Factors Influencing Users' Continued Usage Intention of AIGC Knowledge Services

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Abstract

[Purpose/Significance] Exploring the factors influencing users' continuous usage intention of Artificial Intelligence Generated Content (AIGC) knowledge services can help related products enhance service quality and competitiveness. [Method/Process] First, semi-structured interviews were conducted with users of AIGC knowledge service products. Using grounded theory analysis, hierarchical coding was performed to obtain 26 categories and extract 9 main categories. Then, based on relevant theories, a theoretical model of the factors influencing users' continuous usage intention of AIGC knowledge services was constructed, and corresponding research hypotheses were proposed. Finally, a standardized scale was developed based on valid sample data from a questionnaire survey of AIGC knowledge service users, and structural equation modeling was employed to validate the theoretical model, offering recommendations for AIGC knowledge service practice. [Results/Conclusion] The validation results indicate that user-perceived quality of AIGC knowledge services (knowledge base content quality, interaction quality, and derived function quality) has a direct positive effect on expectation confirmation, while expectation confirmation, perceived usefulness, and user satisfaction significantly and positively influence users' continuous usage intention. However, the direct effects of perceived ease of use and perceived cost of AIGC knowledge services on user satisfaction are not significant.

Full Text

The Influence Factors of AIGC Knowledge Service Users' Continuous Use Intention

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Abstract

[**Purpose/Significance**] Exploring the influencing factors of users' continuous use intention toward Artificial Intelligence Generated Content (AIGC) knowledge services can help related products improve service quality and competitiveness. [**Method/Process**] This study first conducted semi-structured interviews with users of AIGC knowledge service products and employed grounded theory analysis for progressive coding, obtaining 26 categories and extracting 9 main categories. It then combined relevant theories to construct a theoretical model of influencing factors for AIGC knowledge service users' continuous use intention and proposed corresponding research hypotheses based on this model. Finally, using valid sample data from a questionnaire survey of AIGC knowledge service users, a standardized scale was constructed, and structural equation modeling was applied to validate the theoretical model, offering practical recommendations for AIGC knowledge service implementation. [**Result/Conclusion**] The verification results demonstrate that users' perceived quality of AIGC knowledge services (knowledge base content quality, interaction quality, and derivative function quality) has a direct positive impact on expectation confirmation, while expectation confirmation, perceived usefulness, and user satisfaction significantly and positively influence continuous use intention. However, perceived ease of use and perceived cost of AIGC knowledge services show no significant direct impact on user satisfaction.

Keywords: Artificial Intelligence Generated Content (AIGC); continuous use intention; knowledge service; grounded theory; structural equation model

1 Introduction

In recent years, with the explosive development of AI technology, AI has evolved from simple programs that simulate human learning into a technology that shines in computer vision, natural language processing, intelligent computing, intelligent speech, and biometric recognition. Generative AI dialogue products such as OpenAI's ChatGPT, Google's Gemini, and Baidu's Wenxin Yiyan have emerged, bringing the concept of AIGC (Artificial Intelligence Generated Content) into the public consciousness and triggering another wave of industrial transformation across sectors. The development of AIGC has brought tremendous impetus to content production methods, human-computer interaction patterns, and network resource organization forms, promoting the evolution of basic knowledge service forms such as knowledge organization, aggregation, sharing, and dissemination. Meanwhile, the popularization of 5G technology has brought high-speed and low-latency information transmission means, greatly improving the efficiency and accuracy of AI processing. AI has also provided more knowledge service application scenarios for 5G networks, creating a synergistic effect

between 5G and AI technologies that provides technical momentum for knowledge services to evolve toward intelligent knowledge services.

Early knowledge service models primarily consisted of structured reference models (e.g., libraries, archives) and consulting company models (e.g., consulting firms, law firms). As the value of knowledge gradually gained recognition from its owners, the professional knowledge center model (e.g., CNKI, PatSnap) with knowledge payment as a profit model gradually grew. In 2016, with the emergence of knowledge-sharing platforms such as Zhihu, the virtual community model became the mainstream mode of knowledge service, achieving a qualitative leap in knowledge dissemination speed and making accessible knowledge more readily available, thereby enhancing the public's willingness to search, learn, and discuss online. In 2022, ChatGPT became the most discussed product in the knowledge service field, with its biggest difference from traditional knowledge services being that the knowledge provider shifted from humans to AI—the AIGC model. AIGC technologies and products represented by ChatGPT have brought opportunities and challenges to five major aspects of knowledge services: foundation, content, scenarios, ethics, and cost. In an information society that emphasizes user experience, "human-centered" and "user-centric" knowledge services are more favored by users. With its powerful data processing and reasoning capabilities, AI can provide convenient, fast, and efficient knowledge services for users, and the content generated by AI covers diverse scenarios of work, study, life, and entertainment, thereby improving user productivity and assisting user decision-making to a certain extent.

It is foreseeable that in the near future, the combination of knowledge services and AIGC will unleash tremendous vitality, with significant growth potential in user scale and increasingly comprehensive and professional application scenarios. Investigating users' continuous use intention toward AIGC knowledge services can help product designers and developers fully explore user needs, provide effective improvement strategies for AIGC knowledge services, and thereby enhance user satisfaction. Simultaneously, identifying the various factors influencing the development of AIGC knowledge services helps understand the development mechanisms and effective pathways of this service model, providing references for the deep integration of AIGC and knowledge services.

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2 Literature Review

2.1 AIGC Knowledge Service

AIGC, or Artificial Intelligence Generated Content, refers to the use of artificial intelligence technology to generate various forms of content such as text, images, audio, and video. Unlike human creation methods and traditional AI technologies, generative AI can not only process input data and learn to simulate the internal laws of things but also autonomously create large amounts of novel content. From a technical perspective, AIGC refers to the creation of

content that conforms to human-provided instructions through generative AI algorithms. Currently, AIGC has become an industry hotspot and is regarded as a new generation of content creation mode following PGC (Professionally Generated Content) and UGC (User Generated Content), as well as a key tool in the Web3.0 era. The close integration of knowledge services with AIGC and its derivative tools is expected to trigger transformation in the knowledge service field, making intelligent knowledge services more accessible to a broader user base and 预示着 a paradigm shift in knowledge services within multi-resource environments.

Regarding the potential of AIGC in knowledge services, Guo Yajun et al. analyzed its technical empowerment mechanisms and explored potential impacts in innovative application scenarios. Wang Jie focused on ChatGPT's knowledge Q&A function, comprehensively elaborating on the profound changes this technology brings to the foundation and scenarios of knowledge services. Chu Jiewang et al. examined the challenges AIGC poses to library services, predicted its potential development in library services, and proposed six possible implementation strategies. Additionally, Panda et al. conducted a detailed analysis of the feasibility of ChatGPT replacing traditional knowledge base chatbots in libraries, further expanding the application scope of AIGC in library knowledge services.

In summary, domestic and foreign scholars have conducted in-depth research on AIGC knowledge services, but existing studies have mainly explored the technical foundation and application scenarios. Research on users' continuous use intention and its influencing factors for AIGC knowledge services remains insufficient and urgently needs strengthening. Therefore, this study focuses on analyzing users' continuous use intention, aiming to comprehensively understand and optimize the user experience of AIGC and enhance long-term user acceptance.

2.2 Influencing Factors of Continuous Use Intention

Continuous use intention refers to users' repeated selection of a specific system or platform to use particular products or services over a certain period. Compared with initial use intention, users' continuous use intention better highlights the quality advantages of a system, making the analysis of influencing factors a key to optimizing user experience and improving quality. Therefore, current research in this field focuses on exploring the factors that influence users' continuous use of a particular technology or product.

Wang Wentao et al., based on the Stimulus-Organism-Response (SOR) model, used the mobile experience sampling method to explore the impact of personalized content closure on mobile social media users' continuous use intention. Zhao Jing et al., combining the extended technology acceptance model and information technology fit theory, used structural equation modeling to investigate the key factors influencing graduate students' continuous use intention of AIGC

for academic practice. Qiu Junping et al., based on expectation confirmation theory and uses and gratifications theory, constructed a continuous use intention model for generative AI among college student users. Davis proposed that perceived usefulness and perceived ease of use are key factors affecting users' continuous use of a technology and developed the Technology Acceptance Model based on this view. Zhao Baoguo et al., from the perspectives of expectation confirmation theory and perceived cost theory, constructed a model analyzing factors influencing users' continuous use intention of paid content applications.

In summary, although research on continuous use intention covers multiple information system application scenarios such as social media, AIGC, and mobile payment, specialized research on continuous use intention for AIGC knowledge services remains relatively scarce. Given this, this study first identifies influencing factors of AIGC knowledge service users' continuous use intention through grounded theory, then constructs a theoretical model from the dual perspectives of expectation confirmation model and technology acceptance model to analyze related influencing factors and mechanisms, and finally validates the theoretical model using structural equation modeling, providing theoretical support for optimizing user experience and sustainable development of AIGC knowledge services.

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3 Research Design and Data Coding

This study adopts grounded theory to identify and analyze the influencing mechanisms of AIGC knowledge service users' continuous use intention. Grounded theory is a qualitative research method proposed by Glaser and Strauss in 1967, emphasizing that research on new phenomena should start with exploratory excavation of problem essence from real life, then establish factual and empirical materials, and finally construct theoretical models based on these materials. This study uses ChatGPT as a representative product of AIGC knowledge services, selects real ChatGPT users for interviews, and conducts coding analysis and theoretical model induction according to grounded theory research procedures.

3.1 Interview Data Collection

Before conducting formal interviews, this study designed a detailed semi-structured interview outline based on specific research questions and relevant literature. However, during actual interviews, questions were handled flexibly according to circumstances without being constrained by the outline's scope. Interview content mainly included respondents' usage of AIGC knowledge service products, their usage experience, and their attitudes toward these products. This study selected 17 interviewees from AIGC knowledge service product-related topics on Zhihu and Xiaohongshu platforms, primarily using online interviews (telephone, WeChat chat, etc.) to collect semi-structured

interview samples. Basic information about interviewees is shown in .

3.2 Qualitative Coding

After interviews concluded, recordings were transcribed verbatim into text materials using software. Documents were imported into NVivo qualitative analysis software for line-by-line coding, and interview texts were sequentially subjected to open, axial, and selective coding according to grounded theory paradigms.

(1) Open Coding: Through segmenting and conceptual summarization of interview texts, 61 original concepts were obtained, which were then inductively clustered into 26 categories.

(2) Axial Coding: Based on open coding results and relationships among categories, further induction and integration were performed, ultimately extracting 9 main categories: knowledge base content quality, interaction quality, derivative function quality, perceived ease of use, perceived usefulness, perceived cost, expectation confirmation, user satisfaction, and continuous use intention. Open coding and axial coding results are shown in .

(3) Selective Coding: Selective coding involves analyzing and summarizing a "core category" from main categories to run through the entire coding process, thereby constructing a theoretical model that describes the entire user usage process as a lifecycle, enabling actual codes to form associations and become conceptualized. The relationships between main categories are shown in .

3.3 Theoretical Saturation Test

Theoretical saturation test refers to conducting the same coding analysis on reserved sample materials to examine whether new concepts or categories emerge. If new categories or concepts still appear, the scope of data collection needs to be expanded until no new categories or concepts emerge. This study had 17 interview transcripts, with the first 15 used as formal coding materials. No new concepts or categories were found in the remaining 2 interview transcripts, proving that the theory constructed in this study has approached saturation.

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4 Model Construction and Research Hypotheses

4.1 Theoretical Model Construction

Through three-level coding analysis, the grounded analysis results based on individual cases were obtained. Users' perceived quality of AIGC knowledge service products manifested in the following aspects:

(1) Knowledge Base Content Quality. The most important aspect of AIGC knowledge service is its vast knowledge base, and providing high-quality knowledge resources is the foundation for its long-term existence. Indicators such

as accuracy, comprehensiveness, and timeliness of knowledge in the knowledge base directly affect knowledge service quality. Responses such as "The most terrifying thing about this direction is its integration capability… something most people haven't realized" and "Never thought there would be an AI robot with such rich knowledge" express users' affirmation of AIGC knowledge service products' knowledge base content quality and indicate that knowledge base content quality can influence users' expectation confirmation.

(2) Interaction Quality. Interaction is the "last mile" of knowledge service, and its effectiveness directly impacts user experience. Currently, AIGC knowledge service products mainly provide knowledge services through text chat. In interaction scenarios, statements such as "Providing information through chat is really convenient" and "In terms of emotional intelligence, it's like a slick middle-aged person, saying everything without making mistakes, absolutely not offending users" express users' affirmation of interaction quality and demonstrate that interaction quality can influence users' expectation confirmation and perceived usefulness.

(3) Derivative Function Quality, referring to functions other than knowledge services provided by AIGC knowledge service products. Although derivative functions are not essential to this service model, developing as many functions as possible will significantly enhance users' continuous use intention. Some users stated, "In the past, brain science experts didn't understand computers, and computer experts didn't understand medicine. With such a or even more powerful AI to mediate, is brain-computer interface still… far away?" and "ChatGPT can even help write literature reviews and provide references as required, which is too amazing." These statements express users' affirmation and expectations for derivative functions, indicating that if knowledge services can meet users' other functional needs, it will enhance their continuous use intention.

The Expectation Confirmation Model (ECM) (see [Figure 1: see original paper]) is an important theory for studying user satisfaction, continuous behavior, and user experience, and has become one of the classic models in behavioral analysis. In this model, expectation confirmation influences perceived usefulness, which has a significant positive impact on user satisfaction and continuous use. Expectation confirmation in this model is users' evaluation of the actual usage effect of knowledge services. If it meets expectations, users develop trust in the model and realize its usefulness. Satisfaction is the psychological state produced after actual use, jointly influenced by expectation confirmation and perceived usefulness. Both satisfaction and perceived usefulness affect whether users continue using the service.

The Technology Acceptance Model (TAM) was initially proposed by Davis based on the Theory of Reasoned Action and Theory of Planned Behavior, with its structure shown in [Figure 2: see original paper]. This model replaced "subjective norm" with "perceived usefulness" and "perceived ease of use" and removed corresponding influencing factors of subjective norm. TAM consists of six variables: external variables, perceived ease of use, perceived usefulness, user

attitude, usage motivation, and system usage behavior. Perceived usefulness and perceived ease of use are direct factors affecting users' attitudes toward the knowledge service model and indirectly influence continuous usage behavior through attitude and usage motivation. External variables include user characteristics, model characteristics, task characteristics, and other elements, serving as antecedent variables of perceived usefulness and perceived ease of use that indirectly affect user behavior and intention. The Technology Acceptance Model has been widely applied in user acceptance research in information technology-related fields such as healthcare, government affairs, culture and tourism, and e-commerce. This study adopts its basic variables "perceived usefulness, perceived ease of use" and variable influence mechanisms to assist in forming a theoretical model applicable to the AIGC knowledge service model.

This study borrows the variables "expectation confirmation, satisfaction" from ECM and references the causal relationships among four variables in the model (see [Figure 1: see original paper]), combining it with the TAM model (see [Figure 2: see original paper]) and qualitative coding research to jointly construct a theoretical model of influencing factors for AIGC knowledge service users' continuous use intention (see [Figure 3: see original paper]).

4.2 Research Hypotheses

Grounded theory analysis results indicate that factors influencing AIGC knowledge service users' continuous use intention can be summarized into four dimensions: perceived cost, perceived quality, perceived ease of use, and perceived usefulness. This study proposes 11 research hypotheses, with the hypothetical model shown in [Figure 3: see original paper]:

H1: AIGC knowledge service knowledge base content quality has a positive effect on expectation confirmation.
H2: AIGC knowledge service interaction quality has a positive effect on expectation confirmation.
H3: AIGC knowledge service derivative function quality has a positive effect on expectation confirmation.
H4: Users' expectation confirmation of AIGC knowledge service has a positive effect on perceived usefulness.
H5: Users' expectation confirmation of AIGC knowledge service has a positive effect on satisfaction.
H6: AIGC knowledge service perceived ease of use has a positive effect on perceived usefulness.
H7: AIGC knowledge service perceived ease of use has a positive effect on satisfaction.
H8: AIGC knowledge service perceived usefulness has a positive effect on satisfaction.
H9: AIGC knowledge service perceived usefulness has a positive effect on continuous use intention.
H10: AIGC knowledge service perceived cost has a negative effect on satisfac-

tion.
H11: Users' satisfaction with AIGC knowledge service has a positive effect on continuous use intention.

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5 Empirical Analysis

This section first designs a questionnaire based on the proposed research hypotheses to collect data on users' usage of AIGC knowledge services and their continuous use intention. Finally, structural equation modeling is applied to conduct empirical research on the theoretical model of influencing factors for AIGC knowledge service users' continuous use intention.

5.1.1 Questionnaire Design

This study used a five-point Likert scale for measurement, with options ranging from "strongly disagree" to "strongly agree." For measurement item design, each latent variable mainly referenced previous coding results and established mature scales from existing research. To ensure questionnaire usability, a pre-test was conducted with selected users before formal survey administration. Variables and their measurement items are shown in .

5.1.2 Questionnaire Collection

This study chose to distribute questionnaires on the Credamo platform for two main reasons: First, AIGC knowledge service products are internet-based, with dispersed users requiring specific IP addresses for access, making online questionnaire distribution the most effective way to maximize geographical coverage. Second, concerning questionnaire validity, Credamo's data marketplace function can be used to improve response validity through incentive mechanisms. Questionnaire distribution ran from January 21 to February 25, 2023, lasting 36 days. A total of 388 questionnaires were collected, and after eliminating problematic responses based on criteria such as whether respondents had used AIGC knowledge service products, questionnaire completion time, and verification of AIGC product accounts, 331 valid questionnaires were obtained, yielding an effective recovery rate of 85.3%. Sample distribution characteristics are shown in .

5.2.1 Reliability and Validity Tests

Scale reliability is typically tested using Cronbach's α coefficient, which is generally divided into six levels: below 0.6, (0.6, 0.65), (0.65, 0.7), (0.7, 0.8), (0.8, 0.9), and above 0.9, representing unacceptable, undesirable, minimally acceptable, quite good, very good, and excellent, respectively. As shown in , all variables' Cronbach's α coefficients exceed 0.7, demonstrating good reliability of the designed scale.

Scale validity includes content validity and construct validity. All measurement items in this study's scale were derived from axial coding results of interview materials and established mature scales, ensuring good content validity. Construct validity can be further divided into convergent validity and discriminant validity. Convergent validity is typically tested using Composite Reliability (CR) and Average Variance Extracted (AVE). In general research, when AVE values exceed 0.5 and CR exceeds 0.6, the measurement model's internal quality is considered ideal. As shown in , all variables' CR and AVE values meet the standards, proving good convergent validity. The evaluation criterion for discriminant validity is that the square root of each variable's AVE must be greater than the correlation coefficients between that variable and others. As shown in , all variables' AVE square root values are greater than their correlation coefficients with other variables, proving good discriminant validity.

5.2.2 Model Fitting and Hypothesis Testing

Structural Equation Modeling (SEM) is a quantitative research method and an important approach for quantitative studies in user behavior fields. This method comprehensively applies causal analysis, path analysis, and multiple regression analysis to explain relationships between variables. Compared with traditional regression analysis, SEM can simultaneously handle multiple dependent and independent variables, making it suitable for complex models. SEM and grounded theory can form methodological complementarity.

This study used SmartPLS 4.0 software for model fitting and hypothesis testing, employing the software's Bootstrapping algorithm with 1000 samples to test the significance levels of each path. The validation results for the theoretical model of influencing factors for AIGC knowledge service users' continuous use intention are shown in [Figure 4: see original paper]. To measure the model's goodness-of-fit for each variable, this study conducted a goodness-of-fit test using R^2 (coefficient of determination). R^2 ranges between 0 and 1, with values closer to 1 indicating better fit. When R^2 exceeds 0.33, the model is considered to have good explanatory power. The R^2 values for expectation confirmation, perceived usefulness, satisfaction, and continuous use intention range between 0.371 and 0.627, indicating that the theoretical model has good explanatory power and fit.

Hypothesis testing results are shown in . Among the 11 hypotheses proposed, 9 were supported. Key findings include: First, knowledge base content quality of AIGC knowledge services has the greatest impact on users' continuous use intention. The knowledge base is the core element of this knowledge service model, and AIGC knowledge service products' ability to quickly and accurately provide required knowledge services depends on their powerful knowledge base, with content quality being the most critical aspect. Therefore, AIGC knowledge services should attract users with better knowledge base content quality. Second, interaction quality has a significant direct positive impact on expectation confirmation. The human-computer interaction interface is the core of AIGC

knowledge services—after extracting knowledge that meets user needs from the knowledge base, AI must transform this knowledge into information that users can easily understand. Third, derivative function quality has a significant direct positive impact on expectation confirmation. Fourth, the hypothesis that AIGC knowledge service perceived ease of use positively affects satisfaction (H7) is not supported, and the hypothesis that perceived cost negatively affects satisfaction (H10) is also not significant.

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6 Practical Recommendations

Based on the in-depth analysis of the influencing mechanism of AIGC knowledge service users' continuous use intention, this study offers the following recommendations for AIGC product knowledge service practice:

(1) Improve Content Quality and Perfect AI Knowledge Base. Grounded analysis results show that users expect knowledge in the knowledge base to be more accurate and comprehensive. In current AIGC knowledge service products, knowledge accuracy receives significant attention, with mainstream large language model evaluation benchmarks all examining AIGC accuracy. Improving knowledge content accuracy and comprehensiveness is crucial for enhancing content quality and strengthening users' continuous use intention. Products or institutions providing knowledge services should improve through algorithm optimization, data optimization, and explore better solutions in directions such as annotated data management and crowdsourcer training. Meanwhile, correcting knowledge base content based on user feedback is a viable approach. AIGC knowledge services should incorporate user feedback functions at AI response points to tag generated content, enabling knowledge base managers to make timely corrections based on user feedback. Additionally, grounded research results show that knowledge timeliness also receives widespread user attention, making the immediate updating of such vast knowledge bases an issue requiring attention.

(2) Optimize Interaction Methods and Enhance Interactive Experience. SEM results show that AIGC knowledge service interaction quality significantly influences users' continuous use intention. Grounded research also found that users have high expectations for AI empathy and experience pleasure. High-quality operational experience often improves user satisfaction and strengthens continuous use intention. AIGC knowledge services have strong human-computer interactivity and need to assist users in obtaining desired knowledge through extensive interaction, requiring relevant personnel to clarify operational logic and design simple, ergonomic interaction interfaces. On the other hand, for emerging technologies to provide deeper convenience to the public, they must not neglect groups such as the elderly and children who have difficulty operating complex products, as well as visually or hearing-impaired groups with certain information reception barriers. Expanding into new mar-

kets while contributing to the broader accessibility of AI technology can bring longer-term value.

(3) Update System Functions and Enrich Usage Scenarios. Currently, besides providing knowledge needed for work, life, and study, AIGC knowledge services also possess auxiliary functions such as code writing, document drafting, file information integration, and data analysis, with text as the main output form. However, user expectations for AI capabilities extend far beyond this. With changing user needs and breakthroughs in related technologies, multimodal information processing capabilities including voice, text, images, and video will be important development directions for AIGC knowledge services, deriving diversified functions for AIGC knowledge service products in professional or popular science fields to adapt to usage scenarios such as scientific research, artistic creation, and learning education.

(4) Improve Evaluation Mechanisms and Value User Feedback. Hypothesis testing results show that expectation confirmation has a very significant positive impact on user satisfaction, and AIGC knowledge services need to attach importance to users' expectation confirmation. A common and effective way to confirm user expectations is user evaluation. On one hand, users can fully express their expectation confirmation, with evaluation content providing references for subsequent users. On the other hand, AIGC knowledge service providers can review user evaluations to effectively monitor knowledge service quality and make targeted improvements. Additionally, as a relatively new product form, AIGC knowledge service product design and development teams should emphasize multi-level communication with users, providing various feedback channels such as in-app feedback, forums, comment sections, and official media.

(5) Implement Reasonable Pricing to Promote Mutual Benefit. This study found that users' perceived cost does not significantly affect satisfaction, mainly because most users in the survey stage used free versions of AIGC knowledge service products and did not clearly perceive usage costs. In the early market entry stage, strongly promoting free versions is a common customer acquisition strategy. However, as market competition intensifies and R&D costs increase, the AIGC knowledge service charging model has become one of the revenue sources. Enterprises or R&D institutions provide different quality services through differential pricing. Service prices set certain economic thresholds for users, and reasonably assessing product value while measuring user costs plays an important role in achieving win-win outcomes for both enterprises and users.

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7 Conclusion

This study first conducted semi-structured interviews with users of AIGC knowledge service products based on grounded theory research, performing open, ax-

ial, and selective coding on interview texts, ultimately obtaining 26 categories and 9 main categories. Second, based on grounded theory coding results and relevant theories, a theoretical model of influencing factors for AIGC knowledge service users' continuous use intention was constructed. Corresponding research hypotheses were then proposed based on model variables, and questionnaires were distributed to AIGC knowledge service product user groups. Finally, structural equation modeling was used to test the theoretical model based on questionnaire data. Validation results show that: users' perceived quality (knowledge base content quality, interaction quality, derivative function quality) has a significant positive impact on expectation confirmation; expectation confirmation and perceived ease of use have direct positive impacts on perceived usefulness; perceived usefulness and user satisfaction significantly and positively influence continuous use intention. Additionally, the direct impact of perceived ease of use on satisfaction and the negative impact of perceived cost on satisfaction are not significant, possibly because products accessible to users during the early survey stage were simple to use and mostly free versions, making users insensitive to ease of use and cost. Based on user research and data analysis results, this study proposes improvement recommendations for AIGC knowledge service-related products regarding content quality, human-computer interaction, derivative functions, evaluation mechanisms, and reasonable pricing, aiming to provide references for relevant enterprises or researchers to enhance user satisfaction and usage intention.

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