A Study on Generation X Users' AIGC Information Fact-Checking Behavior

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Abstract: The rapid advancement of AI technology has significantly transformed people's lifestyles. Many individuals actively seek information from social media platforms, yet this trend is accompanied by a proliferation of AI-generated misinformation intermingled with authentic content. Generation X, while not digital natives, remains accustomed to obtaining information through social media. Compared to Generation Z, Generation X exhibits relatively weaker awareness and capabilities for verifying and evaluating misinformation, frequently becoming victims of such content. Therefore, studying Generation X's AIGC information verification behavior on social platforms has become crucial. Current research on AIGC primarily focuses on the generation mechanisms and dissemination pathways of misinformation, forming diverse governance approaches such as technical identification and platform regulation. However, studies addressing age-specific differences remain scarce. This paper investigates the factors influencing Generation X's AIGC information verification behavior.

The study first analyzes generational differences in Generation X's digital literacy and information consumption habits, exploring their cognitive levels and risk perception characteristics regarding AIGC information. It then reveals the triggering factors, decision-making logic, and tool/strategy preferences underlying Generation X users' AIGC fact-checking behaviors. Concurrently, it examines the moderating role of AIGC information attributes and the external driving effects of social context and platform mechanisms on verification behaviors. The findings not only deepen generational information behavior theory but also provide practical insights for enhancing Generation X users' AIGC information literacy and optimizing platform information governance.

Keywords: Generation X; Aigc Information; Fact-Checking Behavior; Generational Characteristics; Digital Literacy

1. Introduction

Recent rapid advancements in artificial intelligence have propelled generative AI into a highly sought-after content generator. While enabling efficient automated creation, it also produces substantial amounts of false information. Furthermore, deepfakes created using AI further contaminate information sources. Online, the dissemination patterns of AIGC-generated misinformation are becoming increasingly complex, profoundly impacting public information reception. Its "half-truth, half-fiction" nature heightens the deceptive quality of such information, making it more readily accepted and disseminated by diverse audiences. In 2025, a viral online claim about a major fire at Shangyu Industrial Park in Zhejiang Province included accompanying videos. The Cyberspace Administration of China later verified that the videos were AI-generated. Through deceptively realistic AI effects, this misinformation severely misled the public, causing significant harm. Other fabricated incidents include a train collision killing construction workers in Gansu Province and a case in South Korea where suspects used AI technology to create and disseminate fake images of women online. Such incidents proliferate, significantly impairing human judgment, distorting facts, and inducing panic among audiences. AIGC's characteristics-low cost, high efficiency, ease of operation, and strong interactivity-make rumor creation cheaper and verification more costly [1].

Social media serves as a primary conduit for AIGC-driven misinformation, driven by its inherent characteristics. Built on internet technology, social media platforms are characterized by widespread distribution and

rapid dissemination, making them highly susceptible to the viral spread of false information. Additionally, social platforms employ algorithmic recommendation systems. Audiences inherently receive information with a certain "pre-existing bias," tending to align with their existing value systems and thought patterns. These algorithms reinforce this tendency, leading to increasingly"monolithic" information exposure [2]. Numerous countries and institutions have implemented measures to counter AI-generated misinformation on social media. Most platforms now label AI-created content with appropriate disclosures. However, during the 2025 Shigatse earthquake, an image of a child wearing a hat amidst ruins- generated by Midjourney-went viral across social networks. It surged to the top of Weibo's trending topics, sparking intense public debate.Although the creator labeled it as AI-generated upon posting, subsequent reposts by numerous self-media accounts omitted this disclaimer. This forced mainstream news organizations to issue clarifications, explicitly stating the image was not from a real news scene but an AI-generated illustration. Many creators lack the subjective intent to "pass off falsehoods as truth, "yet their work may be misinterpreted by audiences during dissemination.Information literacy exhibits a significant correlation with AIGC- generated misinformation. First, some information actors lack fundamental ethical constraints and may exploit AI technology to create false information driven by profit motives. Second, information actors often lack discernment skills and capabilities; those with low information literacy struggle to distinguish AIGC-generated content from authentic information. This is particularly pronounced on social media and short-video platforms, where users tend to place excessive trust in content that appears "highly realistic" or carries "strong emotional value."

Generation X (born between 1965 and 1980), as "immigrants" rather than "natives" of the digital age, have widely integrated into social media environments yet commonly face the challenge of relatively insufficient awareness and capabilities in information verification. Simultaneously, this demographic plays a vital role in socioeconomic activities, particularly as a key audience in the information market due to its significant purchasing power.Their discernment regarding AIGC impacts not only individual decision-making but also the overall health of the information ecosystem. However, existing research predominantly focuses on AIGC's technical mechanisms, dissemination pathways, and platform governance. Studies examining age-specific differences in information behaviors, particularly among Generation X, remain limited, with a notable absence of systematic exploration into AIGC fact-checking behaviors.Therefore, this study centers on "Generation X users' AIGC information fact-checking behaviors. " Based on the Theory of Planned Behavior (TPB) framework, it examines three core dimensions-attitude, subjective norm, and perceived behavioral control-while introducing digital literacy as a key variable to deeply explore their influence mechanisms and moderating effects. Employing a combination of questionnaire surveys and in-depth interviews, the study systematically examines the influence of factors such as digital literacy levels and perceived behavioral control on information verification behavior among Generation X internet users. It also tests the positive association between attitudes, perceived behavioral control, and information verification behavior.

The potential marginal contributions of this study manifest in two dimensions: Theoretically, by integrating the Theory of Planned Behavior with an information literacy perspective, it offers a new interpretive pathway for understanding information behaviors among older generations in the digital era, expanding the applicability of TPB within AI-driven information scenarios. Practically, the findings provide evidence for enhancing Generation X's digital literacy and developing targeted digital competency education, while also offering references for platforms to optimize information presentation mechanisms and advance cross-generational information governance.

2. Literature Review

2.1 Research on AIGC Information Characteristics and Communication Impact

AIGC, short for Artificial Intelligence Generated Content, represents a pivotal milestone in AI's evolution from the 1.0 era to the 2.0 era. As powerful models trained on massive datasets, AIGC systems possess multimodal input capabilities, enabling rapid generation of creative materials across text, images, audio, and

video formats. This fundamentally revolutionizes cultural content production at the technological level. On the other hand, through data-driven optimization and algorithmic refinement, AIGC achieves "cognitive activation" capabilities. It precisely captures and deeply analyzes diverse elements across art, culture, technology, and design, breaking down disciplinary, hierarchical, and domain boundaries. This drives cross-disciplinary, cross-level, and cross-domain innovation and integration, opening new avenues and possibilities for cultural production. More significantly, AIGC technology has deeply integrated into the entire cultural production process, accelerating its evolution toward automation, intelligence, and integration [3]. The core characteristics of AIGC-generated content-its ease of replication, rapid dissemination, and diverse application scenarios-are reshaping the logic of information propagation ecosystems. Leveraging deep learning models, AIGC technology enables the swift generation of highly realistic text, images, and videos. The barrier to replication has significantly lowered compared to traditional human-created content.For instance, text generation tools powered by large language models can produce news reports in specific styles within seconds. The simulation quality of some content has reached the threshold of being indistinguishable from the real thing. Simultaneously, the embedding of AIGC content into channels like social media and short-video platforms facilitates viral dissemination. A single piece of AIGC-generated misinformation can achieve over a million views within 24 hours. Moreover, AIGC content has permeated diverse scenarios including news, advertising, and social interactions, establishing a comprehensive information penetration landscape. These characteristics heighten users' difficulty in discerning information, particularly when AIGC content spreads intertwined with authentic information. Traditional verification methods-such as source validation and stylistic recognition-may prove ineffective.

The depth and breadth of AIGC's impact on user trust perception and fact-checking needs have been captured by academia. On one hand, the ease of replication increases the proportion of false content in the information environment, leading to a widespread decline in users' trust in information sources . For instance, in the health information domain, AIGC-generated false medical advice misleads user decisions, eroding overall trust in health-related information [4].

2.2 Information Fact- Checking

Currently, academia has not reached a fully consistent definition of the concept "information fact- checking." Its more commonly accepted meaning refers to the process of verifying and examining the authenticity or accuracy of information to determine whether to accept or use it. This process is fundamentally an assessment of the truthfulness of information content. Possessing information fact-checking capabilities helps individuals avoid blindly believing or further spreading misinformation, which is particularly crucial in social media information dissemination. It is important to emphasize that information fact checking requires individuals to actively exert cognitive effort. However, research indicates that most people are not inclined to make such an investment in their daily lives and may even perceive its necessity as limited [5-7].

Historically, fact checking emerged as a professional standard within the journalism industry, originating from the production processes of professional media organizations and journalists [5-7]. Traditional verification methods include contacting eyewitnesses or relevant parties, cross-referencing multiple sources, and conducting field investigations [8]. With the advent of the social media era, journalists' verification approaches have become increasingly technological in response to vast and complex information flows, relying more heavily on search engines, platform-integrated search functions, digital maps, and specialized fact-checking tools [9]. Ideally, to ensure news accuracy, journalists should verify all information impartially and meticulously [5]. However, empirical research indicates that verification sometimes serves to bolster the persuasiveness of journalists' positions during debates with skeptics [10]. Simultaneously, the time pressure inherent in news reporting drives journalists to adopt faster verification strategies, sometimes making judgments based on limited data [9]. Worse still, some journalists, chasing traffic, may choose to neglect or even actively spread unverified information, abandoning their basic verification responsibilities [11]. Consequently, in the information-overloaded social media environment, even professional

news producers may exhibit verification oversights. Coupled with algorithmic recommendation systems that weaken traditional gatekeeping functions [12], the risk of misinformation exposure for ordinary audiences has significantly increased. On the other hand, the role of contemporary audiences has shifted. They are no longer passive recipients of information but actively participate in the reproduction and dissemination of news by sharing personal experiences, expressing opinions, and reposting content via social media [13].This implies that whether audiences possess and practice information verification skills not only affects their individual ability to obtain accurate information but also influences the spread of misinformation in public spaces. In recent years, as the phenomenon of online fake news has become more prominent, academic attention has increasingly focused on audiences' information verification behaviors. Some scholars advocate that audiences should cultivate verification awareness and skills, verifying information before believing it to resist misinformation and ensure the accuracy of information acquisition [14,15]. Others view the ability to search for information online, assess its credibility, and utilize it effectively as a core component of contemporary digital information literacy [16].

2.3 Digital Literacy and Generational Differences Among Generation X Users

G eneration X, comprising individuals born between 1965 and 1980, occupies a dual position as both digital natives and a transitional group bridging traditional media. Their generational distinctiveness in digital literacy and media usage patterns has been identified as a core research focus. This cohort retains usage habits of traditional media such as newspapers and television while having early exposure to internet technology, collectively shaping an "offline-online" integrated information acquisition paradigm. Approximately 62% of Gen X users still engage indaily print newspaper reading. Yet over 85% of the cohort rely on social media for real-time information acquisition [17]. This dual-attribute coupling results in contradictory tendencies regarding media trust among Gen X.Trust in traditional authoritative media significantly outpaces that in social media platforms. Yet their adaptation speed to emerging digital tools lags behind Generation Z while surpassing that of Baby Boomers [18].

The stratified digital literacy levels among Generation X are influenced by their technological exposure during formative years. Those who accessed the internet earlier-such as those born between 1975 and 1980-score significantly higher in digital literacy than later cohorts born between 1965 and 1974. This heterogeneity directly shapes the depth and breadth of their media engagement [17]. Approximately 68% of users actively filter redundant information on social media, prioritizing in-depth reporting from authoritative media. However, a point of contention arises: some studies anchor Generation X's reliance on algorithmic recommendations within a range closer to younger demographics. Other studies, however, reveal that they still tend to manually search for information, with less than 30% trusting algorithms [18].

Approximately 57% of Gen X users verify facts by cross-referencing information across platforms. This proportion exceeds that of Baby Boomers but falls below Generation Z [17]. Simultaneously, Generation X's "pragmatic" approach to technology adoption is evident. Approximately 64% of users only learn digital tools relevant to work and daily life. Awareness of emerging technologies like AIGC remains below 25%. This limited technological understanding may constrain their ability to fact-check AIGC information [18].

The dual nature of Generation X's digital literacy and generational differences in media usage provides a crucial foundation for understanding their AIGC information fact-checking behaviors. The authoritative trust cultivated by traditional media fosters their vigilance toward the "low source credibility" of AIGC-generated information. Limited digital proficiency may constrain their ability to utilize specialized verification tools. Existing research remains contentious regarding generational differences in Gen X's technology acceptance and the specific impact of media trust tendencies on verification behavior. Further evolutionary analysis integrating empirical data is required [17,18].

3. Research Questions and Hypotheses

3.1 Generation X's AIGC Information Verification Behavior

While some scholars suggest information

verification can be either proactive or incidental [19], this study focuses solely on proactive verification-where individuals actively analyze and assess information authenticity. Given the scarcity of domestic research on Gen X's AIGC verification behaviors, the following research questions emerge:

R1: How does Generation X proactively verify AIGC information? What is the frequency of related verification behaviors?

3.2 Influencing Factors of Generation X's AIGC Information Verification Behavior

3.2.1 Attitudes Toward Information Verification

Metzger et al. (2015) noted in examining information verification capabilities that previous research indicates most people cannot adequately or accurately assess information, and some may even lack awareness of the need for verification. This reflects individuals' assessment of their preference for information verification behavior.According to the Theory of Planned Behavior, individuals are more likely to engage in a behavior if they perceive its benefits-that is, the more favorable an individual's attitude toward a behavior, the greater the likelihood they will perform it. Therefore, it is reasonable to hypothesize that the strength of awareness about information verification influences actual verification behavior. Thus, the research hypothesis is
proposed:

H1: Attitude toward information verification positively influences information verification behavior.

3.2.2 Perceived Information Verification Ability

The variable of perceived behavioral control in the Theory of Planned Behavior primarily explains behaviors not fully controlled by volition. It refers to an individual's perception of the ease or difficulty of executing a specific behavior-that is, their perception of their ability and conditions for performing the behavior [20]. Perceived behavioral control is generally considered to have been proposed based on Bandura's self-efficacy theory. Self-efficacy refers to an individual's confidence in their own capabilities, which relates to personal competence, ability,and the skills required to execute target behaviors. Ajzen and Fishbein (2005) argue that
individuals who believe they possess the ability and means to implement a behavior are more likely to exhibit higher self-efficacy. It can thus be inferred that individuals with greater confidence in their information verification abilities may possess higher self-efficacy, thereby increasing the likelihood of engaging in information verification. Therefore, the followinghypothesis is proposed:

H2: Perceived information verification ability positively influences information verification behavior.

3.2.3 Digital Literacy

Generation X primarily accesses information through two modes-an integrated "offline-online" information acquisition paradigm. This dual-attribute coupling results in contradictory tendencies toward media trust among Generation X. Trust in traditional authoritative media stands at approximately 78%, significantly higher than the roughly 45% trust in social media platforms. Moreover, Generation X's "pragmatic" orientation toward technology acceptance is clearly evident.Approximately 64% of users only learn digital tools relevant to work and daily life. Awareness of emerging technologies like AIGC remains below 25%. This limited technological understanding may constrain their ability to fact-check AIGC information [18]. Therefore, the following hypothesis is proposed:

H3: Digital literacy positively influences information verification behavior.

4. Research Methodology

Questionnaire survey method: Based on established scales (referencing studies by Ajzen, Eagly, Hobbs, et al.), items were adapted for AIGC scenarios to form a five-point Likert scale questionnaire. Generation X internet users born between 1965 and 1980 (encompassing working professionals, household decision-makers, and other groups) were selected via stratified sampling. Data collection utilized a combination of online survey platforms (e.g., Wenshuangxing) and targeted offline distribution. Analysis of Cronbach’s reliability coefficient.

4.1 Sample Design

Based on the core definition of Generation X, this survey adopted a stratified classification approach combining key demographic dimensions to ensure the representativeness and comprehensiveness of the sample. The specific criteria are as follows:

Age dimension: Strictly limited to people born between 1965 and 1980, and further divided into three subgroups by birth year: 1965-1970,

1971-1975 and 1976-1980, covering the entire age range of Generation X in full.

Educational attainment dimension: Divided into five levels: primary school or below, junior high school, senior high school/technical secondary school/skilled workers' school, junior college, and undergraduate or above, taking into account Generation X groups with different educational levels and adapting to the analysis of intergenerational and individual differences in digital literacy in the study.

Occupation type dimension: Divided into five categories: enterprise/company employees, government/institution staff, freelancers, retirees, and others (including housewives/househusbands, unemployed, etc.), covering the mainstream occupations and living conditions of Generation X and conforming to the research on occupational differences in their information consumption habits.

Basic screening dimension: Respondents must be active social media users, i.e., using mainstream social platforms such as WeChat, Weibo and Douyin no less than three times a week. Those without the habit of using social media were excluded to ensure a high degree of matching between the sample and the research scenario of AIGC information exposure and fact-checking.

4.2 Distribution Channels

The questionnaire was distributed entirely through online channels in this survey. Channel selection took into account both the extensiveness and targeting of the sample to accurately reach Generation X Internet users with different characteristics. The specific distribution paths are as follows:

Core online platform: An official research questionnaire was built on Questionnaire Star, serving as the sole port for questionnaire filling and collection to ensure the standardization of data collection.

Precise distribution on social platforms: The questionnaire link was forwarded through channels frequently used by Generation X, such as WeChat Moments, WeChat groups (including workplace groups, community groups, interest groups), Weibo super topics for middle-aged and elderly people, and local life forums.

Targeted institutional push: In collaboration with the administrative departments of enterprises in different industries, the general offices of government and public institutions, community neighborhood committees and other organizations, the questionnaire link was pushed to the internal staff who meet the age definition of Generation X in a targeted manner.

Targeted invitation in online communities: Access was gained to online interest communities and professional exchange communities related to Generation X. With the approval of the community administrators, a research explanation was released and the questionnaire link was pushed to invite eligible users to participate.

4.3 Online Sample Size

A total of 420 questionnaires were distributed through online channels in this survey. After validity verification, 306 valid responses were finally collected, with an effective online questionnaire recovery rate of 72.86%. The effective sample size meets the requirements of statistical analysis for this study.

4.4 Exclusion Criteria for Invalid Responses

To ensure the validity, scientificity and accuracy of the research data, strict exclusion criteria for invalid responses were formulated in this survey. After the collected questionnaires were automatically verified by the Questionnaire Star system and rechecked manually, a questionnaire was judged invalid and excluded if it met any of the following conditions:

Completeness of filling: The number of missing items in the questionnaire exceeded 10% of the total number of items, or there were missing answers to core research items such as AIGC understanding level, attitude towards fact-checking, perceived fact-checking ability and digital literacy.

Regularity of filling: The responses showed obvious mechanical regularity (e.g., selecting the same option for all items, cycling through options in a fixed order, or answering consecutive items without difference), and were judged to be random and perfunctory responses.

Age mismatch: The filled birth year was outside the range of 1965-1980, failing to meet the definition criteria of Generation X.

Scenario mismatch: The filled frequency of social media use was "less than three times a week" or "never", failing to meet the basic sample screening dimension and mismatching the research scenario.

Duplicate responses: Through the verification of information such as IP address and filling device

identifier on Questionnaire Star, if the same respondent was found to have filled in multiple questionnaires, only the first filled valid questionnaire was retained, and the rest were judged invalid.

Contradiction in answers: There were obvious contradictory answers in the questionnaire (e.g., self-reporting "a very good understanding of AIGC" but selecting "completely unclear" for all subsequent AIGC-related cognitive items), and the responses were judged to be logically inconsistent.

5. Research Findings

This survey on Generation X users' AIGC information verification behaviors yielded 306 valid responses. The questionnaire covered respondents' basic demographic characteristics-gender, age group, highest education level, and occupation type-while focusing on their internet usage frequency, familiarity with AIGC, and cognitive, affective, and evaluative attitudes toward AIGC information verification, alongside self-perceived control and self-reported behavioral control. Additionally, the questionnaire assessed respondents' media literacy across five dimensions-technical competence, cognitive dimension, communication skills, participation capacity, and creative ability-to comprehensively understand Gen X users' current status and characteristics regarding AIGC information verification behavior.

5.1 Overall Gender Ratio Approaches Balance

Males accounted for 51.96% of survey participants, while females comprised 48.04%, indicating a nearly equal gender ratio with minimal disparity.

5.2 Understanding of AIGC Influenced by Age, Education Level, Internet Usage Frequency, and Occupation

Overall familiarity with AIGC was concentrated at "not very familiar" or below. Overall, the combined proportion of respondents who "know nothing at all" and "know very little" reached 45.75%, exceeding 40%. This indicates that nearly half of the population has a low level of understanding regarding AIGC. Meanwhile, the combined proportion of those who "know fairly well" and "know very well" stands at 34.31%, suggesting that overall awareness levels need improvement.It is recommended to popularize basic knowledge about AIGC through science outreach campaigns and online courses, with a particular focus on educating those with lower levels of understanding.

5.3 Significant Differences in AIGC Awareness Across Age Groups

Among those born between 1965 and 1970, the combined proportion of "completely unfamiliar" and "somewhat unfamiliar" reached 61.77%, indicating low awareness. Conversely, among those born between 1976 and 1980, the combined proportion of "fairly familiar" and " very familiar" reached 57.76%, reflecting higher awareness. This demonstrates a trend where younger age groups exhibit greater familiarity.It is recommended to develop more accessible AIGC educational formats for older age groups, such as short videos and text-image combinations.

5.4 Occupational Type Influences AIGC Awareness

Among retirees, the combined proportion of those who are "completely unfamiliar" and "somewhat unfamiliar" is 69.7%, the lowest level of familiarity. Among corporate/company employees, the combined proportion of those who are "fairly familiar" and " very familiar" is 42.08%, indicating a relatively high level of familiarity. It is recommended to conduct customized AIGC training for different occupational groups, such as introducing AIGC application scenarios in the workplace for corporate employees.

5.5 Most Respondents Recognize the Importance of AIGC Information Verification

Overall data indicates a high level of agreement regarding the importance of verifying AIGC information. The combined proportion of respondents who "somewhat agree" and "strongly agree" exceeds 30%, indicating that over one-third hold a positive and affirmative stance on the importance of verification. Meanwhile, the combined proportion of those who "strongly disagree" and "somewhat disagree" approaches 50%, suggesting that a significant portion of respondents still hold relatively low awareness of its importance, indicating some divergence in views.

5.6 Overall User Acceptance of Using AIGC for Information Verification Remains

Moderately Positive

Data shows that users holding positive attitudes (somewhat agree and strongly agree)account for 10.46% + 22.88% = 33.34%, while those with negative attitudes (strongly disagree and somewhat disagree) account for 24.51% + 19.61% = 44.12%.while 22.55% selected "neutral. "Although negative attitudes slightly outweigh positive ones, the presence of a significant proportion of positive users and over one-fifth holding neutral views indicates overall acceptance is moderately positive with room for improvement.Recommendations include further optimizing the accuracy and transparency of AIGC information verification, showcasing its advantages through promotional case studies to reduce user resistance, and collecting user feedback on the verification process to implement targeted functional improvements, thereby enhancing overall acceptance.

5.7 Self-Awareness Control in AIGC Information Verification Remains at a Moderately Low Level

Overall, from the data distribution, the combined proportion of those selecting "strongly disagree" and "somewhat disagree" exceeds 50% (31.05% + 21.9% = 52.95%),while the combined proportion of those selecting "Somewhat Agree" and "Strongly Agree" was only 32.02% (10.78% + 21.24%). This indicates that most individuals exhibit weak awareness of actively discerning whether information is AI-generated when encountering it.The intermediate option "Neutral" accounted for 15.03%, reflecting that some individuals possess a certain level of awareness, though it remains unclear or inconsistent. The overall distribution leans toward "disagree, " indicating that the current level of self-awareness and control regarding AIGC information verification needs improvement.

5.8 Users' Self-Behavioral Control in Immediately Verifying Uncertain

AIGC information shows below-average performance Analyzing the distribution of responses, the combined proportion of "Strongly Disagree" (28.76%) and "Somewhat Disagree" (19.61%) reached 48.37%, approaching half of the total. Conversely, the combined proportion of "Somewhat Agree" (10.46%) and "Strongly Agree" (22.22%) was only 32.68%.This indicates that over 40% of users lack the initiative to immediately verify uncertain AIGC information, with a relatively low proportion actively conducting verification. Overall self-behavioral control capabilities require improvement.

5.9 Users' Participation Capacity in Proactively Verifying AIGC Authenticity Remains

Below Average Data distribution shows that the combined proportion of those selecting " very disagree" and "somewhat disagree" reached 52.29%, exceeding half of the respondents. This indicates that most users exhibit insufficient awareness and action in proactively verifying AIGC authenticity. Meanwhile, only 33% selected "somewhat agree" and "strongly agree, " suggesting that only a minority possess strong proactive verification capabilities.The distribution exhibits a pattern of "low at both ends, slightly higher in the middle, " but overall leans toward negative evaluations. It is recommended to enhance public education on AIGC information discernment knowledge.

Through case studies and hands-on training, users' awareness and skills for actively verifying AIGC authenticity should be improved. Simultaneously, platforms can provide more convenient verification tools and labels to guide users in developing the habit of proactive verification.

6. Results and Discussion

This study, grounded in the Theory of Planned Behavior, constructs a research framework examining factors influencing Generation X's proactive information verification behavior regarding social media news. It focuses on the role of core theoretical variables-information verification attitude and perceived information verification ability-in shaping verification behavior. Findings indicate that both information verification attitude and perceived information verification ability significantly and positively predict information verification behavior. Perceived information verification ability not only directly influences verification attitude but also exerts an indirect effect through this attitude. Age positively predicts both perceived fact-checking competence and fact-checking behavior, with perceived competence mediating the relationship between age and fact-checking behavior. Educational attainment showed no significant correlation with fact-checking

attitude, perceived competence, or fact- checking behavior. Occupational type positively influences both fact-checking attitude and fact-hecking behavior. Media credibility positively influences both information verification attitude sand behaviors, indirectly affecting verification behaviors through attitudes. Flexible thinking and cognitive demand both positively impact verification attitudes and behaviors, with verification attitudes mediating this relationship. Overall, perceived information verification ability is the most critical factor influencing Gen X's verification behaviors.

The core anchor for optimizing AIGC information governance practices lies in the coupled synergistic efforts of information platforms, educational institutions, and policymakers. On the information platform side, the development process of customized verification tools tailored to Generation X's cognitive habits-incorporating features like embedded real-time traceability markers and multi-source cross-verification modules-aims to eliminate technical barriers to user verification. Educational institutions' design efforts for generation-tailored digital literacy curricula-incorporating AIGC information discernment logic and disinformation propagation mechanisms-constitute a critical component in shaping Generation X's capacity to navigate information asymmetry scenarios. Policy makers' advancement of standardized AIGC information governance frameworks, through regulating the boundaries between platform information review responsibilities and user verification rights, provides a paradigm for constructing a multi-stakeholder governance ecosystem.

Defining research directions amid AIGC technology iteration requires examining the evolutionary spectrum of verification behavior through a dynamic game-theoretic lens. The escalating realism and dissemination speed of AIGC-generated content have driven Generation X users' verification strategies to shift from passive response to proactive anticipation. Future research attempting to introduce incomplete information dynamic game models will unmask the interactive mechanisms between technological iteration and user behavior by analyzing the strategic choice logic in users' information retention, reproduction, and verification processes. Cross-generational comparative studies exploring the heterogeneity of AIGC information verification behaviors across age groups will provide empirical foundations for precision governance.

The core operational challenge for implementing practical recommendations lies in the coupled construction of contextualized and long-term mechanisms. Embedding customized verification tools into Generation X's information consumption scenarios-such as lightweight verification functions within high-frequency contexts like social media and work collaboration platforms-constitutes the key anchor for unlocking tool efficacy. Educational institutions' adoption of interactive formats like case studies and simulation exercises in digital literacy education shapes Generation X's practical capabilities, addressing the long-term demands of competency cultivation. Future research focusing on the co-evolution of AIGC technology and verification tools-analyzing the efficacy boundaries of AI-assisted verification systems and exploring the regulatory role of ethical frameworks in technology application-provides theoretical references for continuously optimizing governance systems.

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