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## Undergraduate students' attitudes towards the role of digital geographic journalism in promoting tourism in Aseer region in Saudi Arabia

اتجاهات طلبة المرحلة الجامعية نحو دور الصحافة الجغرافية الرقمية في الترويج للسياحة في منطقة عسير  
بالمملكة العربية السعودية

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### Abstract

This study investigates undergraduate Students' attitudes towards digital geographic journalism in promoting tourism in the Aseer region of Saudi Arabia. The region, rich in cultural heritage and natural beauty, remains underdeveloped in tourism. Digital geographic journalism, which uses digital tools to create engaging geographical stories, could enhance tourism promotion efforts. The research assesses students' awareness, evaluates the perceived effectiveness of digital geographic journalism, and identifies factors influencing their attitudes.

A quantitative survey was conducted with 225 undergraduate Students in the Aseer region. Data were collected through a structured questionnaire and analyzed using descriptive statistics, cross-tabulation, and correlation analysis.

Findings reveal a strong positive perception of digital geographic journalism's role in tourism promotion. Students recognized the importance of social media accounts as digital geographic journalism and highlighted the need for investment, effort, time, and modern technologies. Significant correlations between content quality and students' knowledge about tourist sites suggest that improved digital content can boost tourism engagement.

The study underscores digital geographic journalism's potential as a tool for promoting

### ملخص

تبحث هذه الدراسة في مواقف طلاب المرحلة الجامعية تجاه الصحافة الجغرافية الرقمية في الترويج للسياحة في منطقة عسير بالمملكة العربية السعودية. المنطقة، الغنية بالتراث الثقافي والجمال الطبيعي، لا تزال تحت التطوير في مجال السياحة. يمكن للصحافة الجغرافية الرقمية، التي تستخدم الأدوات الرقمية لإنشاء قصص جغرافية جذابة، أن تعزز جهود الترويج السياحي. يقيم البحث وعي الطلاب، ويقيم الفعالية المتصورة للصحافة الجغرافية الرقمية، ويحدد العوامل التي تؤثر على مواقفهم.

أجري مسح كمي مع 225 طالبًا جامعيًا في منطقة عسير. تم جمع البيانات من خلال استبيان منظم وتحليلها باستخدام الإحصاء الوصفي والجدولة المتقاطعة وتحليل الارتباط.

تكشف النتائج عن تصور إيجابي قوي لدور الصحافة الجغرافية الرقمية في الترويج السياحي. أدرك الطلاب أهمية حسابات وسائل التواصل الاجتماعي كصحافة جغرافية رقمية وأبرزوا الحاجة إلى الاستثمار والجهد والوقت والتقنيات الحديثة. تشير الارتباطات المهمة بين جودة المحتوى ومعرفة الطلاب بالمواقع السياحية إلى أن المحتوى الرقمي المحسن يمكن أن يعزز المشاركة السياحية.

وتؤكد الدراسة على إمكانات الصحافة الجغرافية الرقمية كأداة للترويج للسياحة في عسير. وتقدم رؤى لصناع

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tourism in Aseer. It offers insights for policymakers and marketers, emphasizing the importance of technological investment and high-quality content to attract tourists.

**Keywords:** Digital Geographic Journalism, Tourism Promotion, Aseer Region, Undergraduate Students' Attitudes, Social Media, Saudi Arabia Vision 2030.

السياسات والمسوقين، مؤكدة على أهمية الاستثمار التكنولوجي والمحتوى عالي الجودة لجذب السياح. الكلمات المفتاحية: الصحافة الجغرافية الرقمية، الترويج السياحي، منطقة عسير، مواقف الطلاب الجامعيين، وسائل التواصل الاجتماعي، رؤية المملكة العربية السعودية

## Introduction

The Aseer region, located in the southwestern part of Saudi Arabia, is renowned for its rich cultural heritage, stunning landscapes, and unique architectural styles. It boasts a variety of tourist attractions, including the historic village of Rijal Almaa, the scenic mountains of Al Soudah, and the traditional markets of Abha. Despite its potential, the region's tourism industry remains underdeveloped compared to other parts of the Kingdom. Efforts to promote Aseer as a tourist destination are ongoing, with a focus on leveraging its natural beauty and cultural assets to attract both domestic and international visitors.

Tourism is considered a key sector in Saudi Arabia's Vision 2030, which aims to diversify the economy and reduce dependency on oil revenues. The Aseer region is identified as a potential tourism hub due to its moderate climate, natural beauty, and cultural significance. Initiatives like the development of tourism infrastructure and the promotion of local culture and traditions are part of the broader strategy to enhance the region's appeal to tourists (Saudi Vision 2030, 2016).

Digital geographic journalism refers to the use of digital tools and platforms to report on geographical and location-based stories. This form of journalism utilizes interactive maps, geotagging, multimedia content, and social media to create engaging and informative narratives. It plays a crucial role in contemporary journalism by making geographical information more accessible and engaging to the public. Through digital geographic journalism, audiences can explore places virtually, gain insights into various locations, and engage with interactive content that enhances their understanding and interest (Pavlik, 2008; Fenton, 2010).

Digital geographic journalism has transformed how people consume news and information about the world around them. By incorporating elements like digital maps, geotagging, and multimedia content, journalists can provide a richer, more interactive experience. This approach not only helps in telling compelling stories but also in making complex geographical information more understandable and relatable (Robinson, 2010; Deuze, 2008).

While there is a growing body of research on digital journalism and its applications, there is a lack of studies focusing specifically on digital geographic journalism and its role in promoting tourism in the Aseer region. Additionally, understanding the attitudes of undergraduate Students towards this form of journalism is crucial, as they represent a significant segment of the digital audience and potential influencers in tourism promotion. Undergraduate Students are often early adopters of new technologies and digital trends, making their perceptions and attitudes valuable for shaping effective tourism marketing strategies (Hermida, 2010; Bruns, 2011).

Exploring this research gap is essential for several reasons. First, it helps in understanding how digital geographic journalism can be leveraged to enhance tourism promotion efforts. Second, it provides insights into the preferences and behaviors of undergraduate Students, who are key target audiences for digital content. Third, it contributes to the broader literature on digital journalism and its impact on various sectors, including tourism (Singer, 2007).

The primary aim of this research is to explore undergraduate Students' attitudes towards the role of digital geographic journalism in promoting tourism in the Aseer region of Saudi Arabia. By examining their perceptions, this study seeks to provide insights into how digital geographic journalism can be leveraged to enhance tourism promotion efforts in this culturally rich and scenic region. Specifically, the research aims to:

1. Assess undergraduate Students' awareness and understanding of digital geographic journalism.
2. Evaluate their perceptions of the effectiveness of digital geographic journalism in promoting tourism.
3. Identify the factors that influence their attitudes towards digital geographic journalism.
4. Provide recommendations for leveraging digital geographic journalism to promote tourism in the Aseer region.

This article is organized as follows: Section 2 presents the literature review, outlining the key theoretical frameworks and existing studies relevant to digital geographic journalism and tourism promotion. Section 3 details the methodology used in the research, including data collection and analysis techniques. Section 4 present the results and discussion. Finally, Section 5 provides the conclusions.

## Literature Review

The study of digital geographic journalism has gained momentum due to its profound impact on various sectors, including tourism. This literature review synthesizes the current state of research related to digital journalism, geographic journalism, and students' attitudes towards digital media and tourism promotion, particularly in the context of the Aseer region in Saudi Arabia. The review aims to provide a comprehensive understanding of the field, identify gaps, and suggest directions for future research.

## Digital Journalism and Its Evolution

Digital journalism has undergone significant transformations due to advancements in technology and the internet. Traditional journalism has evolved to incorporate digital platforms, offering greater flexibility but also presenting new challenges related to credibility and professionalism (Farid, 2023). Digital journalism includes various forms such as blogs, social media posts, online news websites, and video content. The practice of digital journalism has significantly expanded the reach of news while enhancing audience engagement (Pavlik, 2008; Hermida, 2010). Burgess and Hurcombe (2021) define digital journalism by exploring its evolving relationship with the internet and social media platforms, underscoring the need for both the study and practice of digital journalism in the public interest.

The growing use of data science in digital journalism, including text mining, event extraction, and recommendation systems, indicates a rapidly evolving field. Nearly half of the research in this area has been published in the last three years, highlighting the increasing role of advanced technologies in journalism (Fernandes, Moro, & Cortez, 2023). New journalistic formats, such as immersive journalism and augmented reality, are also gaining traction, enhancing the ways in which information is presented and consumed (Lopezosa et al., 2023). Eldridge et al. (2021) emphasize the importance of interdisciplinary research in understanding digital journalism, providing an overview of key concepts and themes.

Training in digital journalism can significantly enhance the ability of students to contribute to tourism promotion. Kartinawati and Purwasito (2024) emphasize the importance of equipping students with journalistic skills to create engaging and informative content that can be published on various media platforms. By learning how to produce high-quality journalistic products, students can play a vital role in promoting their local tourism destinations.

## Digital Tourism

### *News Framing in Digital Tourism Journalism*

News framing in digital tourism journalism involves the strategic presentation of information to influence public perception and understanding of tourism destinations. Journalists use framing techniques to emphasize certain aspects of a story, thereby shaping the audience's interpretation of events. In the context of tourism, effective news framing can highlight the cultural, historical, and recreational value of destinations, making them more attractive to potential visitors (Ariestyani, 2020).

### *Development of Digital Tourism*

The development of digital tourism is closely linked to advancements in internet technologies and e-marketing. Khurramov (2020) discusses how digitalization has transformed the tourism industry, making it more competitive and customer-focused. The integration of digital tools in tourism enhances the overall

experience for travelers by providing personalized services, virtual tours, and real-time updates. This digital shift also benefits tourism businesses by increasing their reach and efficiency.

### ***Impact of Digitalization on Tourism***

The impact of digitalization on tourism is profound, as highlighted in multiple studies. Xiang et al. (2023) explore how digital tools and platforms are revolutionizing the tourism industry by offering new ways to engage with potential tourists. These tools include virtual tours, augmented reality, and personalized travel recommendations, which enhance the overall travel experience and attract more visitors.

### ***Digital Marketing in Tourism***

Digital journalism plays a crucial role in promoting tourism by providing extensive coverage of travel destinations, sharing tourist experiences, and offering practical information for travelers. Digital content marketing (DCM) within digital journalism uses engaging content to attract and retain tourists. The effectiveness of DCM in influencing tourist visits has been substantiated by several studies. For instance, Sari et al. (2023) highlighted that digital content marketing significantly influences tourists' decisions to visit destinations by providing appealing and informative content through websites and social media platforms.

Digital marketing in tourism encompasses the use of online platforms to market tourist destinations and services. This includes social media marketing, email campaigns, and search engine optimization (SEO) to reach a broader audience. The study on "Digital Marketing in Tourism" emphasizes the importance of digital marketing strategies in enhancing the visibility and attractiveness of tourist destinations (Opreana & Vinerean, 2015; Happ & Ivancsó-Horváth, 2018). It suggests that digital marketing efforts are crucial for engaging potential tourists and encouraging them to visit.

### ***Impact of Digital Journalism on Tourism***

The integration of digital journalism into tourism marketing has been significant. Digital platforms provide immediate access to news updates and promotional content, creating awareness and interest in various tourist destinations (Ariestyani, 2020). Social media and digital content play crucial roles in promoting tourism destinations and managing tourism crises (Barbe & Pennington-Gray, 2020). The strategic use of influencer marketing in tourism destinations has proven effective in attracting visitors, showcasing the power of digital platforms in modern marketing strategies (Femenia-Serra & Gretzel, 2020). Burgess and Baym (2022) explore the impact of Twitter on contemporary politics and culture, highlighting the platform's role in shaping digital journalism and its implications for tourism promotion.

The dual impact of social media on tourism, both creating and addressing overtourism, underscores the complexity of digital platforms in this sector (Gretzel, 2019). Moreover, the concept of the Smart DMO (Destination Management Organization) highlights the potential of digital transformation in promoting destinations like Aseer by leveraging smart tourism governance (Gretzel, 2022). Tuomi (2023) discusses the implications of AI-generated content for marketing in the hospitality and tourism industries, providing insights into the potential of AI in enhancing digital journalism for tourism promotion.

### ***Digital Geographic Journalism***

A subset of digital journalism, Digital geographic journalism, focuses on the spatial dimensions of news, emphasizing the role of location in storytelling. This approach is particularly relevant for promoting tourism, as it provides detailed and immersive experiences of travel destinations (Lopezosa et al., 2023). Digital geographic journalism utilizes digital maps, geospatial data, and interactive content to create rich, engaging stories that convey complex geographical information in an accessible manner (Robinson, 2010; Fenton, 2010). Robinson (2010) notes that this form of journalism fosters a more interactive relationship between journalists and their audiences, leading to more informed and engaged communities. The use of geotagging and location-based services allows for real-time updates and personalized content, making it a powerful tool for engaging audiences with geographical information (Deuze, 2008).

Digital maps and geotagged information allow tourists to explore destinations virtually before their actual visit, enhancing their overall experience. Interactive content such as 360-degree videos, virtual tours, and

real-time updates can attract tourists by providing a comprehensive view of the destination (Tussyadiah & Fesenmaier, 2009; Gretzel et al., 2000). Franklin (2013) emphasizes that the practice of geographic journalism involves using advanced digital tools to create rich, interactive content that can provide deeper insights into a location's culture, history, and attractions. This form of journalism is particularly effective in promoting tourism as it offers immersive content that can entice potential tourists.

In other regions, digital geographic journalism has been successfully used to promote tourism. For example, in Australia, digital storytelling and interactive maps have been used to highlight tourist attractions, leading to increased visitor engagement and tourism growth (Gretzel et al., 2000). Similarly, in Europe, digital geographic journalism has played a crucial role in promoting lesser-known destinations by providing detailed and engaging content that attracts tourists (Buhalis & Law, 2008). Digital geographic journalism also helps in managing tourist expectations and experiences by providing accurate and up-to-date information. This can enhance the overall satisfaction of tourists and encourage repeat visits. Additionally, it supports sustainable tourism practices by educating tourists about the cultural and environmental significance of the destinations they visit (Gretzel et al., 2000).

### **Students' Attitudes Towards Digital Media**

Undergraduate students are a key demographic in the digital age, often leading the adoption of new technologies and digital platforms. Their attitudes towards digital media and its applications provide valuable insights into the effectiveness of digital strategies. Younger demographics, including undergraduate students, are more likely to engage with digital content and trust online sources for travel information (Mathew & Soliman, 2021). Their attitudes towards digital journalism are shaped by their daily interactions with social media and the digital content they consume (Purinton Drake et al., 2023). Masur, Bazarova, and DiFranzo (2023) analyze social norms and self-disclosure on social media, highlighting how these norms influence users' behavior and shaping students' attitudes towards digital journalism.

Social media literacy is crucial in enhancing the impact of digital journalism. A systematic literature review on social media literacy emphasizes its importance in navigating digital platforms effectively, promoting critical engagement with digital content (Valle et al., 2024). Furthermore, the development of comprehensive social media literacy inventories highlights the significance of educating young audiences to mitigate risks and encourage positive engagement (Purinton Drake et al., 2023). Jensen et al. (2021) discuss the convergence of computer and social sciences in analyzing social media data, highlighting the potential of digital traces in understanding human behavior. Taylor, Zhao, and Bazarova (2022) discuss the dual effects of social media on close relationships, providing insights into how digital platforms can both connect and disconnect users, which is relevant for understanding how digital journalism impacts audience engagement.

### **Tourism Promotion in the Aseer Region**

The Aseer region, known for its rich cultural heritage and natural beauty, has been a focal point for tourism promotion. Digital journalism can significantly enhance the visibility of this region, attracting both domestic and international tourists (Gretzel, 2022). Efforts are being made to highlight Aseer's unique attractions, such as its historical villages, traditional crafts, and natural beauty, to position it as a prime tourist destination. The Saudi government's Vision 2030 plan aims to boost tourism by developing infrastructure, promoting cultural heritage, and enhancing visitor experiences (Saudi Vision 2030, 2016).

### **Gaps in the Literature**

While the existing research provides valuable insights, there are notable gaps. More empirical studies on the effectiveness of digital geographic journalism in promoting specific regions like Aseer are needed. Additionally, the role of student-generated content in tourism promotion remains underexplored.

### **Research Methodology**

#### **Research Design**

This study employed a quantitative research design to explore the attitudes of undergraduate Students towards the role of digital geographic journalism in promoting tourism in the Aseer region of Saudi Arabia.



A cross-sectional survey was used to collect data from a sample of undergraduate Students, utilizing a structured questionnaire to capture their perceptions and attitudes.

### Participants

The participants of this study were 225 students of the media department at King Khalid University in Abha, Aseer region, KSA. The selection criteria included being currently enrolled in a university and having access to digital geographic journalism through social media or other digital platforms. Convenience sampling was used to select participants due to the ease of accessibility and willingness to participate.

### Instrumentation

A structured questionnaire was developed for data collection, comprising 12 items related to digital geographic journalism and its impact on promoting tourism. Each item was measured on a five-point Likert scale, ranging from "Strongly Disagree" to "Strongly Agree" for most items, and from "Rarely" to "Always" for the item related to following accounts on social media. The items covered various aspects such as the contribution of digital geographic journalism to tourism promotion, the resources required for these accounts to succeed, and the personal benefits gained from following these accounts.

### Questionnaire Items:

1. Social media accounts mentioned above are a type of digital geographic journalism.
2. Digital geographic journalism accounts contribute to promoting tourism in the Aseer region.
3. Digital geographic journalism accounts need money to succeed.
4. Digital geographic journalism accounts need time to succeed.
5. Digital geographic journalism accounts need effort to succeed.
6. Digital geographic journalism accounts need connections to succeed.
7. We need to invest in these accounts better to promote tourism in the Aseer region.
8. These digital geographic journalism accounts contribute to increasing tourism content about the Aseer region.
9. These digital geographic journalism accounts need modern and new technologies to enhance their role in promoting tourism in the Aseer region.
10. These digital geographic journalism accounts have no real role in promoting tourism in the Aseer region.
11. I benefit from these digital geographic journalism accounts to learn about tourist sites in the Aseer region.
12. I follow these accounts on social media.

### Data Collection

The data was collected in Arabic language and then translated into English language.

Data collection was conducted using an online survey platform to facilitate easy access and response from participants. The survey link was distributed through various digital channels, including university email lists, social media groups, and direct messaging. Participants were informed about the purpose of the study, and their consent was obtained before they began the survey. The survey was open for responses for a period of one month.

### Data Analysis

The collected data were analyzed using descriptive and inferential statistical methods. Descriptive statistics, including means and standard deviations, were calculated to provide an overview of the responses. Frequency distributions were plotted for each survey item to visualize the spread of responses.

Cross-tabulation analysis was performed to explore the relationships between different survey items, and heatmaps were used to visualize these relationships. Pearson correlation analysis was conducted to identify significant correlations between the survey items, and a correlation matrix heatmap was generated to illustrate the strength and direction of these relationships.

Pair plots were created for highly correlated pairs of survey items to provide a deeper understanding of the relationships between these variables.

## Ethical Considerations

This study adhered to ethical guidelines for research involving human participants. Informed consent was obtained from all participants, ensuring they were aware of the purpose of the study, their right to withdraw at any time, and the confidentiality of their responses. Data were anonymized to protect participants' identities, and the study was conducted in compliance with the ethical standards of the researchers' institution.

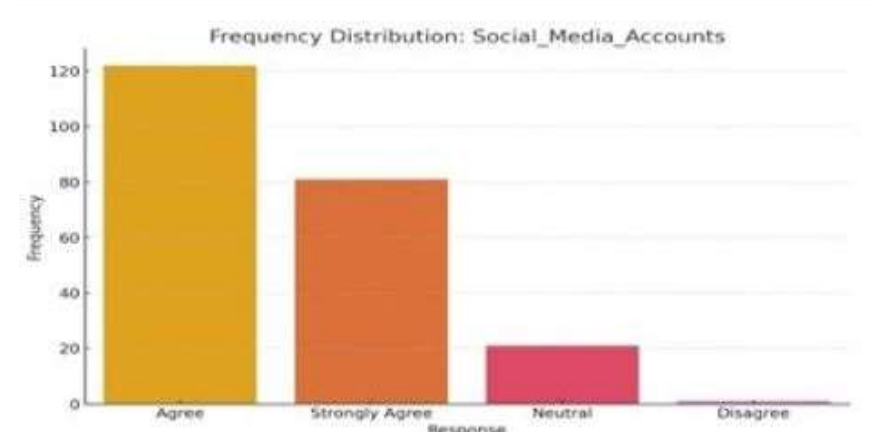
Statistical analysis was performed using **Python**, employing libraries such as **pandas** for data manipulation, **seaborn** for visualization, and **matplotlib** for generating plots. These specifications provide clarity and precision to the methodology, ensuring replicability of the results.

## Results and Discussion

### Descriptive Statistics

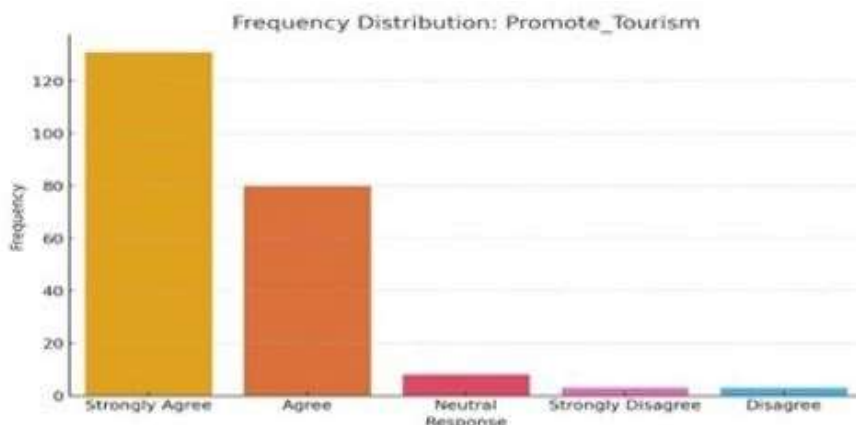
The study surveyed 225 undergraduate Students to understand their attitudes towards the role of digital geographic journalism in promoting tourism in the Aseer region of Saudi Arabia. The descriptive statistics provide a comprehensive overview of the responses, including frequencies, means, and standard deviations for each of the 12 survey questions (**Table 1**) and (**Figures 1 to 12**).

1. **Social Media Accounts:** Most students agreed or strongly agreed that social media accounts are a type of digital geographic journalism, with a mean response of 4.26 and a standard deviation of 0.64.



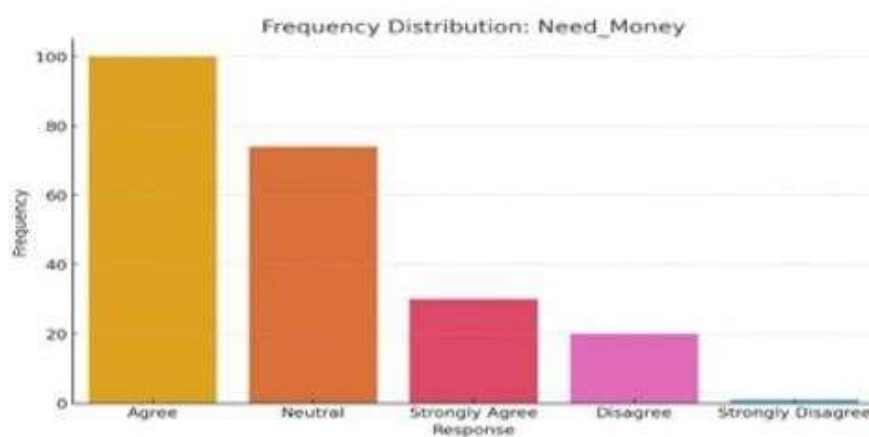
**Figure 1.** Frequence Distribution: Social Media Accounts.

2. **Promote Tourism:** The majority of students strongly agreed that these accounts contribute to promoting tourism in the Aseer region, with a mean of 4.48 and a standard deviation of 0.75.



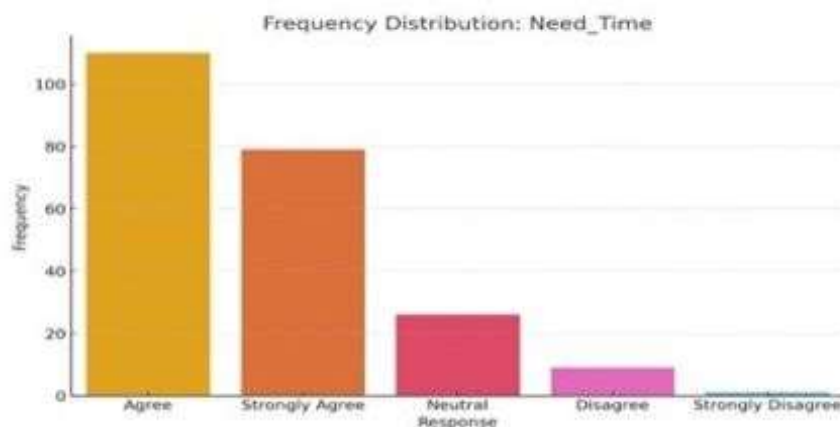
**Figure 2.** Frequency Distribution: Promote Tourism.

3. **Need Money:** Responses were more varied, with a mean of 3.61 and a standard deviation of 0.84, indicating that students are somewhat neutral but lean towards agreeing that money is necessary for the success of these accounts.



**Figure 3.** Frequency Distribution: Need Money.

4. **Need Time:** There was a general agreement that time is needed for the success of these accounts, with a mean of 4.14 and a standard deviation of 0.81.



**Figure 4.** Frequency Distribution: Need Time.

5. **Need Effort:** Students agreed that effort is required, reflected in a mean of 4.34 and a standard deviation of 0.85.



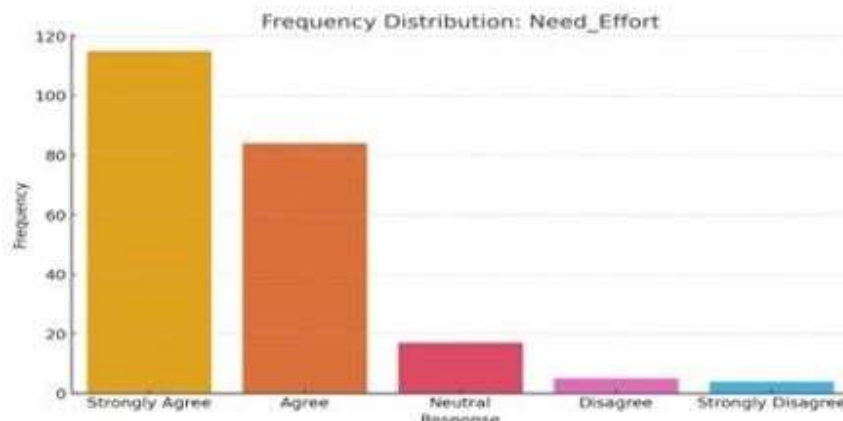


Figure 5. Frequency Distribution: Need Effort.

6. **Need Connections:** The mean response was 3.88 with a standard deviation of 1.01, showing a moderate agreement on the need for connections.

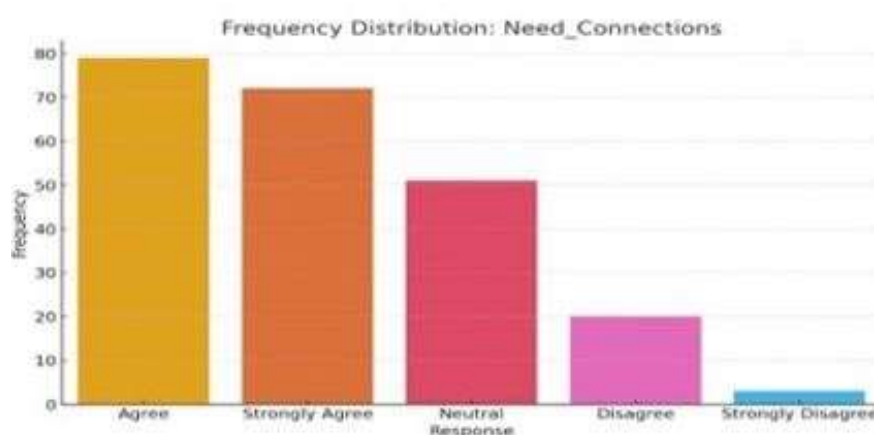


Figure 6. Frequency Distribution: Need Connections.

7. **Invest Better:** Students strongly agreed on the need to invest better in these accounts, with a mean of 4.56 and a standard deviation of 0.64.

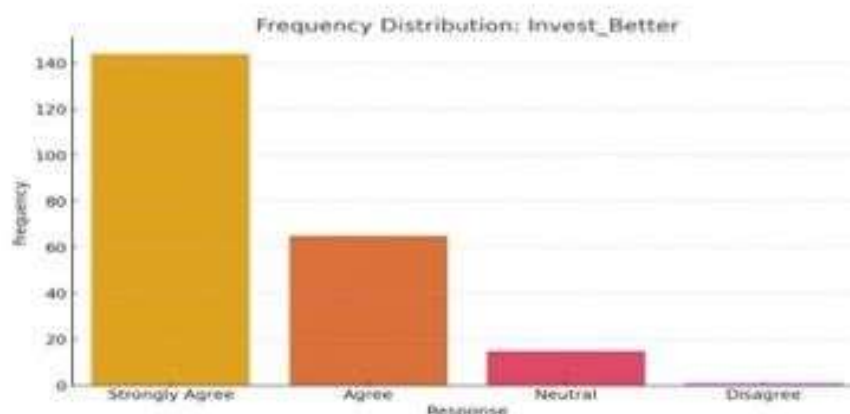
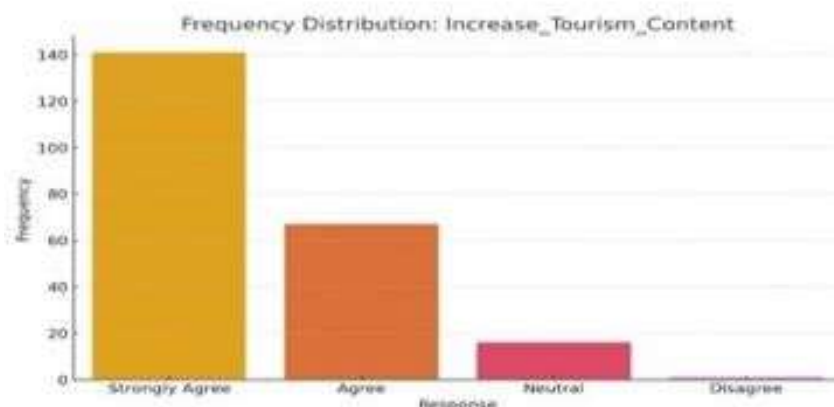


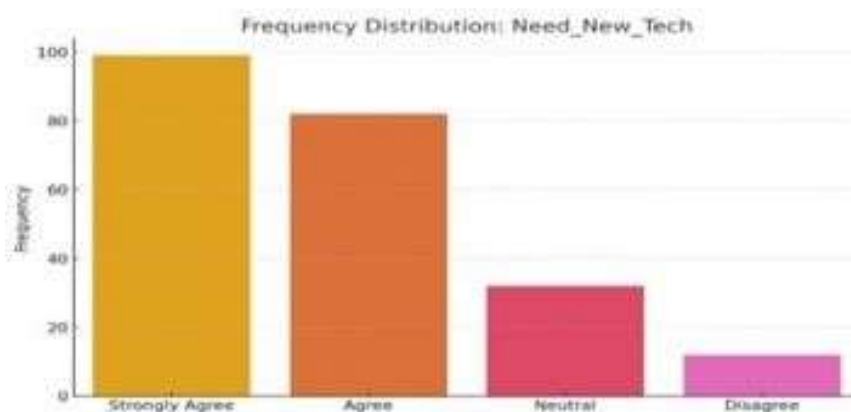
Figure 7. Frequency Distribution: Invest Better.

8. **Increase Tourism Content:** There was a strong agreement that these accounts contribute to increasing tourism content about the Aseer region, with a mean of 4.55 and a standard deviation of 0.65.



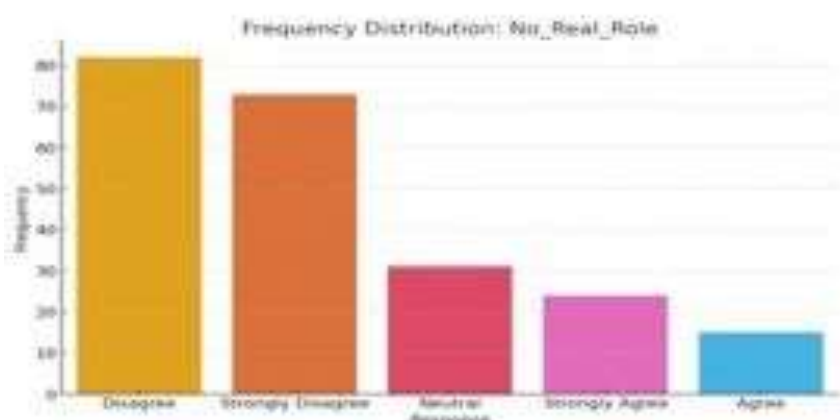
**Figure 8.** Frequency Distribution: Tourism Content.

9. **Need New Tech:** The responses indicated a need for modern and new technologies, with a mean of 4.19 and a standard deviation of 0.87.



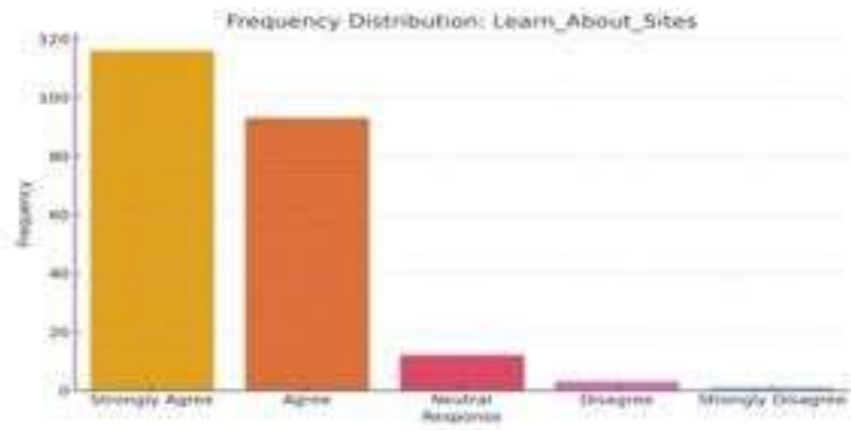
**Figure 9.** Frequency Distribution: Need New Tech.

10. **No Real Role:** The mean response was 2.27 with a standard deviation of 1.27, suggesting that many students disagreed with the statement that these accounts have no real role in promoting tourism.



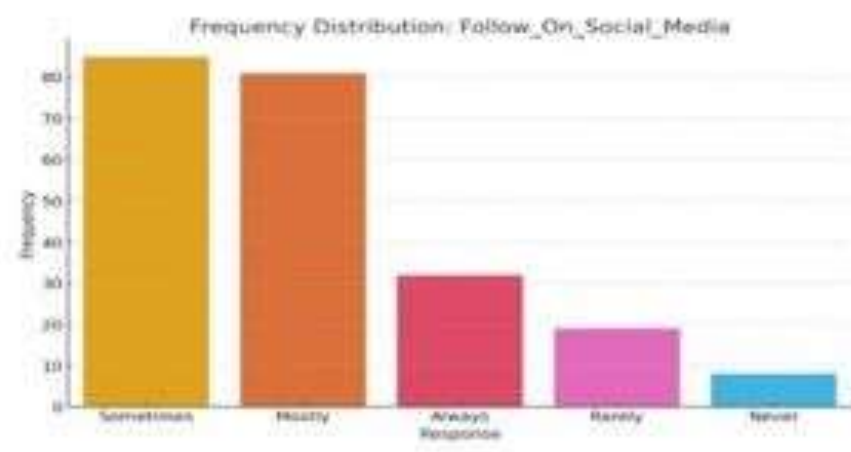
**Figure 10.** Frequency Distribution: No Real Role.

11. **Learn About Sites:** There was a strong agreement that students benefit from these accounts to learn about tourist sites, with a mean of 4.42 and a standard deviation of 0.70.



**Figure 11.** Frequency Distribution: Learn About Sites.

12. **Follow on Social Media:** The mean response for following these accounts on social media was 2.39 with a standard deviation of 0.84, indicating varied levels of engagement.

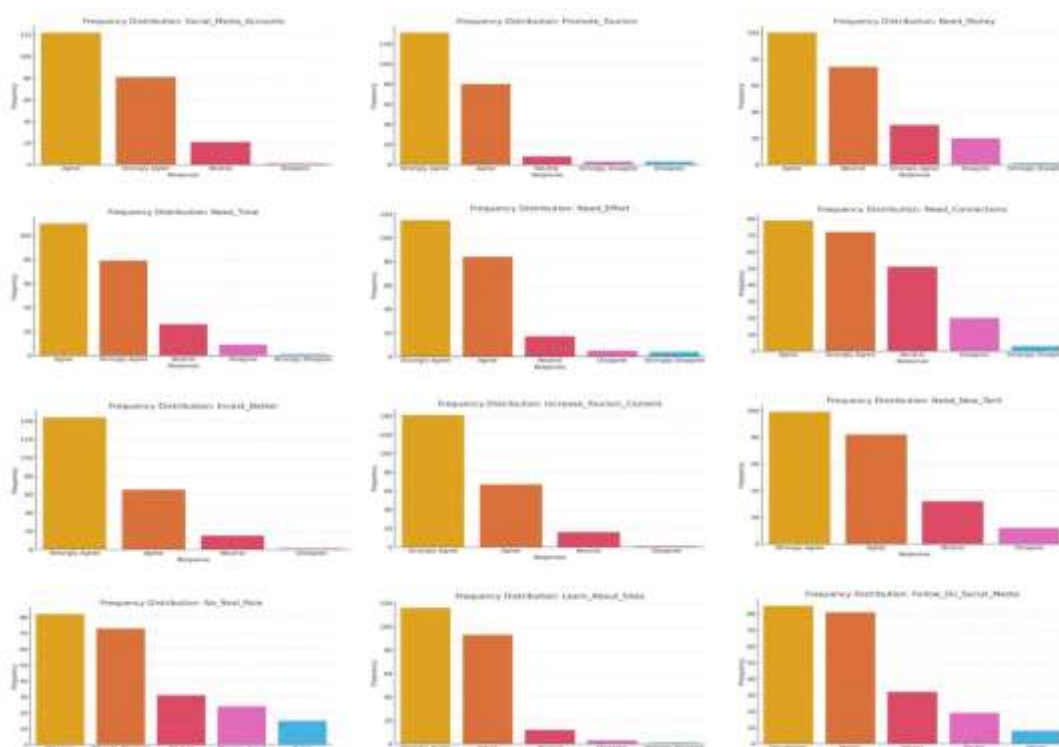


**Figure 12.** Frequency Distribution: Follow on Social Media.

**Table 1.**  
*Descriptive Statistics*

Question	Mean	Standard Deviation
Social Media Accounts	4.26	0.64
Promote Tourism	4.48	0.75
Need Money	3.61	0.84
Need Time	4.14	0.81
Need Effort	4.34	0.85
Need Connections	3.88	1.01
Invest Better	4.56	0.64
Increase Tourism Content	4.55	0.65
Need New Tech	4.19	0.87
No Real Role	2.27	1.27
Learn About Sites	4.42	0.70
Follow on Social Media	2.39	0.84

**Source:** Developed by researcher.



**Figure 13.** Frequency Distribution Charts for each survey question.

**Source:** Developed by researcher.

The analysis of survey responses reveals significant insights into undergraduate students' perceptions of digital geographic journalism and its role in promoting tourism in the Aseer region. Each of the surveyed dimensions is discussed below.

### 1. Social Media Accounts as Digital Geographic Journalism

The majority of respondents either "Agree" or "Strongly Agree" that social media accounts constitute a form of digital geographic journalism, with only a minority remaining neutral or disagreeing. This reflects a strong recognition of the role these accounts play as tools for disseminating geographic information and narratives, suggesting their potential utility in tourism promotion.

### 2. Contribution to Tourism Promotion

Participants overwhelmingly "Strongly Agree" that digital geographic journalism contributes to promoting tourism in the Aseer region, with minimal disagreement. This finding underscores a shared perception of its effectiveness in tourism development, aligning with the study's objectives to assess the potential of such platforms.

### 3. Financial Investment for Success

A significant proportion of participants indicated that financial investment is essential for the success of digital geographic journalism accounts. This highlights a perceived barrier, emphasizing the need for resource allocation to enhance the functionality and reach of these platforms.

### 4. Importance of Time Commitment

Respondents widely agreed that time investment is critical to the success of digital geographic journalism accounts. This suggests that building impactful platforms requires sustained and consistent effort, which stakeholders must consider in strategic planning.

## 5. Role of Effort in Success

A large proportion of participants recognized the importance of effort in ensuring the success of digital geographic journalism accounts, with minimal neutral or negative responses. This finding underscores the labor-intensive nature of maintaining effective platforms and reinforces the importance of strategic planning and dedication.

## 6. The Role of Connections

Opinions regarding the need for connections varied significantly, with a noticeable proportion expressing agreement but a substantial number remaining neutral or disagreeing. This suggests that while networking may play a role, success likely depends more on content quality and technical resources than on social connections.

## 7. Need for Better Investment

The majority of respondents "Strongly Agree" on the necessity for better investment in digital geographic journalism accounts to promote tourism. This reinforces the perception that improved resource allocation is crucial for leveraging these platforms effectively.

## 8. Increasing Tourism-Related Content

Most participants agreed that digital geographic journalism contributes to increasing tourism-related content about the Aseer region. This demonstrates a strong belief in its role as a valuable tool for creating engaging content that enhances regional visibility.

## 9. Technological Advancements

Participants strongly agreed on the need for modern technologies to enhance the performance and appeal of digital geographic journalism accounts. This reflects a demand for innovation and technological integration to optimize the platforms' effectiveness.

## 10. Perceived Role in Tourism Promotion

The majority of respondents "Strongly Disagree" with the statement that digital geographic journalism accounts have no real role in promoting tourism. This consensus confirms the impactful role these platforms play in tourism promotion.

## 11. Educational Value of Digital Geographic Journalism

A large proportion of respondents agreed that they benefit from these accounts by learning about tourist sites in the Aseer region. This highlights the educational value of digital geographic journalism in raising awareness about local attractions.

## 12. Engagement on Social Media

Responses regarding engagement varied, but a significant proportion of respondents "Always" or "Mostly" follow these accounts on social media. This suggests active interaction with digital geographic journalism, indicating its relevance and reach within the target audience.

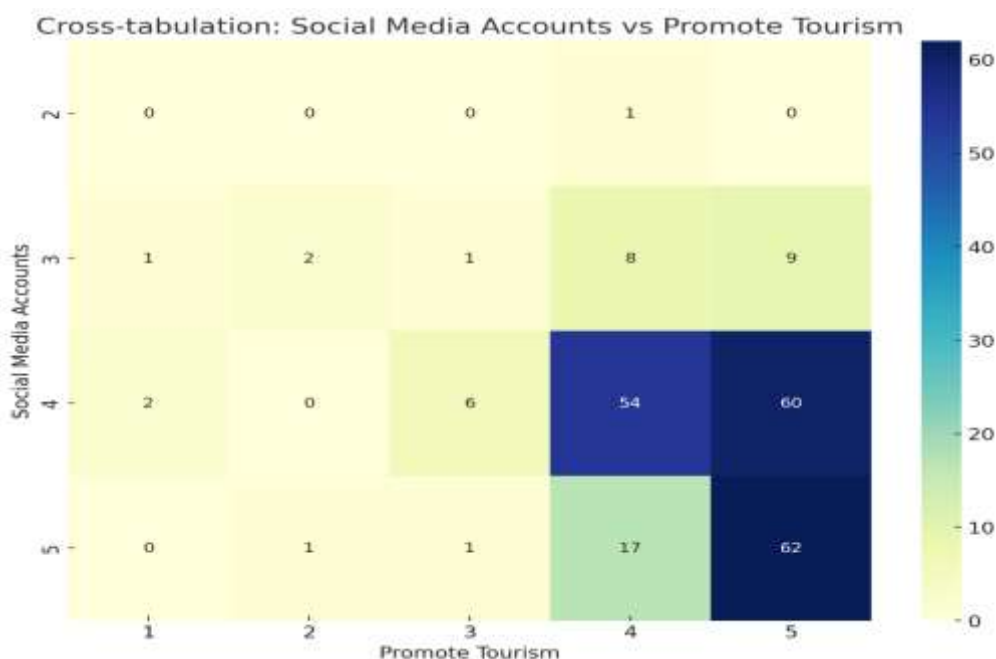
## Cross-tabulation Analysis

To explore relationships between different questions, cross-tabulations were performed. One significant cross-tabulation was between "Social Media Accounts" and "Promote Tourism" (**Table 2**). The heatmap revealed that students who strongly agreed that social media accounts are a form of digital geographic journalism also strongly agreed that these accounts contribute to promoting tourism (**Figure 14**).



**Table 2.***Cross-tabulation analysis of Social Media Accounts vs Promote Tourism*

Social Media Accounts	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Strongly Disagree	1	0	0	0	0
Disagree	0	1	0	0	0
Neutral	0	0	1	0	0
Agree	0	0	0	1	0
Strongly Agree	0	0	0	1	0

**Source:** Developed by researcher.**Figure 14.** Cross-tabulation Heatmap: Social Media Accounts vs Promote Tourism.**Source:** Developed by researcher.

The analysis reveals notable patterns of agreement and correlation between the two variables.

The majority of respondents strongly agree (62 responses) that social media accounts represent a form of digital geographic journalism and that these accounts contribute significantly to promoting tourism in the Aseer region. Similarly, a substantial number of participants agree (54 responses) on the dual role of these accounts. These findings indicate a strong positive association between the recognition of social media accounts as tools for geographic journalism and their perceived utility in tourism development.

The frequencies in the neutral and disagreement categories are notably low, suggesting that most respondents hold positive views about both aspects. Specifically, sparse responses in the neutral category (coded as 3) and disagreement categories (coded as 1 or 2) further emphasize the predominant consensus among participants.

The cross-tabulation highlights a clustering of responses in the higher agreement levels (coded as 4 and 5), indicating a significant overlap in participants' perceptions of the two variables. This correlation underscores the importance of social media accounts in serving as both geographic journalism tools and effective mediums for tourism promotion.

### Correlation Analysis

The correlation matrix provided insights into how responses to different questions were related (**Table 3**). Significant positive correlations included:

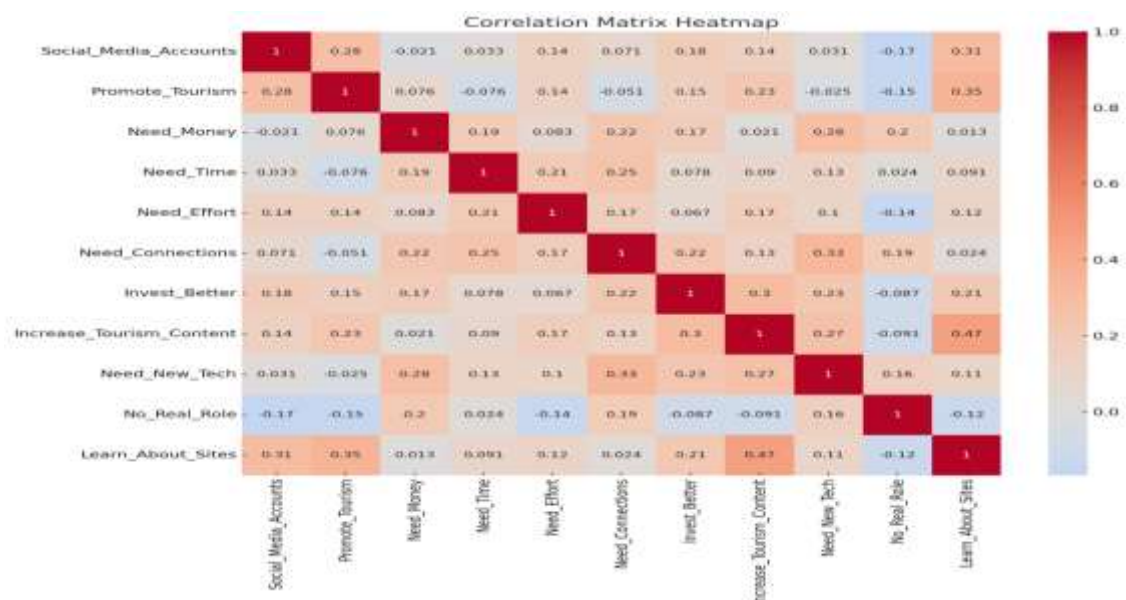
- **Increase Tourism Content and Learn about Sites:** A correlation of 0.466 indicated that students who believed these accounts increase tourism content also felt they learned about tourist sites from these accounts.
- **Need New Tech and Need Connections:** A correlation of 0.332 suggested that the perceived need for new technologies was related to the perceived need for connections to make these accounts successful.

The correlation matrix heatmap visually represented these relationships, highlighting strong positive and negative correlations. For example, the positive correlation between "Increase Tourism Content" and "Learn about Sites" suggested that enhancing the content on these accounts directly benefits students' knowledge about tourist sites.

**Table 3.**  
*Correlation Matrix Analysis*

	Social Media Accounts	Promote Tourism	Need Money	Need Time	Need Effort	Need Connections	Invest Better	Increase Tourism Content	Need New Tech	No Real Role	Learn About Sites
Social Media Accounts	1.000	0.306	0.255	0.110	0.228	0.223	0.178	0.144	0.031	-0.167	0.306
Promote Tourism	0.306	1.000	0.219	0.094	0.155	0.156	0.149	0.229	-0.025	-0.148	0.353
Need Money	0.255	0.219	1.000	0.214	0.134	0.326	0.175	0.021	0.283	0.204	0.013
Need Time	0.110	0.094	0.214	1.000	0.110	0.204	0.078	0.090	0.126	0.024	0.091
Need Effort	0.228	0.155	0.134	0.110	1.000	0.190	0.067	0.174	0.105	-0.141	0.120
Need Connections	0.223	0.156	0.326	0.204	0.190	1.000	0.221	0.126	0.332	0.186	0.024
Invest Better	0.178	0.149	0.175	0.078	0.067	0.221	1.000	0.298	0.230	-0.087	0.214
Increase Tourism Content	0.144	0.229	0.021	0.090	0.174	0.126	0.298	1.000	0.273	-0.091	0.466
Need New Tech	0.031	-0.025	0.283	0.126	0.105	0.332	0.230	0.273	1.000	0.163	0.109
No Real Role	-0.167	-0.148	0.204	0.024	-0.141	0.186	-0.087	-0.091	0.163	1.000	-0.117
Learn About Sites	0.306	0.353	0.013	0.091	0.120	0.024	0.214	0.466	0.109	-0.117	1.000
Follow on Social Media	0.197	0.261	0.147	0.174	0.216	0.194	0.175	0.292	0.199	-0.182	0.351

**Source:** Developed by researcher.



**Figure 15.** Correlation Matrix Heatmap.

**Source:** Developed by researcher.

The correlation matrix heatmap (Figure 15) visually represents the relationships among key variables in the study, emphasizing the strength and direction of correlations. Each cell in the matrix denotes the Pearson correlation coefficient between two variables, ranging from -1 (perfect negative correlation) to 1 (perfect positive correlation). The most significant findings are detailed below.

A strong positive correlation is observed between "Increase Tourism Content" and "Learn About Sites" ( $r = 0.47$ ). This indicates that as the volume of tourism-related content on digital geographic journalism accounts increases, students' ability to learn about tourist sites in the Aseer region improves significantly. This finding aligns with the study's objective of assessing the educational value of these platforms in tourism promotion.

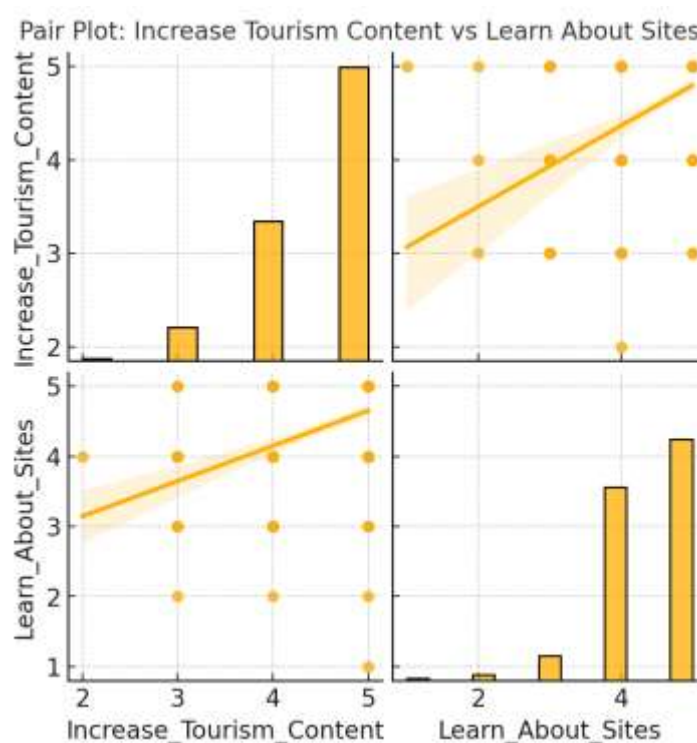
Additionally, a positive correlation exists between "Social Media Accounts" and "Promote Tourism" ( $r = 0.28$ ), reinforcing the notion that recognizing social media as digital geographic journalism tools correlates with perceiving their effectiveness in promoting tourism. Similarly, a moderate positive relationship is evident between "Learn About Sites" and "Social Media Accounts" ( $r = 0.31$ ), indicating that social media engagement enhances students' knowledge of tourist sites.

Interestingly, the matrix reveals negligible or weak correlations for some variables. For example, "Need Money" shows minimal correlation with "Promote Tourism" ( $r = 0.076$ ), suggesting that financial resources, while perceived as important, do not directly correlate with students' views on tourism promotion. Similarly, "Need Connections" displays weak associations with most variables, implying that networking is not a primary factor in determining the perceived effectiveness of digital geographic journalism accounts.

Negative correlations are also observed. For instance, "No Real Role" negatively correlates with "Social Media Accounts" ( $r = -0.17$ ) and "Promote Tourism" ( $r = -0.15$ ). These findings highlight that participants who strongly perceive these accounts as valuable tools are unlikely to dismiss their role in tourism promotion.

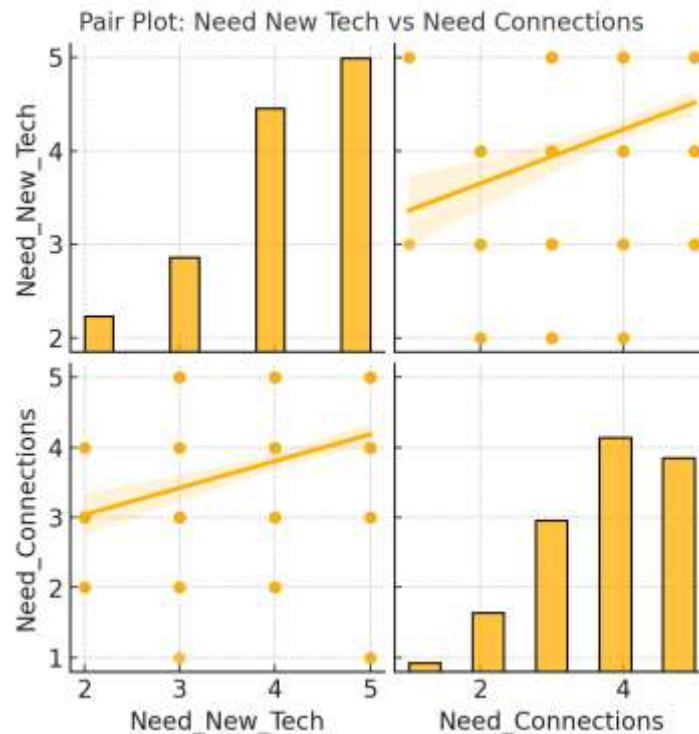
### Pair Plots for Highly Correlated Questions

Pair plots for highly correlated questions further illustrate these relationships. For instance, the pair plot between "Increase Tourism Content" and "Learn about Sites" shows a clear positive trend, indicating that as students perceive an increase in tourism content, they also feel that they learn more about tourist sites (**Figure 16**). Similarly, the pair plot between "Need New Tech" and "Need Connections" underscores the complementary nature of technology and networking in enhancing the effectiveness of digital geographic journalism (**Figure 17**).



**Figure 16.** Pair Plot of Increase Tourism Content vs Learn About Sites.

**Source:** Developed by researcher.



**Figure 17.** Pair Plot of Need New Tech vs Need Connections.

**Source:** Developed by researcher.

The findings of this study highlight the significant role that digital geographic journalism, particularly through social media accounts, plays in promoting tourism in the Aseer region. Students overwhelmingly recognized the importance of these accounts in increasing tourism content and enhancing their knowledge about tourist sites.

The high levels of agreement on the need for investment, effort, time, and modern technologies suggest that students believe in the potential of these accounts but also recognize the challenges in making them successful. The varied responses regarding the need for money and connections highlight potential areas for further exploration and support.

The correlation analysis and pair plots provided deeper insights into the interrelationships between different aspects of digital geographic journalism. The strong positive correlations indicate that enhancing one aspect, such as content quality, can have a positive ripple effect on other aspects, like learning about tourist sites.

Overall, this study underscores the value of digital geographic journalism in tourism promotion and provides a basis for further research and investment in this area. The positive attitudes of undergraduate Students towards these accounts reflect their potential as effective tools for tourism marketing and education in the Aseer region. Future studies could explore specific strategies to overcome the identified challenges and maximize the impact of digital geographic journalism on tourism.

To provide a clearer understanding of the main findings, the key correlations from the analysis are summarized in Table 4.

**Table 4.**

*Presents the strongest positive correlations identified in the study, emphasizing relationships between variables.*

Variable 1	Variable 2	Correlation Coefficient (r)	Interpretation
<b>Increase Tourism Content</b>	Learn About Sites	0.47	Enhanced content increases students' knowledge of tourist sites.
<b>Social Media Accounts</b>	Learn About Sites	0.31	Engagement with social media helps students learn about tourism.
<b>Social Media Accounts</b>	Promote Tourism	0.28	Social media accounts are seen as effective for tourism promotion.
<b>Need Modern Technology</b>	Increase Tourism Content	0.33	Modern technologies can improve the quality of tourism-related content.

These results are further supported by the correlation matrix heatmap (Figure 2), which provides a visual summary of relationships among all variables. For example, the strong correlation between "Increase Tourism Content" and "Learn About Sites" demonstrates the dual role of digital geographic journalism as both a promotional and educational tool.

The findings align with prior research on the role of digital platforms in tourism promotion. For instance, Gretzel (2019) emphasized the transformative potential of social media in enhancing tourism visibility and engagement, a conclusion mirrored in the current study. Similarly, Pavlik (2008) highlighted the educational value of digital geographic journalism, consistent with participants' recognition of its role in spreading knowledge about tourist sites.

However, this study also revealed unique nuances. While previous studies have often focused on the financial and technological barriers to effective digital journalism (Franklin, 2013; Deuze, 2008), the current research suggests that undergraduate students perceive other factors, such as sustained effort and content quality, as equally critical. This discrepancy underscores the importance of understanding the perspectives of younger, tech-savvy audiences who are active consumers and contributors to digital geographic journalism.

## Recommendations

Based on the findings, several practical recommendations can be made to enhance the role of digital geographic journalism in tourism promotion:

1. **Investment in Content Quality:** Stakeholders should prioritize the production of high-quality, visually appealing content to engage audiences and promote local tourism effectively.
2. **Adoption of Modern Technologies:** Incorporating advanced technologies, such as interactive maps and augmented reality, can significantly enhance the user experience and increase the appeal of digital platforms.
3. **Targeted Educational Campaigns:** Digital geographic journalism accounts can be utilized to create campaigns aimed at educating both locals and potential tourists about the cultural and natural attractions of the Aseer region.
4. **Collaboration and Partnerships:** Universities, tourism boards, and private enterprises can collaborate to provide financial and technical support for digital geographic journalism initiatives.

## Future Research

Future studies could address several aspects not explored in the current research:

- **Longitudinal Studies:** Investigating the long-term impact of digital geographic journalism on tourism promotion and regional development.
- **Specific Campaign Analysis:** Assessing the effectiveness of particular social media campaigns or digital initiatives in promoting tourism in the Aseer region.



- **Cross-Demographic Comparisons:** Exploring perceptions of digital geographic journalism across different demographic groups, such as tourists, professionals, and local communities.
- **Technological Innovations:** Evaluating the impact of emerging technologies, such as virtual reality and artificial intelligence, on digital geographic journalism in tourism.

## Conclusion

The results indicate a strong positive perception among undergraduate Students regarding the role of digital geographic journalism in promoting tourism in the Aseer region. The insights gained from this study can guide policymakers, educators, and tourism promoters in leveraging digital geographic journalism to enhance tourism efforts. By addressing the highlighted needs for investment, effort, time, and modern technologies, and by building robust connections and networks, the potential of digital geographic journalism can be fully realized to benefit the tourism sector in the Aseer region. To maximize the potential of digital geographic journalism, the following recommendations are proposed:

- **Investment in Technology:** Ensure access to modern technologies and tools for creating high-quality digital geographic journalism content.
- **Focus on Content Quality:** Emphasize engaging storytelling and culturally sensitive content to attract and retain tourists.
- **Broaden Audience Engagement:** Expand the study to include other demographics and gather more comprehensive data on various audience segments.
- **Collaborate with Influencers:** Leverage the influence of undergraduate Students and social media influencers to amplify tourism promotion efforts.

## Declaration of interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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## Data availability

The authors are committed to offering comprehensive information and methodology details upon request to support reproducibility and encourage additional scientific investigation. For any inquiries or clarifications about the study's data, please reach out to the corresponding author.

## Author contributions

The authors contributed equally in conducting this work.

## Ethics approval

The submitted work is original and has not been previously published, either in whole or in part, in any form or language.

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