisms and Effects of Digital Reading in the Mobile Social Era: Postprint

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Abstract

[Purpose/Significance] The most distinctive feature of digital reading in the mobile social era is its interactivity. However, existing theoretical research has devoted limited attention to the interaction mechanisms and interaction effects of mobile social reading. It is therefore necessary to thoroughly reveal the interaction mechanisms and interaction effects of digital reading in the mobile social era. [Method/Process] By systematically reviewing different dimensions of existing research on mobile social reading interaction, this study clarifies the interaction modes and relationships of mobile social reading from three levels—interaction chain, interaction domain, and interaction field—constructs a mobile social reading interaction mechanism, and thoroughly reveals the interaction effects through a dual-path approach focusing on both interaction process and interaction outcomes. Taking the "Yunzhou" knowledge service space as an example, an empirical study was conducted on the mobile social reading interaction mechanism and interaction effects. [Results/Conclusion] Through research on the mobile social reading interaction mechanism and interaction effects, this study clarifies the context of mobile social network reading interaction, which helps promote the transformation of mobile social network reading interaction from homogeneity to heterogeneity, and achieve precision and personalization of mobile social network reading services.

Full Text

Preamble

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Research on Interactive Mechanism and Interactive Effect of Digital Reading in Mobile Social Era

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Abstract: [**Purpose/Significance**] The most important feature of digital reading in the mobile social era is its interactivity. However, existing theoretical research has paid limited attention to the interaction mechanism and interaction effect of mobile social reading, making it necessary to provide an in-depth revelation of these aspects. [**Method/Process**] By examining different dimensions of existing research on mobile social reading interaction, this study clarifies the interaction methods and relationships of mobile social reading from three levels—interaction chain, interaction domain, and interaction field—and constructs an interaction mechanism for mobile social reading. It also provides a deep analysis of interaction effects through dual pathways of interaction process and interaction results. Using the "Yunzhou" knowledge service space as an example, an empirical study on the interaction mechanism and effect of mobile social reading is conducted. [**Result/Conclusion**] Through research on the interaction mechanism and effect of mobile social reading, this study clarifies the context of mobile social network reading interaction, which helps promote the transformation of mobile social network reading interaction from homogeneity to heterogeneity and achieve precision and personalization in mobile social network reading services.

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Reading has manifested in different content and forms across historical periods. Initially, reading was simply the ability to obtain visual information from any encoding system and understand its corresponding meaning. Later, it specifically referred to the comprehension of continuous textual symbols written on physical carriers. Now, reading has evolved into the ability to acquire information from electronic screens on mobile terminals [1]. With the continuous development of reading terminals such as e-book readers, smartphones, and tablets, the continuous improvement of mobile internet infrastructure, and gradually decreasing usage costs, coupled with the entry of e-commerce platforms like Dangdang and JD.com into digital publishing and the increasing richness of digital reading software and content, people's acceptance of mobile reading products has greatly improved [2]. In the mobile social era, the application of social networks and new media has made digital reading a frequently discussed and constantly renewed hot topic in the industry. For instance, Wu Yao [3] studied reading evolution from the perspective of media evolution theory, pointing out that digital reading introduces dialogue mechanisms into traditional texts through network interaction technology, transforming individual introspective reading into group

social reading. Reading represents information collision within group knowledge communities, and with the bonding role of "relationships," its core lies in sharing, interaction, and dissemination. Xu Yuan [4] noted that rich multimedia content and interactive reading interfaces have become major trends in mobile reading content innovation to meet personalized reading needs and explore diversified reading experiences. Wang Jue [5] observed that due to modern work pressure, busy schedules, and irregular lifestyles, micro-reading characterized by fragmentation and shallow reading has become one of the features of mobile social network digital reading. Digital reading is not only human-computer interaction but also an interactive platform among people, books, and between people and books.

The digital reading industry has undergone an epoch-making transformation catalyzed by mobile social networks, and the traditional, closed, fixed, and linear reading mode that libraries have maintained for thousands of years is gradually being replaced by open, dynamic, and networked mobile fragmented reading. Based on this, scholars both domestically and internationally have conducted research on digital reading and reading behavior in the mobile social network environment. Through reviewing and analyzing relevant literature, this paper summarizes the current research status of digital reading interaction in the mobile social era into the following main aspects.

First, regarding interaction methods and content. With the social upgrade of the internet, digital reading has characteristics such as non-linearity and multimedia, allowing users to reduce complexity in human-computer interaction through senses (vision, hearing, touch). The application of advanced technology makes digital reading devices more readable and can reduce visual load. Yu Qing [10] pointed out in research on digital publishing user experience that to optimize product experience, attention should be paid to user needs and product objectives of digital publishing platforms, grasping functional design and information content requirements, implementing standardized product interaction design and information architecture design, and doing well in information design, interface design, and navigation design to highlight product aesthetic design. Zheng Fangqi et al. [9] believe that advanced technology applications make digital reading devices more readable and can reduce visual load. S. Lee [11] used web surveys to explore factors influencing the promotion of mobile e-book reading in South Korea, including individual innovativeness, perceived usefulness and ease of use, innovation resistance, and perceived risk. S. Kamala et al. [12] studied how interactive comments posted after reading blog articles affect other readers' comprehension and engagement.

Second, regarding interaction content and quality. Zhao Wenjun and Ren Jian [6] studied the continuous usage intention of mobile reading services from three dimensions—cognitive, social, and emotional—and found that information interaction quality and system interaction quality have significant positive effects on perceived usefulness and satisfaction, while interpersonal interaction quality significantly positively affects perceived sociability. Xu Yanzhang [7] studied

mobile reading APP design from the perspective of user experience, believing that interactivity directly affects user cognition and experience, and can be designed from aspects such as streamlining interaction objects, optimizing interaction processes, and human-centered interaction control. Zheng Chengming and Zhan Qingdong [8] studied mobile library services based on new media, believing that mobile libraries have two significant characteristics—mobility and interactivity—but their current service forms have not fully highlighted the comprehensive interactivity of new media. They pointed out that strengthening integration with Web 2.0 and building service platforms will bring new ideas for mobile library development.

Third, regarding factors influencing interaction. Zheng Fangqi et al. [9] believe that digital reading has characteristics such as non-linearity and multimedia. Yu Qing [10] pointed out in research on digital publishing user experience that attention should be paid to user needs and product objectives. As Wang Haiyan et al. pointed out in their research, current reading research and platform construction have the problem of "emphasizing reading while neglecting interaction" [13]. Only by clarifying the basic theories and internal mechanisms of mobile social network reading interaction can we better construct mobile social network reading platforms, grasp various factors affecting users' mobile social reading, meet users' personalized mobile social reading needs, and thus promote the continuous deepening and forward development of library reading promotion services. Based on this, this paper starts from the elements of mobile social network reading and their interactive changes, deeply discusses the transformation process and direction of mobile social network reading interaction, studies the interaction mechanism and effect of mobile social network reading, and uses the "Yunzhou" knowledge service space as a case study of mobile social network reading interaction, aiming to provide an in-depth analysis of the reading mechanism and effect in the mobile social era.

2. Evolution of Reading Interaction Across Different Media

Understanding the interaction methods and relationships of reading in different periods helps to comprehend the development context of digital reading in mobile social network environments. Only on this basis can we construct the interaction mechanism and effect of mobile social digital reading. At the beginning of the 21st century, when the internet became popular in China, the information environment on which people depend for survival underwent tremendous changes, marking humanity's entry into the digital reading era. With the social upgrade of the internet, reading methods have demonstrated unprecedented interactivity. Overall, reading methods have experienced three forms: traditional print media reading, PC internet-based social reading, and mobile terminal-based social reading. These three forms have met humanity's reading needs in different environments during their gradual evolution and mutual compatibility while also undergoing the following transformations [14]: First, communication transformation. Traditional reading communication mainly came from "media

organizations," with library and information institutions serving as authoritative information providers. The emergence of mobile social networks has made reading communication sources diversified. The role of individual users in information dissemination within mobile social networks has gradually become apparent, shifting from non-core to core positions. Second, audience behavior transformation. Audience reading methods have shifted from "passive reception" to "selective acceptance" and "active acceptance," and from "mechanical dissemination" to "emotional dissemination" and "intelligent dissemination." Individual users can not only select needed information according to their interests and preferences [15] through mobile social networks, comment on and forward published information, but they themselves are also the main body for publishing primary and secondary reading documents. Thus, in the mobile social network era, reading audiences have gradually moved from the end of the traditional reading chain to central and front positions in mobile social reading. Third, interaction transformation. Social network reading overcomes the linear constraints of traditional reading, shifting to flexible domain interaction and field interaction. Fourth, content transformation. Reading content has developed from "homogenization" toward "personalization." In the mobile social era, user reading experience largely depends on platform top-level design. However, the phenomenon of content homogenization [17] in existing mobile social reading is relatively serious, as seen in "Toutiao," "Tencent News," and "Kuaibao," urgently requiring platform top-level design optimization based on users' real needs to provide smooth experiences for personalized reading. Fifth, interaction effect transformation. In the transformation process from authoritative media reading interaction to user-to-user reading interaction, mobile social networks have broken geographical restrictions, and traditional reading channel advantages and competitiveness are declining day by day. Reading no longer interacts in a one-way linear manner but oscillates among friends in a network form. Mobile social reading interaction is shifting from relying on "channel resources" to relying on "relay transmission among friends."

As shown in Table 1 , in the three different periods, reading interaction communication sources have transformed from pure authoritative media to authoritative media as the main body with users as supplement, and further to users as the main body with authoritative media as supplement. Interaction forms have shifted from one-way interaction to multi-way interaction, and further to multilateral interaction. Interaction relationships have transformed from linear interaction to field interaction, and finally to network interaction. In the three periods of reading development, content production methods have shifted from a single professional generated content [18] (PGC) method to user generated content [19] (UGC), algorithm aggregated content [20] (AAC), and mixed production methods including PGC. Information interaction forms have also shifted from one-way linear dissemination to multilateral network dissemination. The UGC mode of user content production and multilateral interactive information dissemination methods have been common in Sina Weibo, ScienceNet blogs, Tianya forums, and WeChat during the PC internet era. In summary, reading

interaction in the three different periods has different manifestations. Based on this, the author conducts in-depth research from the perspective of mobile social network reading interaction mechanism.

3. Mobile Social Network Reading Interaction Mechanism

Mobile social reading is the result of reading development and evolution through different stages. The massive amount of reading information generated by mobile social networks is digitally submerging the world we possess and blending with our lives, causing reading content and forms to gradually develop from quantitative to qualitative changes [21]. Mobile social networks have transformed user reading from passive to active, especially when written text becomes real-time, interactive, and open text, audio, and video, and when concepts such as authors, themes, and creative intentions gradually become less meaningful, and every user can become a creator and information source. In this situation, it is necessary to effectively sort out and summarize the interactions among users, between users and platforms, and between platforms in the mobile social network environment, and construct a mobile social reading interaction mechanism to guide the construction of mobile social reading platforms and achieve information space reconstruction and service innovation.

The greatest feature of mobile social networks' extension and expansion in reading functions is the perfect integration of "mobility" and "sociality," which further highlights the flexibility, sociality, and value of reading, amplifying reading effects. Mobile social network reading mainly involves the following elements: First, reading mode, which includes different types from three periods: traditional print media reading, PC internet-based social reading, and mobile terminal-based social reading. Second, individual users, who are the most dynamic factors in mobile social reading. Different users have different information literacy and interaction needs, habits, and preferences [22], and interaction among individual users helps them learn from each other, thereby optimizing their interaction needs, habits, and preferences and making the entire interaction more rational. Third, interaction types, including user-to-user interaction, user-to-platform interaction, and platform-to-platform interaction, which achieve comprehensive and three-dimensional interaction from different perspectives. During the interaction process, user experience and platform perception will collide and rub against each other, thereby optimizing interaction. These three types of elements have mobile associations and coupling relationships during the reading process, building a mobile social network reading interaction mechanism model oriented by mobile reading goals and targeting user experience perception. See Figure 1 [Figure 1: see original paper].

As shown in Figure 1 [Figure 1: see original paper], the characteristics of mobile social network reading interaction are mainly reflected at three levels: macro, meso, and micro.

3.1 Macro Level

Macro-level reading interaction reflects interaction forms, which can be divided into primary interaction, secondary interaction, or multi-level interaction. First, primary interaction consists of three types: user-to-user interaction, user-to-platform interaction, and platform-to-platform interaction. Primary interaction refers to the initial interaction triggered by reading themes and is also the most core interaction form. The quality of primary interaction determines the quality of secondary and multi-level interactions and should attract the attention of mobile social reading researchers. Good primary interaction quality can form strong user stickiness and prevent user loss, while poor quality will affect user loyalty. Second, secondary interaction is the sublimation of interaction based on primary interaction, representing a further enhancement. Secondary or multi-level interactions promote information transformation and original information promotion on mobile social platforms. Through multi-level interactions, multi-perspective and multi-level development of original interaction theme information among users on the same platform, users on different platforms, and different platforms can be achieved, enhancing the hierarchy and three-dimensionality of mobile social interaction and realizing value-added interaction. Effective grasp of macro-level interaction forms can help understand and master the overall support degree of mobile social reading platforms for user information needs, which is beneficial for library managers to make decisions.

3.2 Meso Level

Meso-level reading interaction reflects the interaction process [23], which can be divided into three stages. First, chain interaction. Chain interaction is an organic interaction chain formed by the integration of user interaction, user-platform interaction, and platform interaction. Different reading themes have different interaction chains, and the interaction quality and effects of different interaction chains [24] are also different. Interaction chains are dynamically formed and can be dynamically dismantled. Second, domain interaction. Domain interaction refers to the form of interaction among different users within the same platform. The configuration method of the reading platform based on users' different information needs determines the formation of reading interaction domains [25], such as book domains, newspaper domains, journal domains, video domains, document domains, theme domains, and special domains. For different users, the number of interaction domains varies. More interaction domains indicate richer interaction. More stable interaction domains indicate higher-quality interaction themes, representing essence-style interaction. Conversely, less stable interaction domains indicate that interaction themes are either too ordinary or too professional, suitable for small-scale interaction. Third, field interaction. The interaction field is composed of different interaction domains [26], similar to a magnetic field that cannot be seen or touched but indeed exists and can be perceived. As shown in Figure 1 [Figure 1: see original paper], primary interaction forms an interaction field, while secondary interaction

forms another expanded interaction field based on the primary interaction field. A larger interaction field indicates that the reading theme concerned is significant and a focus of current society, representing the focus of reading.

3.3 Micro Level

Micro-level reading interaction reflects interaction types [27], including the following three categories. First, user-to-user interaction. User interaction is the most dynamic in reading interaction, reflecting the collision and exchange of knowledge and experience among different users [28], enabling users to understand mobile social reading themes more comprehensively and profoundly. In particular, different understandings of the same theme by users from multiple professional fields help other users understand reading themes from multiple perspectives, promoting the transformation of reading from deep to shallow and from slow to fast, and facilitating the transformation from professional reading to social reading. Second, user-platform interaction. User interaction with reading platforms reflects users' understanding and grasp of platform usability, ease of use, and usefulness. Generally, by mastering users' dwell time on platforms, user loss, and user feedback, it helps understand the configuration status of reading platforms' resource contexts, service contexts, and technical contexts and their integration, enabling mobile social reading platforms to further adjust reading contexts based on user behavior and feedback. Third, platform-to-platform interaction. This is contextual interaction between different reading platforms. Based on the above two types of interaction, effective interaction between platforms enables them to learn from each other's resource contexts, service contexts, and technical contexts, and improve contexts [29] and context configuration according to target user needs and platform positioning. Platform-to-platform interaction helps platform contexts develop from heterogeneity to homogeneity and then to new heterogeneity, achieving expansion and contraction of contexts and their configuration, and ultimately promoting platform upgrading.

In summary, the mobile social reading interaction mechanism is a gradual transformation from traditional print media reading to PC internet-based social reading and then to mobile terminal-based social reading. In the process of chain interaction, domain interaction, and field interaction, it has experienced primary and secondary interactions among users, between users and platforms, and between platforms, realizing the development of reading theme interaction from mechanical interaction to emotional interaction and then to intelligent interaction. Throughout the interaction mechanism model, it can be found that not only does user interaction promote the transformation of tacit knowledge to explicit knowledge, gradual optimization of contexts, and adaptation between contexts and user behavior, but also different reading platforms learn from each other's contexts, making different reading platforms distinctive. Under the action of this interaction mechanism, mobile reading social sharing is promoted gradually and deeply.

4. Mobile Social Network Reading Interaction Effect

Based on the interaction mechanism of mobile social network digital reading and drawing on existing mobile social service forms, deducing and summarizing mobile social network interaction effects is one of the goals of this study. Existing surveys on various mobile social user information behaviors indicate that instant messaging, online news, information search, mobile games, music and video, online literature, Weibo, and WeChat are network applications with high usage rates on mobile terminals [30]. In fact, users browsing Weibo information, checking QQ space updates, reading WeChat moments and official accounts, and accessing news and online novels on mobile intelligent terminals all belong to the broad category of mobile social reading. Throughout relevant research results, there is currently a lack of research on effectively combining professional databases of library and information institutions with mobile social networks. Using professional data resources to achieve mobile social reading [31] can not only improve the utilization rate of professional data resources but also promote reading interaction to further develop and improve along the paths of sharing, transformation, and originality.

The purpose of mobile social reading interaction is to promote the transformation of interaction from quantitative to qualitative change on the basis of meeting user needs, improve users' reading ability, promote the optimization of mobile social platform contexts and the adaptation between contexts and user information behavior, and thus regulate and guide user information behavior. In the development process of mobile social reading from chain interaction, domain interaction, and field interaction to network interaction, the formation and change of reading interaction effects mainly come from the continuous optimization of contexts and continuous debugging of context configuration. Under the dual effects of user experience and mobile social platform perception, the formation of different dimensional effects of mobile social reading can be achieved. The author describes the formation, improvement, and development process [32] of mobile social network reading interaction effects by combining existing theoretical research and practical applications. See Figure 2 [Figure 2: see original paper].

As shown in Figure 2 [Figure 2: see original paper], traditional library and study-style reading is integrated into mobile social network reading through three interaction modes: user-to-user interaction, user-to-platform interaction, and platform-to-platform interaction. This integration combines traditional deep reading with shallow reading, promoting their complementarity and fusion, enriching reading content and making reading levels more three-dimensional. In the process of achieving reading sharing, transformation, and innovation, through thinking collision and ideological exchange among users, platform value-added and original information release are promoted. Mobile social reading interaction effects [33] are reflected in multiple aspects of both interaction process and interaction results dimensions. First are interaction process effects. As mentioned earlier, there are chain, domain, and field interactions, which corre-

spondingly produce chain interaction effects, domain effects, and field effects, ultimately forming value effects. Second are reading interaction result effects, including: (1) Word-of-mouth effect. Mobile social network word-of-mouth effect refers to users' recognition of mobile reading resources, technology, and services obtained during the reading interaction process, which is conducive to promoting the transformation of usage intention into usage behavior and social platform marketing [34]. (2) Matthew effect. This refers to the phenomenon in mobile social platform operation where high-quality platforms attract more users, making the strong stronger and the weak weaker [35]. The Matthew effect can achieve survival of the fittest among mobile social platforms, making the remaining reading platforms better meet the reading needs of the majority of netizens. (3) Brand effect. Users have different experiences and cognitions of different mobile social platforms, which affects their loyalty to the platform, ultimately causing the "80-20 rule" in mobile social reading platforms—20% of platforms are accepted and recognized by the majority of netizens. These platforms have formed brands with brand effect [36], and most netizens prefer to use branded mobile social reading platforms. (4) Economic effect. The economic benefits of mobile social reading platforms are reflected in monetary income, such as user payment, value recreation, product value-added, and e-commerce. (5) Social effect. Social effects are intangible assets such as user data, fan traffic, and brand value generated by mobile social reading platforms, representing non-monetary income. Although intangible assets cannot be immediately monetized, they are important long-term investments and social capital for mobile reading service institutions. Mobile social reading interaction effects ultimately act on users, making them creators of information and promoters of deep reading. Thus, whether interaction process effects or interaction result effects, they ultimately point to value-added of mobile social reading—improving user information literacy, guiding and regulating user information behavior, and adapting corresponding contexts for user information behavior, thereby further amplifying mobile reading effects.

5. Case Study of Mobile Social Network Reading Interaction

Yunzhou Knowledge Service Space [37] is a reading service platform developed by Beijing Chaoxing Company that combines digital resources with mobile social networks. It well combines the characteristics of traditional reading and modern social networks, further expanding and extending social applications. Yunzhou Knowledge Service Space consists of three major modules: "digital space system + digital resources + full network service" platform [38], overcoming the drawbacks of previous mobile digital libraries and achieving the following interaction transformations.

First, interaction methods. Yunzhou can achieve original content creation and release, sharing of reading experiences and content, that is, through commenting, liking, and forwarding [39] on reading themes, allowing other users to have a

clear overall understanding of reading themes. Second, interaction levels. Yunzhou Knowledge Service Space has realized the development and evolution of user-to-user interaction from simple human-computer mechanical interaction to emotional interaction among users, making interactions between users and platforms and among users develop toward multi-dimensional and three-dimensional levels. Third, interaction experience. Yunzhou Knowledge Service Space is a mobile social reading platform developed to address the serious homogenization of library resources and declining reader stickiness, integrating resources, space, and service. It represents a breakthrough for libraries expanding from physical space to virtual space, overcoming previous deficiencies in experience between physical and virtual spaces and enhancing stickiness between users and platforms [40]. Fourth, interaction forms. Yunzhou Knowledge Service Space can form a chain interaction process between user reading and the platform. User-to-user interaction forms a domain interaction process for a certain theme, while multiple chains and domains form the user's field and network interaction processes. The interaction architecture of Yunzhou Knowledge Service Space [41] is shown in Figure 3 [Figure 3: see original paper].

As can be seen from Figure 3 [Figure 3: see original paper], the left side is domain interaction, with created domains displayed at the top and recommended, popular, latest, and friend subscription functions at the bottom. The middle of Figure 3 [Figure 3: see original paper] is field interaction, showing subscriptions recommended by mining users' historical reading data. The right side of Figure 3 [Figure 3: see original paper] is network interaction, aggregating different types of knowledge units on the same theme and presenting them to users. At the same time, it provides forwarding and sharing functions to achieve interaction with friends, and its interaction effect will be manifested in user loyalty and continuous usage intention [43]. The entire Figure 3 [Figure 3: see original paper] reflects effect interaction, demonstrating the interaction effects of Yunzhou Knowledge Service Space: (1) Word-of-mouth effect. Based on the purchase or trial use of Yunzhou Knowledge Service Space by various university libraries, the author believes that word-of-mouth among students is good. (2) Matthew effect. There are various forms of mobile libraries, but more and more institutions are promoting Yunzhou Knowledge Service Space and fully leveraging its functions. (3) Brand effect. Yunzhou Knowledge Service Space is launched by Chaoxing Company and has resource brand advantages. (4) Social effect. As an innovative model of mobile libraries, Yunzhou Knowledge Service Space has generated extensive social benefits in social applications. (5) Economic effect. Economic benefits are reflected not only in the developers of Yunzhou Knowledge Service Space but also in library and information institutions. If library and information institutions develop independently, they lack technical, resource, and service advantages. From this perspective, library and information institutions also gain huge economic benefits.

User-platform interaction in Yunzhou Knowledge Service Space is specifically reflected in: First, refined resource interaction. Yunzhou innovates the interaction method between resources and users, shifting from resource organization

methods mainly based on subject method and classification method to methods mainly based on resource integration and aggregation. Yunzhou Knowledge Service Space fine-grains books, newspapers, journals, documents, videos, and original files, then uses resource micro-aggregation methods to form a series of topics. A group of topics forms a domain [42], creating domains such as popular music, fitness, world history, grade examination, reading, and painting domains. Users can also add domains according to their needs. Second, personalized space interaction. Yunzhou expands physical space and achieves good integration with virtual space. Information acquisition in Yunzhou Knowledge Service Space has shifted from PC terminals to mobile social terminals, and the information creation process has also changed, achieving note release and forming personalized topic domains for users in different fields. Third, social multi-mode interaction. Yunzhou Knowledge Service Space transforms reading from "one book, one person, one space" to "personalized recommendation, multi-person exchange, social space" mobile social reading, changing libraries' massive resources into thematic applications. Thus, Yunzhou Knowledge Service Space well interprets the primary and secondary interaction modes of mobile social networks. Primary interaction is users' different reading domains—interaction between users on a certain reading theme. Secondary interaction is users' interaction with the platform during reading experience, promoting continuous platform improvement and fully reflecting the platform design's ease of use and usefulness. Fourth, multi-dimensional quality interaction. First, it achieves original information interaction, that is, perfect combination of rich media editors and data entries enables interaction of any information anytime, anywhere. Second, it achieves topic construction interaction based on social space, that is, embedding social media in Yunzhou enables online and offline interaction. Third, it achieves interaction mining, that is, recording, tracking, and mining users' reading preferences, habits, and behaviors to provide accurate personalized information services. Fifth, knowledge fusion interaction. Yunzhou Knowledge Service Space is the organic combination of knowledge and space, the largest integrated library of knowledge, while the essence of space is social. Yunzhou Knowledge Service Space combines social and knowledge well, can establish different academic groups, and form collaborative and exchange relationships among learners and others.

Through Yunzhou Knowledge Service Space's forwarding function, high-quality topics and notes can be continuously circulated, highlighting user participation in resource construction and fully tapping user potential to make resources more flexible and closer to users' real needs. The interaction page display of Yunzhou Knowledge Service Space is shown in Figure 4 [Figure 4: see original paper].

Interactivity is an important attribute of network space. Mobile social network reading breaks through the linear constraints of traditional reading, shifting to flexible domain interaction (such as interest domain and topic domain interaction), field interaction (such as discipline field and industry field interaction), and network interaction modes (such as leisure, entertainment, news, current affairs, etc.). Primary and secondary or multi-level interactions among users,

between users and platforms, and between platforms present a development path of reading theme interaction from mechanical interaction to emotional interaction and then to intelligent interaction. Mobile social network reading interaction performance is reflected through mobile social network reading interaction effects. Therefore, starting from dual pathways of reading interaction process effects and reading interaction result effects, this study points out that reading interaction effects will ultimately be reflected as interaction value, which can not only improve users' reading literacy but also optimize context configuration of mobile reading platforms, thereby achieving reconciliation between users' reading needs expectations and reality, regulating and guiding users to conduct mobile social reading scientifically and reasonably. Yunzhou Knowledge Service Space has well interpreted the mechanism and effect of mobile social network reading interaction to a certain extent. However, how to achieve seamless connection between online reading and offline reading to further optimize the reading interaction mechanism and enhance reading interaction value is the focus of future research.

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