From Search Engines to Conversational AI: Cross-Cultural Differences in Information-Seeking Behaviors in AI-Mediated Digital Media

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Abstract. With the rapid development of generative AI, the digital search space has transitioned from keyword-based search engines to conversational AI systems that generate answers. As AI systems increasingly mediate how people access and interpret information, examining their impact on users' information-seeking practices has become a significant field within digital media research. Previous research either focuses on cross-cultural differences in information-seeking behaviors within traditional search settings or considers conversational AI interactions within single cultural contexts, but not many studies have compared these two paradigms systematically or analyzed how AI mediation changes cultural differences in information behavior. In order to fill in this gap, the present paper will conduct a systematic review of peer-reviewed studies published between 2001 and 2025 and will put forth an analytical structure composed of a three-layer model that incorporates information behavior models, cultural dimension theory and AI-mediated search structures. As the analysis shows, conversational AI changes the way people seek information by centralizing information and shifting epistemic authority to AI systems. Therefore, the cross-cultural differences that were present in queries and navigation strategies tend to surface in the way that people evaluate AI-generated responses and negotiate authority with AI systems. The study provides a conceptual basis for how cultural differences are being reshaped through AI-driven information environments and suggestions for the design and management of globally used conversational AI systems.

Keywords: AI-mediated search, information-seeking behavior, cross-cultural differences, conversational AI, algorithmic mediation

1. Introduction

The digital search technologies have also experienced a structural transformation over the last couple of years from traditional keyword-based search engines to more modern generative artificial intelligence (AI) driven conversational search engines. Information-seeking behavior has always been seen as a key part of digital media and communication research, it shows how people obtain information, evaluate credibility and make choices in their daily lives.

In this study, the conversational AI search platform refers to the dialogue systems that are generated by the language learning models (LLMs), such as ChatGPT, OpenAI; Gemini, Google; Doubao, ByteDance; and DeepSeek, DeepSeek Inc.). These platforms are analytically separable from other kinds of traditional intelligent customer service chatbots or rule-based dialogue systems that match predefined responses and do not generate or integrate knowledge.

Also, AI mediation refers to the intervention carried out by AI system on its own on the way that users seek information by rephrasing user's questions, collecting sources, and synthesizing responses. This definition does not include purely instrumental tools that merely retrieve or show documents but do not involve interpretation at the level of content.

Existing research either concentrates on cross-cultural information-seeking through traditional search engines or user interaction with conversational AI in a single cultural context, and there is insufficient examination of the mediating function of AI in the cross-cultural reconfiguration of epistemic authority in both search paradigms. This research also fills this gap through developing a three-layer analysis system for the cross-cultural distinctions in AI-assisted information searching.

Correspondingly, it will be studying the following research question:

RQ1: What differences in information-seeking behaviors exist between different cultural contexts when using traditional search engines and conversational AI search platforms?

RQ2: What are the main behavioral dimensions in which these differences emerge? How does AI function as an intermediary of information in this?

The rest of this paper is organized as follows. First, Section 2 is a review of the information-seeking behavior and cultural dimension theory. Section 3 is the methodology of this research. Section 4 explains how search technologies have changed from document-based retrieval systems into AI-mediated conversational structures. Section 5 applies the three-layer framework to examine cross-cultural contrasts in AI-mediated information-seeking practices. Finally Section 6 discusses theoretical implications, design and governance considerations and future work.

2. Information-seeking behavior in digital media: a cross-cultural perspective

2.1. Cross-cultural information-seeking behaviors

Information-seeking behavior has long been at the heart of information science and research on digital media. Wilson's Model of Information Behavior [1] and Kuhlthau's Information Search Process [2] both state that information seeking depends not only on cognitive needs but also on affective states and situational contexts. On digital platforms, search engines have emerged as the main entry points where people find information, changing the way people seek information from direct person-to-world engagement to interactions with algorithms via the search engine.

Starting from the early 2000s, scholars have begun researching how cultural values influence information behavior. Studies that have been cross-cultural have shown that elements such as individualism, collectivism and uncertainty avoidance impact how a person expresses what kinds of information they need, the kinds of searches they want to undertake and even what kinds of sources will be acceptable to them [3]. According to Hofstede's cultural dimensions theory and Hall's high- and low-context communication framework, western contexts are usually related with individualism, lower power distance and low-context communication, but Chinese contexts are often associated with collectivism, higher power distance and high-context communication. All these studies show that seeking information is culturally embedded. However, the vast majority of this was done with respect to traditional keyword-based search engines and assumes that the search

system itself serves as some sort of relatively neutral retrieval device, rather than a participant in the construction of meaning.

2.2. Cultural influences on search strategies, trust and evaluation

Building from here, later studies looked at what cultural factors influence actual search actions, such as choice of words for search terms, how people move about when they browse, the creation of trust in the search results, and the judgment criteria. Empirical studies show that users with different cultural backgrounds have different query lengths and uses of exploratory and focused search strategies and rely on the system-provided ranking [4]. Cultural norms also affect trustworthiness: Some find the high search engine standing itself the most trustworthy, others will check against several and possibly other sources for veracity and then have their say [5].

Pivotally, much of that literature treated search engines like infrastructural tools that help people find documents, but do not actually intervene in knowledge construction in any fundamental way. Even if the algorithmic ranking was recognized as affecting what was visible, it was assumed that the user would have to choose, make sense of, and put together information from many different sources [6]. That is, traditional search systems only mediated access and did not proactively produce or gather knowledge. But as digital search environments transition towards AI-driven conversational systems, this assumption becomes more problematic; if an AI system were purely retrieval-oriented, it would provide a link to all of the documents and rank them for the users, but instead, it synthesizes and frames the information. Hence, the "neutral tool" assumption that underpinned earlier cross-cultural research is now being questioned.

2.3. AI-extended information-seeking behavior

Since the mid-2010s, development in neural language processing and formulation of conversational search framework has shifted focus away from traditional keyword-based retrieval systems towards more advanced AI-driven conversational search environment. In conversational search research, it is mentioned that now AI systems have been developed to have multiple turns of interaction, accept natural language inputs, and reformulate queries dynamically so that users can iteratively refine what they need via dialogue [7]. Unlike traditional search engines that return lists of links, conversational AI aggregates different sources and generates synthesized answers. It shifts mediation from "navigating documents" to "building an answer" [8].

More recently, generative AI systems alter information-seeking processes via automated query expansion, context recognition, structured summary creation and preemptive conversational steering [9]. Such mechanisms rearrange information channels so that users no longer browse through various sources on their own, but instead interact directly with AI. As a result, interpretive authority is in some ways centralized by the system.

The AI era brings about the change from "user→tool→information" to "user↔AI↔information" for the way of information seeking, so the cultural difference will get more and more attention. If different cultures have different levels of trust orientation, authority acceptance, and uncertainty management, then it will lead to different extent of reliance on AI-generated synthesis. Therefore, it is necessary to incorporate AI-mediated mechanisms in to cross-cultural information-seeking theory for understanding contemporary digital media.

3. Research methodology

To address these questions, the study employs a literature review integrated with analysis with a cross-cultural approach. This study is going to identify variations in AI-influenced information seeking. The analysis is based on peer-reviewed empirical studies from Web of Science and Scopus between 2000 and 2024.

3.1. Literature selection criteria

The literature selection follows three standards. Firstly, the included studies should be in SSCI/SCI indexed journals or the major international conference (e.g. Journal of the Association for Information Science and Technology, ACM Computing Surveys, SIGIR, CHIIR). Second, the studies have to be either on cross-cultural information-seeking behavior in traditional search environments (2000-2015) or on conversational search and AI-mediated interaction in digital search systems (2016-2025). Thirdly, it excludes non-peer reviewed sources like blog posts, technical whitepapers and commercial reports to ensure academic rigor.

3.2. Database search keywords

Database search keyword combinations: "information-seeking behavior", "cross-cultural search", "conversational search", "AI-mediated search", "algorithmic mediation", "human-AI interaction", "individualism collectivism search behavior", "power distance information evaluation".

3.3. Three-level analytical framework

Analytical framework combines three theoretical levels.

Firstly, on the behavioral level, use basic information behavior models such as Wilson's Information behavior model and Kuhlthau's Information Search Process. Wilson views information behavior as a contextual process influenced by user need, motivation and situational factors [1], Kuhlthau sees information seeking as a staged cognitive and affective process involving exploration, evaluation and integration [2].

Second is the Cultural Moderating Layer which is influenced by Cultural Dimension Theory. Cultural dimensions framework based on Hofstede explains about the individualism collectivism, power distance and uncertainty avoidance according to views towards authority, decision making and uncertainty [10]. Hall's High-context and low-context communication. Theories split cultures into relying more on cues implicit to a context or explicit speech verbal information [11].

Third, structural mediation layer is informed by conversational search and algorithmic mediation research. Algorithmic mediation can be regarded as part of AI mediation, mainly referring to algorithmic filtering and ranking systems that organize how visible certain information is. Unlike basic algorithms, AI mediators do more than selecting; it synthesizes information as well, producing its own answers and guiding user interactions. In the case of conversational search, it is assumed that a search is an interaction between a user and a system in which the system provides iterative query refinement and answer construction [12]. The Algorithmic Mediation research reveals that AI systems have proactively to define and order digital pathways for information flow by editing information sources, regulating responses, and controlling interpretative powers within the digital world [9].

This study puts these three theoretical layers together to make a comparative framework to investigate how AI-mediated search systems change culturally deep information-seeking procedures.

3.4. Case selection criteria

The case is selected by two criteria. Firstly, the selected platforms must be large-scale AI-driven conversational search systems embedded within different cultural markets such as ChatGPT and Gemini in the Western context, Doubao and DeepSeek in Chinese language context. Second, behavioral interpretations have to be based on recorded empirical findings about conversational search interaction structure, not anecdotal or journalistic observation.

4. Artificial intelligence as a mediating structure in digital information environment

Traditional search engine and conversational AI have different logics of mediation that determine how users encounter, evaluate and combine with this kind of information. Though search technologies have for some time been regarded as neutral technical means of information retrieval, they are increasingly becoming digital media forms of expression that organize what and who can be seen and shape human-computer interaction (HCI) as well as meaning-making processes. From keyword-based search engines to AI-driven conversational systems then, is not an upgrade, it is a reconfiguration of the mediation logic of digital information environments. Traditional search engines are organized according to a list-based mediation logic: users translate their information needs into short, frequently decontextualized keyword queries, and then the search engine returns a ranked list of links as the outcome of the query, where the algorithms mediate the visibility and ordering of the outcome, and the users are left with the task of clicking on, comparing and synthesizing the many sources into their own conclusions [13]. In this scenario, it's still not direct, the system only structures access to knowledge, not actively building it. Unlike them, conversational AI systems utilize a dialogue-based logic where users speak their needs and the system continually interprets them and their answers, in natural language, throughout many turns, as it continually integrates different sources in the background and actively drives interaction, shifting mediation from the "documented navigation" to the "co-creation of answers" [14]. Structurally, this change transfers interpretive authority from distributed sources and individuals users to the AI system. In traditional searches, breadth is promoted and parallel exploration occurs along with users driving evaluation of information, conversely, conversational AI centralizes selection, compression, and framing in the system, reducing the cognitive load whilst increasing the sense of coherence and authoritativeness of responses [12]. All these mediating structures facilitate the identification of specific behavioral patterns. When users engage with conversational AI systems, they ask longer and more contextualized questions, use more iterations and follow-ups than manual reformulation, consult fewer other sources, and rely more on synthesized answers. These patterns might heighten the way cultural variances in trust, authority orientation, and uncertainty avoidance get portrayed in AI-mediated information-seeking actions [7].

To point out structural differences between traditional and conversational AI search, the following contrasts are delineated based on the primary categories outlined in Table 1: mediation format, authority relationship layout, user role, information presentation and cognitive requirement.

Table 1. Structural comparison between traditional search engines and conversational AI

Comparison Dimensions	Traditional Search Engines	Conversational AI
Mediation Form	List-based mediation presenting ranked links to external documents.	Dialogue-based mediation that generates synthesized responses through multi-turn interaction.
Authority Distribution	Epistemic authority remains distributed across multiple external sources; users determine which sources to trust.	Interpretive authority becomes partially centralized in the AI system, which aggregates and synthesizes information into unified answers.
User Role	Users actively navigate search results, compare sources and integrate information independently.	Users interact with the system through prompts and follow-up questions, evaluating AI-generated answers rather than individual documents.
Information Presentation	Multiple links presented as ranked lists requiring manual exploration.	Synthesized responses presented in natural language, often accompanied by explanations, summaries or suggested follow-up prompts.
Cognitive Load	Higher cognitive load due to the need to evaluate multiple sources and reconcile conflicting information.	Reduced navigation effort but increased reliance on system-generated synthesis and interpretive framing.

5. Cross-cultural differences in AI-mediated information-seeking behaviors

On the basis of the three-layer analytical framework, the following part will analyze the cross-cultural difference in AI-mediated information seeking from three related perspectives. The behavioral level focuses on differences in interaction strategies and information navigation processes. The cultural moderation level emphasizes differences in evaluation standards and decision-making directions shaped by culture. The structural mediation level explains how AI systems can alter these practices through mechanisms such as answer synthesis and dialogue guidance.

This section uses the three-layer analytical framework created in the previous parts to scrutinize how information behavior processes are culturally shaped and structurally reformed in AI assisted search surroundings. The section combines established cultural frameworks such as individualism-collectivism, authority orientation with documented conversations searches empirically, to see how AI-mediated structures might amplify cultural embedded differences [5,9,12,15].

5.1. Information-seeking strategies and interaction patterns

Empirical study into traditional search settings, it appears cultural setting does have a bearing on how people express information requirements, structure their inquiries and explore results [3,5]. In keyword based systems these differences were most visible in differences in how the queries were formed and how far the users were willing to go in browsing.

Conversational AI like ChatGPT, Gemini, DeepSeek and Doubao facilitates iterative conversations, with the dialogue evolving into a multi-turn and contextually refined exchange [7,12]. Conversation system let users utilize full natural-language requests and keep asking for clarification of what they need. Empirical research suggests that conversational search conversations typically use longer queries and clarifications that progress instead of repeating the same manual reformulations [7].

The observations of platform usage reveal different interactions on different cultural markets. Western usage contexts of ChatGPT and Gemini, the publicly available prompt corpora and usage examples mostly have task-oriented queries as single-problem request like "summarize this article", "write a python function", "compare X and Y" with few clarification turns following. This tendency can be explained by the response logic of conversational AI systems. As they produce immediate and synthesized responses to a bounded task, many users' needs are met in a single interaction. Therefore, those already favoring the direct and efficient style have no need for an extended framing of the context, which reinforces a shorter, task-oriented style of prompting.

In contrast, the interaction patterns recorded in Chinese language AI platforms such as Doubao and DeepSeek often have chained prompts and scenario elaboration, where the user continuously improves on the situation by adding constraints, requesting step-by-step instruction, or asking for an explanation before deciding. This is amplified by multi-turn affordances of conversational AI. Conversational AI systems allow users to slowly add in context, revise their intentions, and ask for explanations across turns. In most cases, it would generate follow up prompts that can help to clarify. As a result, they frequently develop into extended dialogues, making it aligned with the forms of interaction that rely on an accumulation of context and a loop of clarification.

Although there are few published large and cross-national behavioral datasets of conversational AI usage, integrating conversational search research [7,9] with existing cultural communication frameworks implies that AI-mediated dialogical structures might intensify culturally rooted interaction preferences. Instead of eliminating the variation, conversational AI systems provide an interaction space for difference in directness, context and iteration to be more visible.

5.2. Information evaluation standards and decision-making functions

In general search environments, users must compare information from multiple sources and independently integrate the information, which largely places the responsibility of evaluation on the individual [6]. The research has shown that users in individualistic cultures place an emphasis on personal verification and cross-checking information which corresponds with less trust placed in central authorities [15]. On the contrary, in cultural context of high authority orientation, people accept institutionally structured information source.

Conversational AI changes this evaluative process. In place of presenting dispersed documents, systems like ChatGPT or Doubao give combined, single responses which compress different sources into cohesive outputs [9,12]. In this central mediation, evaluation changes from evaluating many sources to evaluating the credibility of the systems output.

When these structural centralizing interactions exist alongside cultural authority, the norm for making differentiation can be seen. In lower power-distance, individualistic contexts, conversational AI will more likely be seen as an assistive productivity tool that is subject to external verification. In higher authority contexts, the answers from AI systems might just be more easily used when making decisions, without needing to compare a lot of different places.

So, AI-driven search isn't going to standardize the way people judge things. Nevertheless, by shifting the sources of knowledge from numerous and dispersed channels to a few centralized systems, these technologies exacerbate existing cultural differences in how to verify truth and how to assign authority to cognition.

6. Theoretical contributions, practical implications, limitations and future direction for further research

6.1. Theoretical contributions

It contributes to three. Firstly, it verifies the structural validity of classical information-seeking models such as Wilson's model [1] and Kuhlthau's Information Search Process [2] in AI-contexts. Need recognition, exploration, evaluation, and integration still have a visible process, but the evaluation stage has been transformed. Users interact with synthesized system outputs instead of many documents. It extends prior process-based models to generative AI settings.

Second, the study still uses the foundations of cross-cultural information behavior studies [5,15] which show that cultural variables like Uncertainty avoidance and Power Distance do still have some effects in the evaluation methodology for the use of AI. That higher uncertainty-avoidance contexts may show intensified verification behaviors toward AI outputs matches with Hofstede's cultural setup [10] and expands it into algorithmically mediated scenarios.

Third, the study fills in for conversational search research [5,9,12,15], which largely looks at interaction mechanics inside just one cultural situation. The authors take into consideration mediation theory as well as cultural dimension theory to solve for culturally isolated conversational search analysis and develop a structure comparison.

On balance, it brings together disparate domains and points to how AI mediation changes where and how culturally different manifestations become behaviorally obvious.

6.2. Design implications for cross-cultural AI search platforms

Findings will be for global AI system design. If AI systems accumulate epistemic power, the cultural variance of what a person can expect from someone with authority, and the extent to which they desire to be impressed by a deep explanation, must be included. For instance, for lower-context communication cultures, more succinct, to-the-point responses with optional expansion modes would likely improve usability for those cultures. Conversely, for higher-context communication cultures, layered explanation modes like step-by-step displays or more extensive contextualization could be more in keeping with user expectations. It needs to be noted that such implications mostly refer to general-purpose conversational AI systems where users seek extensive information and synthesize knowledge through AI. Conclusions could be less relevant for domain-specific AI systems such as professional medical, legal or scientific search tools which are more likely to have specific interaction structure and evaluation criteria based on more specialized knowledge frameworks and expert validation.

6.3. Limitations and directions for future research

While this study provides a theory-linked framework of the understanding of cross-cultural difference of AI-mediated information-seeking behavior, it should recognize several limitations. First, it is based on systematic literature synthesis and integration of concepts, not original cross-national empirical data. Second, the focus is mainly at the macro-cultural level, and does not empirically explore the relationship between individual-level factors such as age, education, and digital literacy and cultural orientation under AI-mediation. Finally, platform level observation is interpretive and not from large behavioral dataset.

Future work must do more rigorous testing of this proposal via controlled experiments and large behavioral databases. First, controlled experiments can control for the effect of culture by manipulating the AI response format, for example, concise and elaborate answers, or whether the answer is cited or not. Key indicators: verification frequency, how many times did I check with external sources, and whether I believe in the answers generated by AI. Second, across different regions, platform log analysis could uncover the way people of different cultures interact with conversational AI systems. Relevant measure could be: how many times they make another query after the AI answers, how much interaction occurs, and how many times someone does an outside search after the AI's response. Lastly, qualitative approaches like interviews will be used to clarify why the different cultures out there have their own answer to why AI-generated information would look differently.

7. Conclusion

This study explores how AI-augmented searches are transforming cross-cultural information-seeking behavior by contrasting traditional search engines and conversational AI systems through a consistent method. Integrate information behavior models with cultural value frameworks and AI-mediated search structures so as to develop a three-tiered analytical framework about how cultural difference arises within the context of AI-mediated information environment.

The findings demonstrate that cultural difference does not vanish in AI-mediated search environments, they become restructured. In terms of cultural variations in traditional search, it mostly showed up in query formation, navigating through search results, and comparing different sources of information. However, with the help of conversational AI, these cultural variations now take place during the evaluation of AI-generated synthesized responses, and the negotiation of epistemic authority between people and AI.

These shifts carry profound implications for more general global AI system design and governance. With conversational AI becoming more of an information access infrastructure, culturally distinct expectations about whom to consult (and why), what should be explained (and how), and who to verify (and when) need to be taken into account in the design of AI-mediated searches. Incorporate adaptive explanation strategies and culturally responsive transparency mechanisms for better cross-cultural usability. Meanwhile, these risks should also be acknowledged. In diverse global information environments, users from different cultural backgrounds have varying levels of acceptance and trust in artificial intelligence. Ignoring these users' understanding of how AI generates knowledge could ultimately exacerbate existing inequalities.

Some restrictions must also be admitted. Analysis was through systematic literature synthesis and concept synthesis rather than original cross-national empirical data and is mainly at the macro cultural dimension level. Future research will also continue to use empirical methods to study cross-cultural human-AI interaction, and identify what different kinds of people understand, verify and depend on the information provided by AI.

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