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Лю Биньбинь

Магистр

Казахский национальный университет имени аль-Фараби

Алматы, Республика Казахстан

ИССЛЕДОВАНИЕ ИНФОРМАЦИОННОГО ВОСПРИЯТИЯ СТУДЕНТОВ В УСЛОВИЯХ АЛГОРИТМИЧЕСКИХ РЕКОМЕНДАЦИЙ

Аннотация. В условиях развития цифровых медиа алгоритмические рекомендательные механизмы стали одним из ключевых факторов, определяющих способы получения и осмысления информации студентами вузов. В данной статье рассматривается влияние алгоритмических рекомендаций на информационное восприятие студентов с позиций коммуникационных и медиаисследований. В отличие от работ, сосредоточенных преимущественно на макроуровневых последствиях, таких как «информационный кокон» и «фильтрующий пузырь», данное исследование акцентирует внимание на промежуточном уровне восприятия информации, включая оценку студентами её полноты, достоверности, значимости и разнообразия. Опираясь на теорию медиазависимости, концепцию аффордансов и подход, связанный с исследованием внимания, автор показывает, что алгоритмические рекомендации не определяют когнитивные процессы студентов напрямую и принудительно, а постепенно перестраивают их перцептивные рамки посредством персонализированной дистрибуции контента, повторяющейся экспозиции и управления вниманием. Такое влияние носит скрытый, накопительный и долгосрочный характер, затрагивая не только содержание получаемой информации, но и способы интерпретации социальной реальности и формирования суждений по общественным вопросам. Исследование подчеркивает значимость анализа информационного восприятия для более глубокого понимания когнитивных и социальных эффектов алгоритмических рекомендаций в цифровой медиасреде.

Ключевые слова: Алгоритмические Рекомендации, Информационное Восприятие, Студенты Вузов, Цифровые Медиа, Внимание, Медиаграмотность

Liu Binbin

Master

Al-Farabi Kazakh National University

Almaty, Kazakhstan

PERCEPTION RESEARCH OF COLLEGE STUDENTS UNDER THE BACKGROUND OF ALGORITHM RECOMMENDATION

Abstract. In the context of digital media development, algorithmic recommendation has become a key mechanism shaping how college students access and understand information. This article examines the influence of algorithmic recommendation on college students' information perception from the perspective of communication and media studies. Rather than focusing only on macro-level consequences such as information cocoons and filter bubbles, the study emphasizes the intermediate level of perception, including how college students evaluate the completeness, credibility, importance, and diversity of information. Drawing on media dependency, affordance, and attention perspectives, the article argues that algorithmic recommendation does not directly determine cognition in a coercive way, but gradually restructures perceptual frameworks through personalized content distribution, repeated exposure, and attention guidance. Such influence is implicit, cumulative, and long-term, affecting not only the information college students receive, but also the way they interpret social reality and form judgments about public issues. The study highlights the importance of focusing on information perception in order to better understand the cognitive and social effects of algorithmic recommendation in the digital media environment.

Keywords: Algorithmic Recommendation; Information Perception; College Students; Digital Media; Attention; Media Literacy

Introduction

With the continuous improvement of the algorithm recommendation mechanism,

the current information distribution system has undergone significant changes, and the methods and sources through which college students obtain information have also changed greatly. In the traditional media platform environment, the main way to obtain information was through users actively searching, which was highly proactive. However, in the current era, the main way to obtain information is through the recommendation form under the algorithm recommendation mechanism, meaning that the proactivity has been somewhat weakened. The frequency and scope of information content appearing are mainly determined by the algorithm. This change and trend have led to college students increasingly relying on the algorithm recommendations of various media platforms in their daily information acquisition process [1].

Some existing studies, when analyzing the impact of the algorithm recommendation mechanism, often focus on macroscopic results such as the information cocoon and filter bubble. These studies usually regard individual users as passive recipients of algorithm-recommended information content, but they do not pay attention to the subjective feelings of individual users when actually receiving information content. In fact, college students are not merely trapped in the predicament of the algorithm recommendation mechanism; rather, in the process of continuous use, they have formed their own perception and judgment system for information content. This includes perceptions of whether the information source is complete, whether it is true and reliable, and whether it requires special attention.

The perception of information is an important intermediate link between the algorithm recommendation mechanism and cognitive outcomes. If we do not pay attention to some changes in the perception aspect, it is difficult to explain why different individuals generate different cognitions and feedback in a similar information environment. Therefore, this article focuses on the information perception level of the college student group and discusses how the algorithm recommendation mechanism changes the degree of understanding and perception focus of college students on information.

Based on this problem awareness, this paper takes college students as the core research object and asks three interrelated questions: how does the algorithm recommendation mechanism reshape college students' perception of information sources, how does it influence their judgment of authenticity, importance and diversity of information, and what latent cognitive consequences may emerge from long-term reliance on recommended content? By centering these questions, the paper seeks to enrich current discussions on algorithmic recommendation from the perspective of communication and media studies, and to provide a more fine-grained explanation of how algorithmic power operates in everyday information practices. The following sections therefore review the relevant theoretical background, analyze the mechanisms through which algorithmic recommendation affects information perception, and finally discuss its latent effects as well as possible countermeasures.

Although previous scholarship has provided important insights into phenomena such as filter bubbles, information cocoons and personalized news consumption, relatively less attention has been given to the meso-level process that connects algorithmic distribution with users' later cognitive judgments, namely information perception. This gap is especially evident in studies on college students. Existing discussions often emphasize external structural consequences of platforms, but they insufficiently explain why users exposed to similar recommendation logics may still develop different understandings of credibility, relevance and importance. Focusing on perception makes it possible to analyze the interactive relationship between algorithmic arrangement and user subjectivity, and to reveal how platform recommendation gradually shapes not only information choices but also standards of recognition and evaluation.

At the same time, this transformation should not be understood only as a technical improvement in information distribution efficiency. In a platformized media environment, recommendation systems increasingly intervene in the pre-selection, ranking and repeated exposure of content, thereby restructuring the conditions under which college students encounter social issues, public discourse and everyday

knowledge. For college students, who are at a critical stage of value formation, identity development and media habit stabilization, algorithmic recommendation does not merely change what information is available; it also changes how information is noticed, interpreted and prioritized in daily life. As a result, the study of algorithmic recommendation needs to move beyond the question of content exposure alone and pay closer attention to the subtle perceptual processes through which information becomes meaningful to users.

Theoretical Background

From the perspective of communication studies, the perception of information is not a simple process of information reception, but rather a comprehensive process of selection, interpretation, and understanding of the content of information from an individual's own perspective at the psychological and cognitive levels [2]. College students, in the process of obtaining information, are influenced by various factors, such as their own interests, experiences, and personal usage habits. The algorithmic recommendation mechanism further reinforces this process. Some important theories in communication studies provide crucial references for understanding how the algorithmic recommendation mechanism affects the perception methods of college students.

The media dependency theory suggests that when individuals highly rely on a certain medium in their learning, entertainment, and social communication activities, the influence of this medium on their cognitive level and perception ability will also increase. For college students, various social media platforms and application software have become an important part of their daily lives, and the algorithm recommendation mechanism plays a crucial role in information filtering and pushing in their daily lives. This high level of dependence makes college students unconsciously accept the information perception mode shaped by the algorithm recommendation mechanism.

The supplyability theory further elaborates on the impact of algorithmic recommendation mechanisms on information perception. When designing internal

algorithmic recommendation systems, various Internet social media platforms do not take compulsory measures to require users to accept certain types of information content. However, these platforms provide users with a specific behavioral approach and perception system through aspects such as page layout, functional structure, content arrangement order, and interaction mode. For instance, when users are using the software, there are some auto-play and highly relevant content push notifications, which prolong users' stay time [3], and attract users' attention, making them focus on these similar content information. This measure is not compulsory, but it guides users' attention and perception focus in actual activities.

The mechanism of algorithmic recommendation on college students' information perception

The key mechanism by which algorithm recommendation technology influences the information perception mode of contemporary college students lies in the fact that the algorithm recommendation mechanism shapes the cognitive framework of the college student group through the continuous and stable characteristics of information expression. The current mainstream algorithm recommendation systems generate and push information content that is highly similar in terms of thematic category, value stance or narrative style based on important data such as users' previous browsing trajectories, search records and search behaviors. These contents tend to be homogeneous [4]. This kind of information homogeneity that users usually cannot clearly identify will gradually form a specific cognitive structure of certain information content at the cognitive level of college students, thereby affecting their overall grasp and judgment of the real information environment. The high-frequency exposure of specific types of information content in the information environment will systematically enhance college students' perception of the value weight of such information, leading them to tend to regard the content filtered by the algorithm as having universal nature and wide social consensus, but they cannot fully recognize that these contents are essentially the products of the algorithm recommendation mechanism. This cognitive preference shaped by the high-frequency information

push will, at the substantive level, affect the focus of attention, cognitive orientation and judgment ability of contemporary college students towards various social phenomena and public affairs. In the process of information acquisition, the algorithm recommendation mechanism greatly reduces the decision-making cost of college students and improves the efficiency of their information acquisition, resulting in a significant decrease in the number of times college students actively search for information content and compare cross-platform content. This brings college students a convenient experience in information acquisition, but at the same time, it gradually weakens their initiative in information exploration, usually passively receiving information. This makes individuals' cognition of information boundaries increasingly restricted by the result range provided by the platform algorithm. This change in information acquisition methods is not due to external pressure, but a behavioral inertia and psychological dependence gradually formed in the long-term use process. Long-term reliance on the algorithm recommendation mechanism will weaken college students' ability to judge various social information, thereby affecting their independent thinking ability. From the perspective of the mechanism of action, the algorithm recommendation mechanism does not directly and forcibly change the existing views and positions of college students, but influences their information perception structure by constructing different forms of information content expression. This kind of influence may not be very obvious in the short term, but in the long term, it will show a progressive feature, gradually accumulating and eventually changing during the continuous use of the algorithm recommendation of social media, and ultimately becoming a deep factor affecting the cognitive development and information judgment ability of college students.

The latent effects of information perception among college students

The changes in the information perception structure of college students under the background of algorithmic recommendation mechanisms will have many impacts on their cognitive processes and behaviors. There are some latent effects in college students' information perception. The information perception structure is influenced

by various factors in the context of the continuous development of the current information age. Under the influence of algorithmic recommendation mechanisms, college students' perception of information sources is also affected in various ways. On the one hand, as the main core users of social media platforms, college students receive various related contents every day. These contents are continuously homogenized and pushed through the algorithmic recommendation of social media platforms. A large amount of recommended content related to the preferences of college students is pushed, enabling them to obtain a large amount of relevant content and information in a short time. Although this method significantly improves the efficiency of information acquisition for college students, it may cause them to have relatively single viewpoints and perceptions of certain contents. This relatively shallow understanding of information content may lead to limitations in the concepts of college students. On the other hand, the scope of information perception further narrows. This narrowing in scope will simplify college students' perception of the entire society and lack a comprehensive understanding. When certain information is continuously pushed according to a specific stance and goal, from an individual perspective, different viewpoints and opinions will be weakened in the discussion process, and complex and changeable problems will be simplified in the judgment process. College students will use a simplified logical thinking to deal with various complex social problems. This change may lead to an extreme attitude or make them lack patience and the awareness of in-depth understanding when facing complex problems. From the perspective of values, the algorithmic recommendation mechanism reinforces a specific narrative mode, which will affect college students' perception of the diversity of values. When various social media platforms output certain values through the algorithmic recommendation mechanism, individuals will gradually accept these values in this process [4]. These values will gradually be regarded as mainstream values, thereby affecting the understanding and judgment of some minority values in society. The influence of algorithmic recommendation on the information content received by college students daily is not only reflected in what

types of information college students receive and see through the algorithmic recommendation mechanism, but also in how the college student group understands the obtained information.

Countermeasures and Suggestions

The algorithmic recommendation mechanism has exerted profound and far-reaching influences on college students' perception of information. In order to mitigate these influences, it is necessary to strengthen college students' awareness and understanding of the contemporary information environment at the cognitive level. As an important field for cultivating critical thinking and independent judgment, higher education institutions should actively undertake the responsibility of media literacy education. Through classroom teaching, thematic lectures, and other related educational activities, universities can guide college students to recognize the operating logic, selection criteria, and implicit biases embedded in algorithmic recommendation systems. Such educational efforts would help students understand that the information they encounter in their daily digital practices is not neutral or comprehensive, but rather selectively filtered and prioritized by platform mechanisms. In this way, college students may gradually shift from passive reception to more active and reflective engagement with information.

At the same time, appropriate measures should also be adopted to encourage college students to engage with diverse viewpoints and social positions within the algorithmically mediated information environment. This is essential for reducing the risk of cognitive closure, emotional polarization, and simplified understandings of complex social issues. From the perspective of college students themselves, they should consciously expand both the scope and the channels of information acquisition by using multiple platforms, consulting different types of media sources, and maintaining a certain degree of initiative in information seeking. Such practices can help increase the diversity of accessible information and weaken the closed informational environment generated by algorithmic filtering. In addition, college students should continuously improve their capacities for information evaluation,

critical reflection, and rational judgment, so as to strengthen their ability to assess the credibility, relevance, and social implications of the content they consume.

From the perspective of social media platforms, it is equally important to further optimize the internal logic of algorithmic recommendation systems. Platforms should seek to reduce excessive homogeneity in content distribution by improving recommendation diversity and broadening users' exposure to heterogeneous information. At the same time, greater transparency in recommendation criteria and stronger user autonomy in content selection should be promoted, so that college student users are better able to understand why particular content is recommended and to make informed choices within the digital information environment. Only by maintaining a balance between technological convenience and user autonomy can the negative effects of algorithmic recommendation on information perception be effectively alleviated.

Conclusion

This study has examined the influence of algorithmic recommendation mechanisms on college students' information perception from the perspective of communication and media studies. The analysis indicates that algorithmic recommendation does not directly determine the cognition of college students in a compulsory way; rather, it gradually shapes their perception of information through the selective presentation, repeated exposure, and continuous prioritization of specific content. In this process, the algorithmic recommendation mechanism affects how college students assess the importance, credibility, diversity, and relevance of information, thereby subtly restructuring their perceptual framework. The influence of algorithmic recommendation is therefore not limited to the technical level of information distribution, but extends to the deeper level of attention allocation, cognitive orientation, and value judgment. By continuously narrowing the visible range of information and reinforcing homogeneous content, algorithmic recommendation may weaken college students' initiative in information exploration, reduce their exposure to diverse viewpoints, and gradually affect their independent

understanding of social reality.

The significance of this study lies in shifting the analytical focus from macro-level consequences such as information cocoons and filter bubbles to the intermediate level of information perception. This perspective helps to explain how algorithmic systems participate in the formation of cognition in the digital media environment and why the influence of such systems is often long-term, implicit, and difficult to detect in the short term. At the same time, this study suggests that college students should not be regarded simply as passive recipients of algorithmically selected information; rather, their information perception is shaped by the interaction between platform mechanisms, individual usage habits, and the broader media environment. Therefore, it is necessary to strengthen media literacy education, improve college students' critical awareness of digital information, and promote greater diversity and transparency in recommendation systems. Although this article is mainly based on theoretical analysis, future research may further incorporate empirical methods, such as questionnaires and interviews, in order to provide a more comprehensive understanding of the long-term impact of algorithmic recommendation on college students' perception, cognition, and value formation.

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