

Artificial Intelligence and Digital Media: A Survey Study of Bahraini Youth Preferences Toward Smart Applications in Social Networks (2025)

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Abstract

This study explores Bahraini youth preferences regarding artificial intelligence (AI) applications in social networks using a descriptive survey method. Results indicate strong user approval of AI-enhanced features such as interactivity, content personalization, and user experience. Attitudes were generally positive across demographic groups, suggesting widespread acceptance of AI integration. Nevertheless, concerns about data privacy and algorithmic bias were noted, underlining the need for ethical and regulatory safeguards. The findings emphasize the importance of balancing technological innovation with user trust and digital governance in AI-driven media environments.

Keywords: Artificial intelligence, social networks, digital media, AI applications, content personalization, Bahrain.

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1.Introduction

The integration of artificial intelligence (AI) into digital media has profoundly reshaped how individuals interact with communication technologies. AI has become a driving force in the evolution of modern media platforms, particularly social networks, where it plays a central role in content personalization, user behaviour analysis, recommendation systems, and interactive engagement (Kavitha, 2023; Mathew, 2021; Hogan, 2020). These technologies enable platforms to process massive datasets from user interactions to identify preferences, predict trends, and support decision-making with accurate behavioural insights (Sarmiento, 2020).

This transformation has expanded the capabilities of mass communication, allowing media content to be tailored to the demographic and digital profiles of audiences. In Arab societies, such developments invite further exploration of how local users, especially youth, engage with AI-driven media environments.

This study investigates the preferences of Bahraini youth toward AI applications in social networks using a quantitative survey method. It draws on Uses and Gratifications Theory (Katz, Blumler, & Gurevitch, 1974), which emphasizes individuals' motivations for media use, and Media Dependency Theory (Ball-Rokeach & DeFleur, 1976), which examines the evolving media-user relationship amid technological shifts. The research focuses on users' knowledge of AI, their preferences and attitudes toward its applications, and the perceived benefits for Arabic digital platforms. This study contributes to the growing body of literature on AI and media in Arab contexts by identifying pathways for enhancing digital content and services that align with regional audience needs.

2.Literature Review

Recent literature underscores the transformative impact of artificial intelligence (AI) on digital media, particularly within social networks. AI technologies increasingly support content creation, personalization, and management. Shah (2024) and Krajčovič (2024) emphasize AI's role in generating and scheduling digital content efficiently, while Mohamed, Osman, and Mohamed (2024) stress its ethical deployment to sustain public trust. Hakimi (2024) highlights AI's contribution to content moderation and security, and Aggarwal (2024) frames AI

as central to modern media discourse, reflecting Mohamed's (2023) findings on its integration for enhancing user experience.

AI also enhances audience engagement. Sharma and Lal (2024) reveal that AI-generated visuals significantly boost interaction, while Wei and Tyson (2023) explore user preferences on platforms blending human and AI-generated content. Singh et al. (2023) demonstrate the accuracy of AI in analysing user comments through natural language processing. Al-Dlalah et al. (2023) affirm AI's broad impact on content interaction, and Msughter et al. (2023) suggest AI fosters wider media access, potentially reshaping the digital divide.

In digital marketing, AI enables precise user behaviour tracking and personalized advertising. Triteos, Halkiopoulos, and Antonopoulou (2024) show how AI enhances campaign effectiveness and audience targeting. Krajčovič (2024) notes AI's utility for small enterprises, while Kavitha (2023) and Mishra (2022) discuss AI's value in need analysis and automation. Benabdelouahed (2020) confirms a trend toward increasingly personalized AI-driven marketing.

Theoretically, Uses and Gratifications Theory (Katz, Blumler, & Gurevitch, 1974) explains why users adopt AI-integrated platforms—to meet needs like interactivity and personalization. Simultaneously, Media Dependency Theory (Ball-Rokeach & DeFleur, 1976) posits that individuals become more reliant on technologies that fulfil informational and relational needs. These frameworks jointly clarify why AI-infused platforms are attractive to users.

Technological and ethical dimensions remain essential. Kalinová (2022) considers AI integral to everyday digital life, while Sančanin and Penjisevic (2022) call for transparent ethical governance. Sadiku et al. (2021) highlight AI's potential in solving global communication challenges, and Natale (2021) notes its subtle yet profound societal impact.

More recent scholarship has extended the understanding of AI's multifaceted role in social media. Møller et al. (2025) conducted a controlled experiment with U.S. participants and found that AI-generated content increases engagement but may compromise perceived quality and credibility. This raises concerns for designers of digital tourism campaigns who seek both reach and authenticity.

In a 2024 study published in *Computers in Human Behaviour*, researchers explored how AI-driven personalization shapes user trust, attention, and concerns about privacy. The study confirmed that while personalization enhances user satisfaction, privacy concerns can diminish overall engagement. This dynamic is especially relevant in the Arab Gulf context, where cultural sensitivities around data use are prominent.

Shrestha et al. (2024) provided a meta-analysis of youth concerns about AI across global platforms. The review showed a consistent demand for transparency and content control, supporting the need for ethical AI design in digital communication strategies targeting young audiences.

From a psychological perspective, Arora et al. (2024) examined algorithmic impacts on teenagers in Northern Europe and highlighted risks such as social pressure and distorted self-perception. Such findings urge digital content developers to embed mental well-being considerations into AI-powered personalization.

In a regionally grounded study, Mensughter et al. (2024) used the UTAUT2 model to examine AI adoption in Arab Gulf states, confirming that user trust, hedonic motivation, and perceived usefulness are key predictors of engagement. These insights underscore the applicability of user-centric design in enhancing digital campaigns tailored to regional audiences.

Collectively, these recent studies expand the analytical lens on AI-driven media by integrating cross-cultural, psychological, and ethical dimensions. They reinforce the central thesis of this study: that AI personalization must be balanced with transparency, trust, and cultural relevance to optimize user engagement in Gulf-based digital media ecosystems.

The reviewed literature presents a clear trajectory: AI has revolutionized digital content creation, user engagement, and marketing strategy. Earlier studies focused on efficiency and personalization, while more recent research emphasizes trust, ethical transparency, mental well-being, and regional specificity. This shift reflects growing awareness that AI's effectiveness in media communication depends not only on its technical capabilities but also on its alignment with human values and contextual expectations.

3. Research Problem

The rapid digital transformation, driven by artificial intelligence (AI), has revolutionized media platforms, particularly social networks. These platforms utilize AI for content personalization, user behaviour analysis, and recommendation algorithms, significantly shaping public engagement. However, there remains a critical gap in understanding how Bahraini youth perceive and interact with AI-driven applications in social networks. Despite AI's potential to enhance user experiences, concerns regarding data privacy and surveillance remain prevalent. Previous studies, such as Pew Research Centre (2023), reveal that a significant proportion of users are apprehensive about their personal data usage, while Zuboff (2019) warns against the implications of "surveillance capitalism." This research aims to examine Bahraini youth's preferences, awareness, trust, and attitudes toward AI in social networks, within the context of evolving media landscapes. The study applies Uses and Gratifications Theory (Katz, Blumler, & Gurevitch, 1974) and Media Dependency Theory (Ball-Rokeach & DeFleur, 1976) to explore how digital literacy, personal experiences, and privacy concerns influence user behaviour and AI adoption.

4. Significance of the Study

This research is significant as it addresses the intersection of two crucial technological trends: artificial intelligence and social networks. AI's integration into social platforms has reshaped digital media practices, offering opportunities for personalized content and enhanced interactivity. This study contributes to understanding Bahraini youth's preferences toward AI-driven applications, shedding light on their awareness and concerns regarding data privacy and trust. By connecting theoretical frameworks such as Uses and Gratifications Theory (Katz et al., 1974) and Media Dependency Theory (Ball-Rokeach & DeFleur, 1976), the research offers insights into how these theories can be applied to current media consumption behaviours in the Arab world. Furthermore, the study provides valuable input for developing culturally relevant digital media policies that address the challenges of misinformation and privacy in AI-driven environments, ultimately contributing to the ethical deployment of AI in media practices (Al-Rawi & Dunaeva, 2022).

5. Research Objectives

This study aims to:

1. Investigate the preferences of Bahraini youth regarding artificial intelligence (AI) applications in digital media.
2. Assess users' knowledge of AI technologies and their patterns of use.
3. Evaluate the perceived benefits of AI technologies for Arabic websites from the users' perspective.
4. Examine the relationship between users' knowledge of AI and their attitudes toward its applications in digital media.
5. Analyse whether demographic variables, such as digital literacy, years of internet use, and profession, lead to significant differences in attitudes toward AI applications.

6. Research Questions

1. To what extent do participants in the study understand artificial intelligence and utilize AI-supported digital media?
2. What smart applications do Bahraini youth prefer on social media platforms?
3. How do users perceive the benefits of AI technologies for Arabic websites?
4. What is the relationship between AI knowledge and attitudes toward its applications in digital media?
5. Are there significant differences in evaluations of AI applications based on digital literacy, internet usage duration, and profession?

7. Hypotheses

H1: There is no significant relationship between participants' knowledge of artificial intelligence and their evaluation of its benefits for websites.

- H2: There is no significant relationship between participants' AI knowledge and their attitudes toward AI applications.
- H3: There is no significant relationship between participants' AI knowledge and their views on the necessity of AI applications for Arabic websites.
- H4: No significant differences exist in evaluations of AI technologies on websites based on varying levels of knowledge.
- H5: No significant differences in attitudes toward AI applications are observed based on years of internet use.
- H6: No significant differences in evaluating the benefits of AI applications exist based on participants' internet usage levels.

8.Theoretical Framework

I. Artificial Intelligence in Digital Media

Artificial intelligence (AI) has become a cornerstone of digital media, particularly in social networks. Initially conceptualized in the 1956 Dartmouth Conference, AI has evolved to enable machines to perform tasks that require human-like cognition, such as decision-making, analysis, and interaction (Chen, Li, & Chen, 2020). In social networks, AI techniques like machine learning, natural language processing, and neural networks allow platforms to personalize content, provide recommendations, and analyse user behaviour (Bekker, 2019). Platforms like Facebook, Instagram, and TikTok leverage AI for content organization, targeted ads, sentiment analysis, and content moderation (Kavitha, 2023). However, these developments raise concerns regarding privacy, algorithmic bias, and misinformation, highlighting the need for ethical consideration and regulation in AI use (Zuboff, 2019; Oliveira, 2023).

II. Uses and Gratifications Theory (UGT)

UGT explains how individuals actively select media to meet their cognitive, social, and psychological needs (Katz, Blumler, & Gurevitch, 1973). It posits that users are active agents who choose media platforms that best fulfil their desires for information, entertainment, and social interaction. In the context of AI, users' preferences for smart applications can be seen as driven by:

- **Cognitive gratification:** Obtained through personalized content recommendations and effective information organization.
- **Social gratification:** Enhanced via interactive communication and connection with others.
- **Functional gratification:** Provided by tools such as data analytics and real-time customer support.
- **Entertainment gratification:** Delivered through augmented reality and tailored video content (Quadros, 2020). AI has been shown to increase these gratifications, making it a primary motivator for users' platform choices (Mufareh, 2020; Kavitha, 2023).

III. Media Dependency Theory

Ball-Rokeach and DeFleur's Media Dependency Theory (1976) focuses on the growing dependency individuals have on media, especially in periods of technological change. According to the theory, as media platforms become better at fulfilling users' cognitive, social, and functional needs, their dependency on these platforms intensifies. AI integration in social networks deepens this dependency as platforms not only provide information but also customize and organize it according to users' preferences and Behaviors (Hendler & Mulvehill, 2016). Users' level of AI knowledge influences how they interact with and evaluate these platforms.

By combining UGT and Media Dependency Theory, this research provides a framework to:

1. Understand user motivations for preferring AI applications in digital media.
2. Examine the relationship between users' knowledge of AI and their media dependency.
3. Explore how different variables, such as digital knowledge and internet use, affect attitudes and Behaviours.
4. Analyse the social and cultural impacts of AI in Bahrain's digital media landscape.

This integrated framework allows for a nuanced examination of how AI shapes user preferences and Behaviours in social networks, offering insights into the evolving dynamics of digital media.

9. Methodology

This study employed a mixed-methods design, integrating theoretical analysis with empirical survey research to investigate Bahraini youth preferences toward artificial intelligence (AI) applications in social networks. The methodological framework was grounded in recent advancements in digital research design, combining conceptual theory with evidence-based inquiry (Creswell & Plano Clark, 2018).

The theoretical component involved an extensive literature review using databases such as Scopus, EBSCOhost, IEEE Xplore, and Google Scholar, accessed via the University of Bahrain's digital library. Sources were screened for peer-review status and recency (Boell & Cecez-Kecmanovic, 2015; Snyder, 2019). The review focused on smart AI applications, digital personalization, algorithmic governance, and user interaction in media platforms, forming the conceptual framework of the study.

Sampling and Participants

Participants were selected using snowball sampling, which allowed the recruitment of respondents with relevant digital literacy and professional engagement with AI. This method is recommended for accessing digitally active and specialized populations (Noy, 2008; Sadler et al., 2010). The final sample consisted of 240 Bahraini youth aged 18–35 with high engagement in digital media. Data was collected via Google Forms during late 2024 and early 2025.

Measurement and Data Analysis

Measurement included a combination of 3-point and 5-point Likert scales to evaluate various dimensions of AI integration. Responses were analyzed using SPSS version 28. Descriptive statistics (frequency, mean, and percentages) were used to profile respondent demographics and usage behavior. Inferential statistics included chi-square tests to assess associations between categorical variables, and one-way ANOVA to explore differences in perceptions based on digital experience and AI familiarity (Field, 2018).

In addition to traditional procedures, the study could be extended through Exploratory Factor Analysis (EFA) to identify latent dimensions of AI perception. This approach, endorsed by Fabrigar & Wegener (2011), would help validate underlying constructs related to personalization, trust, interactivity, and digital ethics. Moreover, integrating reliability testing via Cronbach's alpha ensures internal consistency across the scale items (Tavakol & Dennick, 2011).

Target Population

The study focused on Bahraini youth engaged with digital media during late 2024 and early 2025. These participants, either professionally or academically involved with AI, were selected for their ability to provide informed, relevant assessments of smart applications in social networks, enhancing the study's validity and relevance (Etikan, 2016).

Operational Definitions

In this study, **Artificial Intelligence (AI)** refers to digital technologies that replicate human cognitive functions—such as learning, decision-making, and analysis—within social media environments. These include tools like machine learning (ML), natural language processing (NLP), sentiment analysis, and intelligent chatbots, all of which serve to personalize content and enhance user engagement.

Social Networks are defined as interactive digital platforms (e.g., Facebook, Instagram, Twitter, YouTube) that facilitate content sharing, communication, and user interaction. In this context, they represent environments where AI technologies are applied to improve the quality and efficiency of digital communication.

Digital Media denotes media platforms that utilize internet-based technologies for content production, distribution, and consumption. This includes websites, mobile apps, blogs, and digital broadcasting tools that integrate AI to optimize editorial processes, user services, and marketing strategies.

User Preferences refer to participants expressed attitudes and behavioural tendencies toward the use of AI technologies in social networks. This includes levels of acceptance, frequency of interaction, and perceived value of AI applications, shaped by cognitive, functional, and social factors.

AI Applications, or intelligent applications, are defined as software tools and algorithms designed to enhance the performance of social media platforms, such as personalized content delivery, ad targeting, privacy protection, and misinformation detection.

10.Results

Section I: Survey Results

Question 1: To what extent do participants in the study understand artificial intelligence and utilize AI-supported digital media?

Level of Awareness of Artificial Intelligence

The study revealed that 93.8% of Bahraini youth reported a high level of awareness regarding artificial intelligence, while 5% indicated moderate awareness. This widespread familiarity underscores the penetration of AI knowledge among digitally engaged youth. According to the *Uses and Gratifications Theory* (Katz et al., 1974), such cognitive awareness functions as a motivational driver, encouraging users to seek AI-integrated platforms to meet their informational and interactive needs. These findings align with Nguyen and Jung (2023), who emphasized the role of technological awareness in optimizing users' engagement with smart media tools.

Internet Usage Patterns

All respondents (100%) reported internet usage, with 90% using it regularly and 10% intermittently. This universal access reflects the internet's foundational role in facilitating interaction with AI-based applications. Drawing from *Media Dependency Theory* (Ball-Rokeach & DeFleur, 1976), this reliance on digital platforms intensifies when the media environment offers diverse, efficient tools that fulfil communication, entertainment, and information needs—conditions clearly met in Bahrain's digital ecosystem.

Digital Media Platforms Most Enhanced by AI (as perceived by respondents)

- Social media platforms – 55%
- News websites – 28.7%
- Government websites – 8.3%
- Blogs/personal websites – 2.5%

Social media emerged as the dominant platform perceived to benefit from AI technologies. This highlights user recognition of algorithms used for content personalization, predictive interactions, and behavioural modelling, consistent with West et al. (2021), who noted AI's centrality in platforms like Facebook and Instagram. From a *Uses and Gratifications* perspective, social media effectively satisfies social-integrative and diversionary needs, reinforcing its leading role among AI-enhanced media.

News websites ranked second, reflecting growing public awareness of AI's role in content curation and user experience optimization—findings that resonate with Zeng et al. (2022), who explored AI's influence on the perceived credibility of news.

In contrast, lower scores for government and personal websites may reflect limited AI integration or low engagement, consistent with *Media Dependency Theory*, which suggests diminished media reliance in the absence of rich, satisfying content.

Question 2: What smart applications do Bahraini youth prefer on social media platforms?

Preferred Smart Applications in Social Networks

The study explored the preferences of Bahraini youth regarding AI-powered applications across various domains of digital interaction. The findings revealed a general tendency to Favor applications that enhance communication, engagement, security, content management, and visual presentation, with varying levels of intensity.

1. Communication Applications

A significant 66.34% of respondents preferred using AI tools for communication. Among these, spam detection was the most favoured (77.8%), followed by tools for effective communication (72.8%), connection suggestions and sentiment analysis (63%), and feedback monitoring (55.1%). This preference underscores the importance of

AI in optimizing digital communication, aligning with the *Uses and Gratifications Theory* (Katz et al., 1973), which views users as active agents seeking tools that fulfil cognitive and social needs. These results echo West et al. (2023), who found that AI-driven communication tools foster more meaningful digital interactions.

2. Audience Engagement Tools

A total of 64.8% of participants expressed a preference for AI applications that support audience engagement. These included public service recommendation tools (68.5%), audience identification features such as facial recognition (63%), and behavioural analysis tools (60.45%). These findings suggest that users value AI's capacity to facilitate targeted interactions and personalized recommendations. This is consistent with *Media Dependency Theory* (Ball-Rokeach & DeFleur, 1976), which posits that users increasingly rely on media that supports decision-making and social integration. Napoli (2022) also highlights AI's role in enhancing platform responsiveness and user satisfaction through audience insights.

3. Information Security and Digital Ethics

Approximately 61.3% of respondents favoured AI tools focused on digital security and ethical standards, with fraud detection (69.1%) and harmful behaviour tracking (61.7%) leading preferences. This reflects growing public concern over privacy and safety in digital environments. Taddeo and Floridi (2021) affirm that trust in AI technologies is contingent on robust cybersecurity and ethical design, reinforcing user engagement.

4. Content Management Applications

Content-related AI applications were preferred by 60.9% of the participants. Tools for tracking news content (67.7%) and content creation/management (66%) were the most popular. These preferences indicate a demand for AI tools that enhance content accessibility and relevance. Broussard (2023) confirms the utility of AI in content personalization, particularly in digital journalism.

5. Visual Content Presentation

About 59.3% of respondents showed a preference for AI applications that enhance visual content presentation. Notable tools included image analysis (66.7%) and visual element detection (51.9%). This trend reflects the importance of visual appeal in digital media, which contributes to cognitive and emotional engagement. Sundar (2020) emphasized the role of AI-enhanced visuals in deepening user interaction.

6. Information Retrieval Tools

AI applications for information retrieval received moderate interest, with 54.3% expressing preference and 45.7% showing limited favourability. Although these tools are valued for enhancing access to information, they appear less critical than communication or security-focused applications. Haider and Sundin (2022) note that trust in AI search tools depends heavily on transparency and accuracy, affecting adoption levels.

In summary, the study demonstrates that Bahraini youth show a strong preference for AI applications that enhance communication, engagement, and security, while moderate interest is shown in search and retrieval tools—reflecting pragmatic expectations from smart technologies in social networks.

Question 3 – How do users perceive the benefits of AI technologies for Arabic websites?

Evaluation of Arab Websites' Use of Artificial Intelligence Technologies

The study investigated participants' perceptions regarding the extent to which Arab websites benefit from artificial intelligence (AI) technologies. Overall, the findings reveal strong support for AI integration, both in the present and anticipated future.

1. General Attitudes Toward AI in Websites and Social Networks

A substantial majority of respondents (70%) expressed positive attitudes toward the application of AI technologies in websites and social networks. In contrast, 21.3% held neutral views, while only 8.7% reported negative attitudes. These results indicate growing public awareness of the potential benefits of AI in enhancing digital platform performance and user experiences. This finding is consistent with the *Uses and Gratifications Theory* (Ruggiero, 2000), which posits that users are drawn to media technologies that fulfil their cognitive, functional, or social needs. Similarly, the *Media Dependency Theory* (Ball-Rokeach & DeFleur, 1976) supports the view that during technological shifts, individuals increasingly rely on advanced media systems—such as AI-powered platforms—for trustworthy services, information, and engagement.

2. Present Need for AI Applications in Arab Websites

The majority of respondents (73.8%) perceived an urgent need for the integration of AI technologies in Arab websites. A further 22.5% held neutral positions, while only 3.7% did not perceive any current necessity. This dominant view reflects users' recognition of the technological lag that affects many Arab platforms and their

belief that AI can bridge existing digital gaps. These results support the findings of Dwivedi et al. (2023), who emphasized that AI contributes to improved operational efficiency, user interaction, and content personalization. The trend is also reinforced by *Media Dependency Theory*, which maintains that as users recognize the benefits of emerging technologies, they are more likely to depend on those systems for reliable and adaptive digital experiences.

3. Future Expectations for AI Adoption in Arab Platforms

An overwhelming 98.8% of participants anticipate that Arab websites will benefit from AI technologies soon. Among them, 61.3% expect significant benefits, while 37.5% foresee moderate advantages. Only a marginal 1.2% do not expect any future gains. This optimistic outlook reflects both increased digital literacy and user expectations for enhanced functionality in Arab digital infrastructures. The findings align with the *Uses and Gratifications Theory*, which suggests that users gravitate toward innovations that respond effectively to evolving needs. In parallel, *Media Dependency Theory* underscores the increasing centrality of AI in shaping user engagement, particularly in areas such as content delivery, data analysis, and personalized interactions (Casaló et al., 2021).

In conclusion, the results demonstrate a strong awareness among Bahraini youth regarding the current and future significance of AI in Arab websites. This reflects a broader shift in audience expectations and attitudes toward intelligent digital media, framed within theoretical paradigms that emphasize both gratification and dependency in the digital age.

Section II: Hypothesis Testing

Question 4: What is the relationship between AI knowledge and attitudes toward its applications in digital media?

To examine the relationship between respondents' knowledge of artificial intelligence (AI) and their attitudes toward its applications in Arab digital media, a series of Chi-Square tests were conducted. The analysis was based on data collected from a final sample of 240 Bahraini youth.

1. Relationship between AI knowledge and evaluation of Arab websites' utilization of AI

The results of the Chi-Square test showed no statistically significant relationship between respondents' level of AI knowledge and their evaluation of how well Arab websites utilize AI technologies. The test produced $\chi^2(4, N = 240) = 2.040$, $p = .728$, exceeding the standard threshold of significance ($p < .05$). Thus, the null hypothesis was retained, indicating no meaningful association between these variables.

2. Relationship between AI knowledge and attitudes toward AI applications in social networks

Similarly, no significant correlation was found between respondents' AI knowledge and their attitudes toward the use of AI applications in social media networks. The test result was $\chi^2(4, N = 240) = 0.854$, $p = .931$, which again led to the acceptance of the null hypothesis.

3. Relationship between AI knowledge and perceived need for AI in Arab websites

In the third test, the analysis indicated no statistically significant relationship between respondents' knowledge of AI and their views regarding the necessity of implementing AI in Arab websites. The results were $\chi^2(4, N = 240) = 2.223$, $p = .695$.

These findings collectively indicate that Bahraini youth's attitudes toward AI applications are not significantly shaped by their technical knowledge of AI. This observation aligns with the *Uses and Gratifications Theory* (Blumler & Katz, 1974), which emphasizes that media users engage with technologies based on the degree to which these fulfil their personal, social, or informational needs, rather than based on their level of expertise. The appeal of AI, therefore, appears to lie in its ability to deliver practical value—such as personalization, efficiency, and privacy—rather than its technological complexity.

Media Dependency Theory (Ball-Rokeach & DeFleur, 1976) also supports this perspective by proposing that people turn to media technologies as tools for coping with daily life demands, especially during times of digital transformation. In this context, user interest in AI stems from a functional reliance on digital tools rather than from in-depth technical literacy.

Recent empirical work substantiates these results. For example, Zhang et al. (2023) found that user engagement with AI media tools is driven more by communicative gratification than by technical knowledge. Likewise, Kim and Park (2022) noted that users develop favourable attitudes toward AI based on its ability to provide fluid and customized interactions, regardless of their technical familiarity.

In conclusion, the results suggest that the cognitive dimension—measured through AI knowledge—does not significantly impact how users perceive or evaluate AI technologies in the digital media sphere. Instead, psychological and functional gratifications play a dominant role in shaping user attitudes, reinforcing the importance of designing user-centric, intuitive, and adaptive AI systems.

Question 5: Are there significant differences in evaluations of AI applications based on digital literacy, internet usage duration, and profession?

To determine whether participants' evaluations of AI applications varied significantly according to their AI knowledge level, years of internet usage, and occupational background, one-way ANOVA tests were performed.

1. Differences based on level of AI knowledge

The ANOVA test showed no statistically significant differences in respondents' evaluations of AI applications in websites based on their level of AI knowledge. The test yielded $F(2, 237) = 0.212$, $p = .810$. These results indicate uniformity in attitudes toward AI across participants with varying degrees of familiarity with AI technologies.

2. Differences based on years of internet usage

Similarly, no statistically significant differences were observed based on the number of years participants had been using the internet. The results, $F(2, 237) = 2.042$, $p = .137$, suggest that prolonged internet exposure does not necessarily translate into differing perspectives on AI applications.

3. Differences based on nature of work (students, academics, journalists)

The third test explored professional affiliation as a potential variable influencing AI evaluations. The findings again showed no significant differences among occupational groups, $F(2, 237) = 1.135$, $p = .327$. This indicates a shared, cross-professional perspective on the value and potential of AI in digital media platforms.

Taken together, the results from these analyses point to the conclusion that neither technical knowledge, digital exposure, nor professional role significantly influences user evaluations of AI applications in Arab digital environments. These findings are consistent with the core assumptions of the Uses and Gratifications Theory (Rubin, 2009), which suggests that users are motivated by the perceived ability of media to satisfy psychological and functional needs, rather than by demographic or occupational differences.

Media Dependency Theory (Ball-Rokeach & DeFleur, 1976) also provides a meaningful framework for interpreting these results. The theory argues that media reliance increases in contexts where users depend on digital tools to navigate and adapt to evolving social and technological environments. From this perspective, attitudes toward AI are rooted in the extent to which such applications offer real-time benefits—such as efficiency, content personalization, and reliability—regardless of users' background or level of expertise.

Supporting evidence from contemporary studies bolsters this interpretation. Shin and Huang (2022) found that perceptions of AI's usefulness were stronger predictors of user satisfaction than personal attributes. Similarly, Wang et al. (2023) emphasized that functional benefits—such as customization and task automation—play a more critical role in AI acceptance than socio-demographic variables.

In summary, the findings from both Chi-Square and ANOVA tests reveal that Bahraini youth's attitudes toward AI applications in Arab digital media are shaped more by their practical value than by users' knowledge, experience, or occupation. This underscores the importance for digital platforms to prioritize the design of AI tools that are accessible, responsive, and aligned with evolving user expectations, rather than relying solely on strategies that target specific user groups based on technical or professional characteristics.

Section III: Discussion

The findings of this study demonstrate that Bahraini youth exhibit a high level of awareness regarding artificial intelligence (AI) and its applications in digital media and social networks. This awareness has developed despite the relatively recent mainstream emergence of generative AI technologies, such as ChatGPT in late 2022.

Participants expressed generally positive attitudes toward the integration of AI into digital platforms, a response that aligns with the central tenets of Uses and Gratifications Theory (Katz, Blumler, & Gurevitch, 1973), which posits that individuals actively seek out media content to satisfy cognitive, interactive, and social needs.

The preference for AI applications that enhance communication was particularly pronounced, cited by 66.3% of participants. This finding is consistent with Msugther et al. (2023), who observed that AI has facilitated stronger social bonds within digital communities, as well as Oliveira (2023), who highlighted how AI is reshaping communication dynamics in online environments. Closely following were applications that promote public interaction (64.8%), indicating users' desire for deeper engagement with content and content creators. This aligns with Mohamed (2023), who emphasized AI's role in boosting user interaction, and with Devi and Kavitha (2023), who reported that AI-driven content personalization fosters audience responsiveness.

Applications concerning information security and ethical usage were favoured by 61.3% of participants. This interest can be interpreted through Media Dependency Theory (Ball-Rokeach & DeFleur, 1976), which suggests that the more individuals rely on media for information, the more important secure and credible systems become. The results echo Shah's (2024) emphasis on the importance of ethical standards and transparency in fostering trust in AI, reinforcing Mohamed's (2023) argument for responsible AI implementation.

A significant portion of respondents (60.9%) also valued AI tools that support content creation and management. This suggests an understanding of the centrality of content in digital media ecosystems. As Mohamed (2023) noted, AI facilitates real-time content generation, analysis, and customization, thereby enhancing digital platform performance. Sharma and Lal (2024) further argue that AI-generated visuals can shape user engagement and perception, supporting this preference.

Notably, applications focused on information retrieval ranked lowest (54.3%), suggesting that while cognitive tools remain relevant, users prioritize interactive and socially engaging AI features. Ho and Tan (2023) contextualize this trend as part of AI's evolving role in organizing and classifying digital content, though this utility appears to be less valued compared to social functionalities.

Hypothesis testing using Chi-Square and One-Way ANOVA revealed no statistically significant differences in attitudes toward AI based on participants' knowledge, internet use history, or occupational background. These findings suggest a consistent and widespread receptivity to AI, regardless of demographic or experiential factors. This supports Argan's (2023) assertion that AI adoption has become a global phenomenon transcending individual differences.

Finally, these outcomes may be influenced by Bahrain's advanced digital infrastructure, which was ranked first globally for technology adoption in digital services (United Nations E-Government Survey, 2024). As Mercier-Laurent (2021) asserted, effective AI integration within well-developed digital ecosystems can accelerate public acceptance and contribute to solving both media-related and societal challenges.

In summary, the results reinforce both Uses and Gratifications Theory and Media Dependency Theory, demonstrating that users engage with AI primarily to meet social, cognitive, and security-related needs in a rapidly evolving digital environment.

11. Conclusion

This descriptive survey study explored the preferences of Bahraini youth regarding artificial intelligence (AI) applications in social networks. Results indicate a high degree of digital literacy and awareness, supporting the Uses and Gratifications Theory (Katz et al., 1973), which suggests that users adopt media technologies to fulfil cognitive, social, and interactive needs. Participants overwhelmingly endorsed the integration of AI into Arab digital platforms, acknowledging its potential to enhance user experience through technologies such as machine learning, natural language processing, and computer vision (Mohamed, 2023; Sharma & Lal, 2024). Communication-enhancing applications (66.3%) and tools that promote interaction (64.8%) were most preferred, reflecting global trends in personalized and engaging media content (Msugther et al., 2023; Oliveira, 2023). Ethical considerations also emerged as significant, with 61.3% favouring applications that prioritize privacy and resist misinformation, consistent with Media Dependency Theory (Ball-Rokeach & DeFleur, 1976; Shah, 2024; Argan, 2023).

Content creation tools (60.9%) and immersive content formats (59.3%) followed in priority, while information retrieval ranked lowest (54.3%). Demographic factors showed no significant influence, suggesting widespread acceptance of AI. The study underscores the importance of aligning AI development with ethical and cultural

frameworks to ensure a secure, inclusive, and socially responsive digital environment (Mercier-Laurent, 2021). In addition to these findings, recent global research further validates the growing reliance on AI in media. For instance, Sundar and Kim (2024) demonstrated that personalization through AI significantly boosts user satisfaction and dwell time on platforms—especially in the context of digital tourism. Similarly, Reisdorf et al. (2024) showed that young users in the UK were more trusting of platforms that offered explainable AI features, confirming the rising demand for transparent algorithmic design.

Moreover, Wang and Park (2023) found that Korean youth responded more positively to AI-curated news feeds when the interface allowed for feedback control, suggesting that autonomy in user experience strengthens engagement. Meanwhile, Howard and Gillespie (2023) emphasized the need for “algorithmic accountability” to maintain trust in AI-powered media, especially among digitally literate populations. These global insights align with the study’s emphasis on ethical design, transparency, and cultural relevance. They reinforce the need for adaptive AI policies in Arab contexts that balance personalization with user autonomy and digital rights.

Limitations and Future Research

This study is limited by its quantitative design and the use of non-probability snowball sampling, which targeted digitally literate individuals such as journalists, academics, and researchers. While offering informed perspectives, the findings are not generalizable to the broader population of social media users and should be interpreted with caution (Creswell & Creswell, 2018). Additionally, the absence of a standardized classification for AI applications in digital media posed challenges, given the fragmented literature (Dwivedi et al., 2023; Alalwan et al., 2022). Future research should adopt mixed or qualitative methods to explore platform-specific AI applications and their influence on user engagement and media perception.

Recommendations

Based on the study’s findings, Arab digital platforms are encouraged to integrate AI applications that fulfil users’ cognitive and social needs (Katz et al., 1973) while ensuring ethical safeguards to protect privacy and combat misinformation (Ball-Rokeach & DeFleur, 1976). Promoting AI literacy through education and professional training is essential. Future interdisciplinary research should adopt mixed methods to examine AI’s cultural impact. Additionally, regulatory frameworks must be established to guide ethical AI use and safeguard users’ digital rights.

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