Research Article

The Role of Social Media in Enhancing Communication among Individuals: Prospects and Problems

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ABSTRACT

This study is a discussion about the role that social media plays in enhancing communication among individuals, highlighting its prospects and related challenges. This research examines the impact of social media on improving communication among individuals and its prospects and challenges. This study had taken an integrated approach of secondary data analysis methodology through an extensive systematic review of the existing literature, along with the Canadian Research Data Collection (CREDC) national web-survey, to collect the attitudinal and behavioral insight of social media users on different platforms like Facebook, Twitter, and LinkedIn considering theoretical frameworks like Social Presence Theory and Media Richness Theory. Further, this conceptual review used PRISMA guidelines to examine how social media improves communication. Eligibility and exclusion criteria ensured peer-reviewed article selection and credibility. Study reveals that social media platforms significantly enhance interpersonal communication by fostering increased interconnectedness, more accessible information, and community formation. Notably, while these digital environments have considerable benefits, such as the facilitation of learning and support networks, they are also fraught with challenges, including misinformation, privacy concerns, and potential adverse effects on mental health. These findings therefore have dual approaches to reaping the benefits of social media in communication: the promotion of user education to reduce misinformation and building up digital literacy, while there is also a need to consider regulations that will protect against violation of privacy and cyberbullying. It is at this point that stakeholders will, arguably, have fewer difficulties in making use of social media to continue developing active citizenship and rich interpersonal relationships. Future research is encouraged to further explore the implications of emerging technologies on social media communication practices.

Keywords: Social Media; Sustainable growth; Communication; Problem; Prospects

1. Introduction

With the proliferation of social media sites, people from all over the world are now able to instantly communicate with one another. Statista[1] reported that since its start in the 2000s, this media type has developed into a complex ecosystem offering various forms of communication, such as text, video, and other multimedia exchanges. According to Ashraf et al[2], the growth that Facebook, Twitter, Instagram, and LinkedIn have experienced is remarkable in terms of personal, professional, and societal communications among individuals. However, this growth is not limited to this particular area alone. It is the fact that social media is so pervasive in every facet of modern life that serves as the foundation for this argument[3,4]. As at 2023 more than half of world population i.e., over four billion six hundred million people are active users on various worldwide available social networking sites making this trend global scale significant [1]. Therefore there is need to study how this affects our communication practices whether positively or negatively.

In this analysis we wanted to find out if citizenry can be enhanced using such factors as social media like Facebook which became popular since it was launched in 2004[5]. This is done by employing an independent probability sample of social media users who participated in the Canadian Research Data Collection (CREDC) national Web-survey using four tools namely Facebook, LinkedIn, MySpace and Twitter[6,7]. Although there are significant differences between these tools, they have a relatively homogeneous demographic profile overall[8,9]. The government and politics module of the survey provides us with useful data on citizens' use of these social media tools for political and government communications[10,11]. Some important conclusions can be drawn as to whether enlarging memberships may eventually lead to harder leadership participation owing to richness contexts that may undermine people's communication abilities[12,13].

There is a plethora of social media which exist to provide information, facilitate communication, offer entertainment and help people share their lives within a virtual world that connects them into larger social contexts[14,15]. Almost certainly, virtual connections across the spectrum of social media enhance communication among individuals today[16]. It is well known that there are already strong indications of the level of use of this medium by users in every country surveyed thus far[17,18]. However, not all studies have significant use reported between the subjects while use does not mean actual behavior; intentions and actions can vary considerably[19]. With everything we hear about social media's huge growing membership base that drives its popularity, why would some people still refuse to join it? Besides, even with information on a large number of members provided using some social media tools, other non-users show interest in participation and input without taking up any involvement through these tools[20,21]. Virtual social media community has had many names like blogs, social networks and bookmarking sites. There has not been any agreement on the exact definition of web-based programs that fall under the concept of social media [5]. However, there are some common features among different types of social media. First, they are technology-enabled which means their program content must be digital in nature so that network tools can be used. Examples of these network tools include blogs, texting services, instant messaging services, discussion groups, mp3 files etc. Second, it provides a medium for conversation and articulation. Thirdly the conversation is multi-dimensional and many-to-many meaning that several participants can take part in one conversation together with fourthly, this covers collaborative and interactive discussion[5,6,8,19].

In today's technological world "social media" is becoming a widely spread term. Most specialists as well as students do not know what it means to them despite all the fuss about it[14]. As such, they remain unable to use it effectively because they are ignorant about the available tools provided by various social media sites[22,23]. The term "social media" is defined as "the online platforms where people develop

relationships or connections while talking to each other". From an organizational perspective it is a concept of mutual collaboration and communication[24,25]. Social media consists of various internet and wireless instruments for people communication, interrelating or most crucially contributing[21].

The purpose of this article is to examine the both positive and negative aspects of using social media as a means of communication for individuals. In order to better model the behaviors of people who use social media, game theory will be of assistance. In addition to this, it is essential to conduct an analysis of the consequences that this behavior will have on the user as well as on other stakeholders. Our research suggests that social media platforms have the potential to facilitate the flow of information and communication between individuals. On the other hand, it may also provide access to information that is contentious, irrelevant, and unwanted advertisement messages. This is the flip side of the potential benefits. In addition, users are likely to exhibit biased behavior and produce negative content that is driven by content that is sticky and friendly to trolling. It is because of this kind of unwelcome behavior that quality contributors will be dissuaded from producing high-quality expertise materials, which will ultimately lead to a reduction in the significance of social media in terms of improving communication between individuals.

The study focuses on the multiple positivity of social media in supporting communication of different individuals thereby providing both the pros and the cons of social media use. The proceeding proposition will also focus on analyzing the effects of social media on interpersonal relationship, the role of virtual communities in support, and the consequences of such interaction on mental wellbeing[26]. Social Presence theory and Media Richness theory this paper assessed the strengths of different types of social media for communication and interaction[17].

Consequently, the study aims to enlighten the multifaceted aspects that represent current social media communication practices and thereby provide the basis for the further investigation of the problems emerging from the advancement of these technologies. Knowledge of these dynamics is instrumental in designing better messages in social media platforms (SMO) while addressing the negative impacts offered by social media. We have postulated the following research questions;

RQ1. How does social media enhance communication among individuals?

RQ2. What are the prospects and challenges associated with the use of social media for communication?

The study delineates numerous research gaps, encompassing the necessity for targeted analysis of specific demographics, longitudinal effects of social media usage, cultural disparities in communication styles, pathways of misinformation dissemination, mental health repercussions, intervention methodologies, and the impact of emerging technologies on social media engagement and communication dynamics.

2. Literature review: understanding social media

2.1. Definition and types of social media platforms

Social media refers digital platforms applications that enable users create share engage with content connect with others[27,28]. These platforms have become integral parts of contemporary communication allowing individuals, groups or organizations to interact in real-time even across large geographical areas. There are various types of social networks depending on different purposes like personal expression or professional networking[29].

Facebook and LinkedIn are social networking sites (SNS) that have been designed to create and manifest the social networks or social relations of people. Facebook, launched in 2004 has since become a global phenomenon with over 2.8 billion monthly active users as of 2021 [30]. It allows personal networking

by allowing users to create profiles, share updates, photos, and videos among others, as well as interact with other people through likes, comments, and messages made on this platform [22]. On the other hand, LinkedIn is a professional networking site that brings together professionals helping them display their work experience, skills, achievements it also facilitates job search and recruitment[31,32] .

Twitter and Tumblr are examples of microblogging sites where users can post brief updates and also comment on what others have done through retweeting[27]. With its character limit which was initially set at 140 characters but now stands at 280 characters Twitter encourages concise posts made in frequent intervals[33]. It is an information sharing platform that supports real-time communication utilized by celebrities' politicians or organizations in direct communications with their audiences[34,35]. Tumblr combines characteristics of blogging and social media platforms; users can post multimedia content or follow each other's blogs thereby creating a dynamic mix of contents[25]. Multimedia content sharing is the main focus for platforms like Instagram Snapchat Tik Tok etc[8,12]. Instagram which was launched in 2010 has gained popularity due to its capability of photo and video sharing accompanied by filters and editing tools making it one big visual storytelling board hence used as an advertising tool by influencers and brands for marketing campaigns[36,37]. Known for its ephemeral messaging Snapchat provides images/videos sent with timelines that disappear after being viewed along with features such as Stories & Discover for more lasting material[38,39]. Tik Tok, one of the most popular short-form video platforms, is known for its algorithm-based content discovery and viral challenges that attract a largely youthful generation[40,41]. Messaging applications like WhatsApp Facebook Messenger WeChat etc. are used to communicate in real-time via text voice or video calling [36]. WhatsApp, with an estimated two billion users worldwide, facilitates both individual and group messaging, sending voice notes as well as media files among others; this app also uses end-to-end encryption for privacy purposes[25,29] The Facebook platform has integrated Facebook Messenger with it which provides similar features commonly used for connecting to friends on Facebook[42, 43]. WeChat is a versatile communication tool in China that combines messaging with various services such as social networking payments news among others[39].

Reddit and Quora serve as discussion forums where users interact and share information about different topics[44,45]. Reddit which is often referred to as "the front page of the internet" comprises subreddits dedicated to different topics on which users can post content and vote on its relevance and quality[25]. Quora is a question-and-answer site from which people seek information or share their expertise usually providing answers from experienced individuals or professionals[2,18]. Collective projects such as Wikipedia allow many people to write or edit an article simultaneously[47,48]. The largest online encyclopedia Wikipedia is maintained by a community of volunteer editors who contribute and verify information thereby ensuring accuracy and completeness[49]. These platforms are based on user-generated content and crowdsourcing ideas that utilize collective intelligence to encourage valuable resource building[50].

2.2. Key features and functions

Social media networks are marked by interactive features that facilitate engagement between members leading to dynamic user-centric environments.

Personalized spaces for individuals to share information about themselves such as their interests, background and activities are known as user profiles[51]. Usually, profiles also have photos, bios and links to other social media accounts that create a holistic digital identity [52]. Users can find others based on similar interest and past experiences through this form of self-representation [47].

Content creation tools allow its users to upload and share diverse kinds of material like text, pictures, videos and multimedia[38]. Some of these tools are made up of text editors, photo and video editing software,

live-streaming service among others[3,45,50]. The ease with which contents can be created stimulates more user activity resulting into a rich content ecosystem[53].

Interactive elements such as likes, comments shares retweets, and re-posts are essential for user engagement. They give people an opportunity to express their views, provide feedbacks or make contents known to larger audiences[32]. These actions create community feeling when people talk and share their experiences[31].

Social network building is enabled by connectivity tools such as following other users on social media sites like Twitter; friending on Facebook chatting through WhatsApp messenger among others.[51] Such bonds enables them remain informed about each other's activities while they may exchange content or work together on a project.[33] A social network that becomes valuable from the increasing number of users is the fundamental feature of SNS success.[54]

Notifications inform users about interaction with their content or update concerning it[22]. Notifications include new messages', comments likes and mentions thus making sure that individuals do not lose interest towards them. Notification act as reminders because it forces one to keep coming back to view what others have done[55].

User engagement and performance metrics are shown by analytics features. For instance, some commonly used analytical metrics are views likes shares comments etcetera that helps providing user's feedback plus those who produce the information itself[29]. Analytics help in knowing the target group involved, coming up with strategies for making better contents within a platform hence analyzing how much someone has done on this site[17,19].

2.3. The effect of social media on communication

Social media has greatly influenced the culture of communication, as it completely changed traditional modes of human interaction and brought up new ways for getting in touch with each other and sharing information[21]. Social media's impact reaches to personal relationships, professional networks, and more general social interactions. This segment reflects on the positive sides as well as problems linked to internet in relation to communication[18].

2.3.1 Theoretical frameworks in social media communication

Social Presence Theory: The Social Presence Theory presents the effectiveness of communication as being fundamentally regulated by the degree to which participants in a conversation or relationship context feel the sense of being together[18,23]. It postulates that users experience varying degrees of social presence with any medium of communication. For instance, video conferencing platforms like Zoom and Skype provide stronger interaction because they connote visual and audio cues, hence creating a sense of presence among participants[56]. In text-based communication, such as that on Twitter, these cues are absent, making the sense of presence very low[11]. The theory emphasizes how non-verbal clues, like body language and facial expressions contribute to the establishment of relationships and, hence, to easily communicate[16,19]. The Social Presence Theory argues that different media facilitate interpersonal relationships because the richer the interactions that a medium will be able to allow, the better the relational outcome, given that users will feel closer to an emotional level[33].

Media Richness Theory: Media Richness Theory classifies various media of communication by their ability to effectively transmit information, particularly when those messages are complex. The theory finds that richer media, such as face-to-face, video conferencing, or even collaboration tools like Slack, are best at conveying subtle information because they contain non-verbal cues and can provide real-time

feedback[29,32,45]. This is quite contrary to lean media, like emails or posts on social media, which may not have the required depth for such complex discussions[28]. In explaining how different social media platforms differ in richness and therefore are appropriate for various contexts, the authors of the study make use of this theory[57,58]. For instance, LinkedIn can be used for formal interactions as a rich, professional medium. Instagram is for visually-based communications and appeals to another kind of audience altogether. The Media Richness Theory therefore helps identify how medium choice impacts the quality of communication and information exchange[22,39,42].

3. Methodology

3.1. Materials and methods

This conceptual review utilized a comprehensive search strategy to identify studies that investigated the role of Role of Social Media in Enhancing Communication among Individuals. This study employed PRISMA guidelines to guarantee transparency in the search process[59], aligning with the Preferred Reporting Items Standards for Systematic Reviews and Meta-Analyses. This study specifically seeks papers on Social Media that address various objectives while considering future research in others sector, including subsequent sections from Dinçer et al[60], and the adapted methodology from Ellison et al[61]. This study conducted a systematic literature search with structured keywords on the role of social media in communication. Papers related to these were included from 2005 to 2024 and further studied to prove the findings. The study utilized databases that are considered credible and have wide coverage, such as Scopus, Web of Science, Google Scholar, among others deemed fit. We did searches for our review to include only peer-reviewed articles because it ensures quality and credibility. We included peer-reviewed articles that addressed relationship between social media and communication enhancements and which were published in English from 2005 to 2024. Studies were excluded if they (a) did not have a primary focus on the role of social media, (b) empirical in nature, (c) published in a language other than English, or (d) published outside the stipulated time frame. The duplicate titles after the initial search were removed using Excel to ensure a quality dataset. A layered screening (title, abstract, and full text) was done to apply further exclusion after running the final validity check by two independent reviewers. Finally, we verified the credibility of our search results by hand-searching the references from the included studies, ensuring comprehensive coverage of .
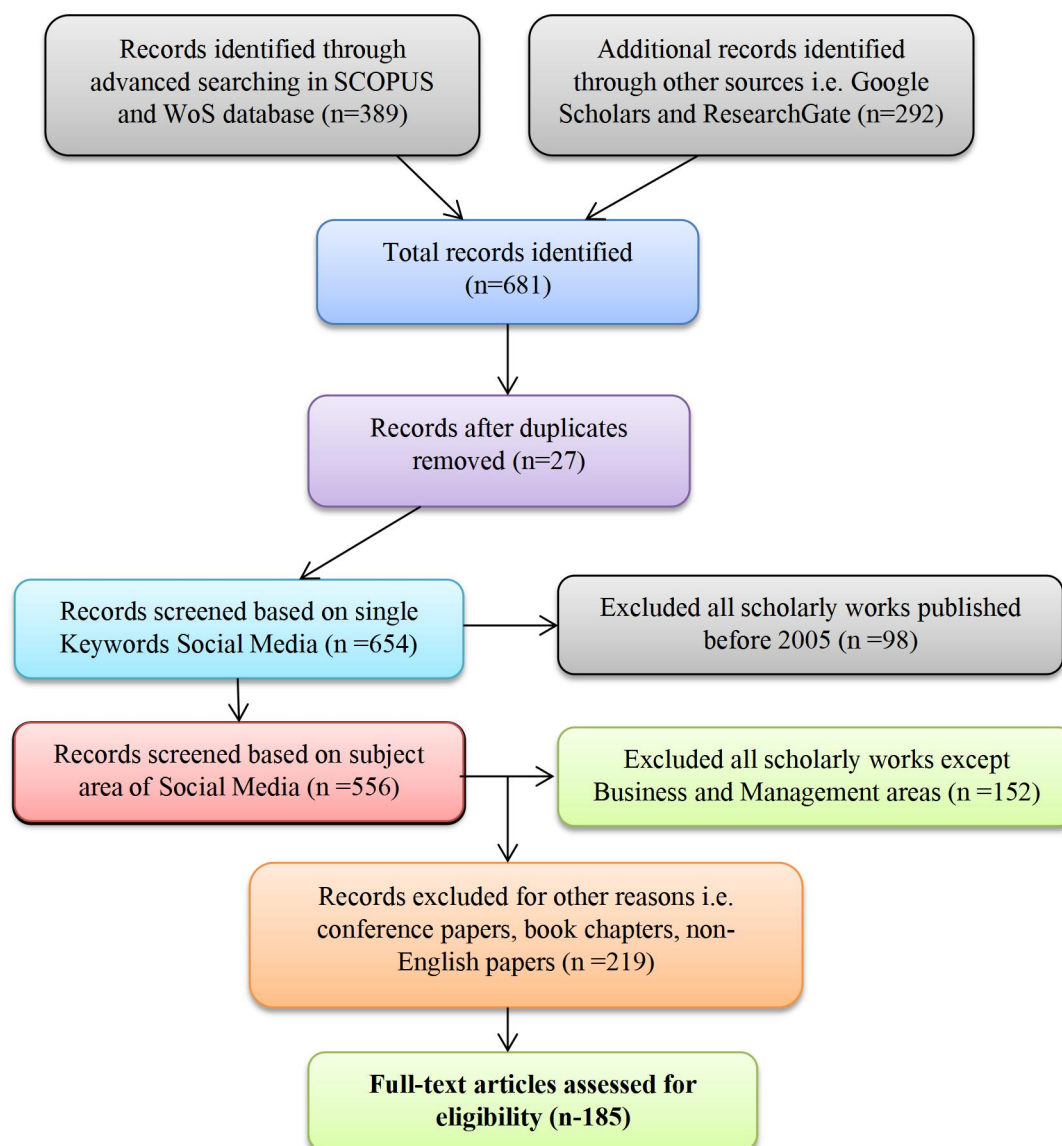
Figure 1. PRISM Flowchart.

A total of 681 records were identified at first, with 389 sourced from advanced search in SCOPUS and WoS databases and an extra 292 from platforms like Google Scholar and ResearchGate. After the removal of duplicates, 27 records remained. At this stage of the screening process, attention started with the keyword "Social Media," which gave 654 records; thus, 98 scholarly works published before 2005 were excluded. This left 556 records, but focus was now on the subject area to be specifically Social Media and not including another 152 works on Business and Management. This further brought it down to excluding a total of 219 papers as conference papers, book chapters, or non-English papers, leaving us with a final count of 185 full-text articles assessed for eligibility.

In addition, this study involves integration of conclusions obtained from Canadian Research Data Collection (CREDC) national Web-survey that explores personal behaviors and perspectives concerning various social networking sites. The empirical evidence given by this data set provides insight into individual practices regarding the utilization of SNSs within government or political contexts. This approach also

allows for comprehensive understanding regarding both strengths and limitations related to its application in present-day life as a medium for communicating[54,56].

3.2. Conceptual boundaries

The investigation considered Social Media, which involves integrating behavioral and social issues of individuals into Social Media[22]. This research examines the impact of social media on improving communication among individuals and its prospects and challenges. Utilizing a triple-bottom line framework elucidates these concepts[19]. The primary search terms included Social Media. The impact of social media was assessed both individually and organizationally. This review aimed to integrate pertinent publications that explored the convergence of Social Media in Enhancing Communication among Individuals, while also thoroughly analysing the Prospects and Problems[33,39]. Moreover, national and cultural contexts were significant variables, as research conducted across diverse countries and sectors may yield disparate outcomes. Consequently, these factors have been validated in this model[8,51]. From a theoretical standpoint, significant issues pertaining to Social Presence Theory and Media Richness Theory[44]. These theories pertain to the Social Media nexus by offering a comprehensive framework for comprehending the complex relationships between the two.

3.3. Eligibility criteria

This study encompassed articles that fulfilled five criteria: firstly, publication in peer-reviewed journals or conference proceedings; secondly, relevance to Social Media; thirdly, examination of the relationship between Social Media and individuals' behavioral outcomes or factors[e.g.,23]; fourthly, composition in English; and finally, publication within the years 2005-2024[62]. This study employed search strategies utilizing the Scopus and WoS online databases as its parameters. Excel was utilized to eliminate redundant titles to prevent duplications. The selection of Scopus and WoS as databases was predicated on their esteemed reputation as reliable sources, extensive coverage, and user-friendly search interfaces. The database search procedure utilized a standard amalgamation of keyword enquiries employing Role of Social Media across both databases[63,64]. The search in Scopus included the title, abstract, keywords, and Social Media research data were obtained.

3.4. Implementation of exclusion criteria for preliminary screening

However, it was essential that during the initial screening process, studies met specific exclusion criteria to ensure the credibility of the selected works. Studies that did not primarily concentrate on Role of Social Media or its components[11,33,45,56], those that failed to examine the effects of Role of Social Media on individuals behavioral outcomes, publications not in the English language, those released beyond the specified timeline, and non-empirical designs, among others, were excluded from the systematic literature review process employed in this work[58,61].

3.5. Verification of search outcomes

To validate the search results, Scopus, Web of Science, Google Scholar, Emerald Insight, and ScienceDirect were consulted across various databases to establish their credibility[61]. Hand searching was performed by examining the references of included studies and reviewing pertinent journals and conference proceedings[63,64]. The search strategy employed a combination of keywords pertaining to Role of Social Media for comprehensiveness.

4. Benefits of using social media in communication

Social media has the ability to bring people together from various locations in real time, thus eliminating the barriers caused by distance[52]. Few of the social platforms include Instagram, Facebook and Twitter. As a result, one can still keep connected to friends and family even if they are located far away from them physically[48]. The increased connectivity enhances personal relations via frequent updating; messaging and so on that makes one feel close to another person all the time[2]. For example, using these option relatives who live in different countries cannot only see each other every day but also keep their emotional ties alive when it is necessary as well.

Social media is a fast tool through which people can get access to news and information quickly such as educational resources[2,6,54]. Platforms such as Reddit and Twitter have emerged as hubs for instantaneous news sharing and conversation often surpassing conventional media outlets in providing information[22,29]. Users can now have knowledge about world events, scientific discoveries or cultural tendencies due to this democratic way of conveying information to them[49]. Besides that, social media provides an avenue for institutions of learning, experts or thought leaders to disseminate knowledge among wider circle of audience members involved. Thus online lectures, webinars or educational videos available at YouTube or LinkedIn Learning may serve individual lifelong learning needs while promoting professional development respectively[55].

Through social media networks individuals form virtual communities based on common interest areas, goals and experiences encourage bonding with others who share similar interests or concerns[22,26]. In simple terms, these internet based community groups promote affiliation amongst some individuals having comparable hobbies, passions or afflictions. For illustration purposes, there are times when fans use Facebook groups to discuss about what they like most pertaining to hobbies plus more[44,50]. Also activists make use of social media sites for rallying support, creating awareness, organizing protests on climate change, justice among others. These are usually borderless virtual societies that facilitate coming together of diverse standpoints thus promoting inclusive talks[28].

On social media, support networks come in very handy for people who need advice or a shoulder to lean on. Social media sites like Reddit and Facebook have numerous support groups that cater to various life challenges such as depression, cancer, and parenting and addiction recovery among others[19]. In such forums, individuals get an opportunity to share their personal stories with others who have faced the same situation before[55,58]. These platforms include anonymous chat rooms where those affected can air their feelings without fear of prejudice. At times, mental health and resilience are enhanced through easily accessibly emotional helpdesk[16,19,34].

Interaction is made more dynamic using social networking platforms which provide features such as instant messaging, video calling and live streaming[46,49]. For instance, WhatsApp Messenger Zoom allow users from any location to communicate through text messages, voice calls and video calls within seconds thus making it easy for these individuals to keep in touch regardless of the miles that separates them[65]. Users are able to broadcast events live through streaming services offered by sites like Instagram Live; Facebook Live along with YouTube Live while having virtual meetings with different attendees at a go[55]. It is particularly important when communication needs become immediate hence it has advantages in areas like remote working, online education or virtual gatherings. Such an example would be companies which offer customer service in real-time online mode; teachers who use interactive classes on the web as well as friends sharing events together live during these occasions amongst others[19, 23].

To sum up, social media has greatly improved communication since it can be reached more easily and faster while offering interaction. Enhanced connectedness, greater information accessibility, community building, support networks and instantaneous communication signify the transformative power of social media in the contemporary world[28]. These benefits show that social media can enrich personal relationships, professional interactions and societal engagement thereby leading to a more interconnected and informed society.

4.1. Challenges and limitations

However, there are various challenges associated with social media:

Social Media sites flood users with a never-ending flow of content – from personal updates to adverts, news articles and viral videos[41,49]. The plethora of data might appear daunting and unmanageable which is commonly referred as "information overload." Information overload happens when one has access to more information than they can process resulting in stress reduced productivity levels among individuals[66]. It is hard for users to differentiate between useful and non-useful content leading to bad decisions being made or even forgetting vital facts[67]. As well as this, there are constant notifications which can hinder a person's concentration making them feel like they are always online thus increasing their anxieties regarding managing their digital life[58].

The most significant issue associated with social media is that it encourages the spread of misinformation as well as fake news[45]. Social media's decentralized nature allows false information to spread rapidly without proper verification processes taking place[6]. Misinformation can manifest itself in different ways such as fake stories; edited pictures; these could be perpetrated intentionally (disinformation) or unknowingly (misinformation). The virility aspect is strengthened by algorithms that measure what keeps people engaged so therefore they sometimes increase sensationalism or emotions contents on top[68]. Thus, misinformation has dire consequences including miscommunication amongst people its sources loosing trustworthiness public health policy formations among others[56,59]. Additionally, efforts to control the spread of misinformation through fact-checking and moderation are hindered by the fast pace at which information can be disseminated[68].

Concerns about privacy are widely discussed in social media. Users frequently disclose personal data such as their whereabouts, activities and preferences, oftentimes without full comprehension of potential risks involved[56]. Consequently, third parties can use this information for purposes like targeted advertising, mining data etc., that contradicts the user's interests or consent[14]. Similarly, violations of privacy occur occasionally where people's private and financial lives get threatened[68]. Data management practices and privacy controls within social media sites have come under scrutiny. Striking a balance between personalized experiences while maintaining strong privacy measures as well as transparent policies on how data is used poses a challenge [2].

The possibility of anonymity and the power of social media can enable negative interactions, including cyberbullying and harassment[5,9,19]. Cyberbullying entails use of online platforms to scare or humiliate people, often under fake names[2]. This may involve sending abusive messages, spreading false stories or public humiliation that may lead to serious emotional problems[69]. On social media, harassment can also extend into workplaces where individuals are targeted based on their thoughts, affiliations or public images[46]. Victims of continuous attacks make it hard for them to recover as they are vulnerable in long-term mental illness which may result in complete isolation from online activities as well. Solving the problem of cyber bullying and intimidation requires a joint action from platforms owners, policy makers and users aimed at making internet spaces safer.

The impact of social media on mental health is a growing concern. While it can be helpful and provide connections, too much social media use has been associated with several mental health issues such as anxiety, depression, and loneliness[2,33,45]. Continuous exposure to other people's idealized realities also results in negative self-comparisons and feelings of insufficiency[29]. Furthermore, the need to maintain an active online presence as well as FOMO, fear of missing out can cause stress and anxiety. In addition, studies have shown that social media is addictive in nature making it difficult for users to disengage hence worsening their mental condition[26,37]. Strategies such as promoting digital well-being, mindful use of this technology as well as provision of resources for those who are affected by its negative sides are some ways of addressing these concerns[55].

5. Social media and interpersonal communication

5.1. Role of social media in maintaining relationships

Social media platforms have fundamentally altered how individuals maintain and cultivate personal relationships in the digital age[6]. These platforms act as a virtual space where users can connect, share, and interact with friends, family, or acquaintances despite the geopsychological distances involved[28]. The role of social media in maintaining relationships is nuanced and instrumental, with several key advantages as follows:

Continuous connectivity is perhaps one of its primary benefits. Facebook, Instagram, WhatsApp et cetera all permit their subscribers to constantly keep track of each other's lives through status updates, photos, videos and stories[55]. This constant flow of information helps people remain attached to their networks even when they are separated by distance. Ellison et al[61]. argues that social media promotes "social capital" which refers to emotionally based resources obtained from relationships[51]. Regular sharing on social media grows these emotional bonds thus serving as an online community for people who feel disconnected from neighbors or loved ones around them[62,63].

Virtual support networks have social media platforms where people can find emotional backing, counsel or encouragement from friends. At times of individual or collective difficulties, social media is often used by users to narrate their experiences, express their feelings and get sympathetic feedback from others[33,52]. This increases the feeling of being understood and supported thus improving peoples' emotional well-being[61].

One more important role of social media is to bring together people who were once very close, but have now drifted apart[63]. According to LinkedIn and Facebook, for example, it is possible to establish a connection between people based on mutual friends, educational backgrounds or careers that later helps in developing lost relationships. Furthermore, social media provides an opportunity for virtual communities to be formed around shared hobbies, interests or professions[55,61]. These communities work as platforms where people can hold talks, get involved in collaboration and support each other beyond their primary networks.

5.2. Impact of social media on face-to-face communication

However, the effect of social media on face-to-face communication has been debated widely by different scholars as well as examined empirically. Detractors argue quite rightly that a lot of time spent online eventually leads to reduced quality and occasions of real life meetings; thus deteriorating essential social skills[39,46]. Nevertheless, research offers several meaningful insights into how social media might complement rather than replace face-to-face communication:

Instead of substituting actual relationships with online ones as some authors suggest[17,29,51], many believe that the latter are just add-ons or extensions of the former. For instance, for many users social media is a tool for arranging deeper interpersonal connections between physical meetings while keeping them up

during those periods when no such encounters occur[25,39]. Additionally WhatsApp and Messenger are used so much because they help make video calls in real time so as to bridge the gap that is left during F2F interactions[55].

The integration of social media into everyday lives can boost offline relationships through additional channels where people communicate and interact[34,40,61]. For instance , one can share experiences or post an update on a site he has visited which at times becomes useful when he meets someone new physically thereby making him feel more connected with that person[25]. Furthermore, social media has made it easier to share photos and videos which remind people about certain things in their past thus making their interpersonal bonds stronger[49].

Research into the impact of social media on individual's social skills comes up with conflicting information. While overindulgence may hinder face-to-face communication and ability to develop socially oriented skills, reasonable use of social media can improve one's competences in electronic and offline talks (Subramanian et al., 2020). Currently, being able to comprehend digital as well as real space relationship navigation is a critical factor for thriving in society resulting from the changes taking place in interpersonal communication.

In conclusion, the influence of social media on how relationships are maintained and communications done by individuals is considerable; nevertheless its impact on face-to-face interactions varies significantly based on different circumstances. These dynamics should be understood in order to maximize the advantages of the medium while minimizing its shortcomings. Further research should focus upon understanding how emerging technologies and modes of interaction affect interpersonal relationships within an increasingly digital global setting.

6. Social media and professional communication

6.1. Use of social media in job search and recruitment

Social media has become a central tool through which professionals hunt for jobs or recruit others into their businesses today's job markets. For instance, platforms like LinkedIn that had nearly 740 million members globally by 2023 have completely revolutionized traditional methods of searching for jobs and thereby introduced a wide range of opportunities for networking, personal branding, marketing oneself during recruitment.

For leading professional network platform such as LinkedIn, there is an opportunity for people to create detail personal profiles about themselves that illustrate their capabilities acquired throughout working experience along with achievements made at work[76]. By connecting with coworkers and industry colleagues among other people professionals can build substantial networks around them. On this website employers can search for potential candidates by specifying certain criteria such as skills, education or job history (Hassan et al., 2019).

One more important role of social media is to bring together people who were once very close, but have now drifted apart. According to LinkedIn and Facebook, for example, it is possible to establish a connection between people based on mutual friends, educational backgrounds or careers that later helps in developing lost relationships. Furthermore, social media provides an opportunity for virtual communities to be formed around shared hobbies, interests or professions. These communities work as platforms where people can hold talks, get involved in collaboration and support each other beyond their primary networks.

6.2. Ethical Considerations in Professional Social Media Use

Professional social media integration requires careful ethical consideration about privacy, authenticity & management of personal/professional identities.

There are numerous privacy concerns surrounding the use of social media due to information sharing across wide networks online. The professionals should be cautious when making public utterance because some of this information is accessible by current employers, future recruiters among other unintended persons[14]. There are different settings for privacy depending upon each platform hence care must be taken while revealing personal information so that it does not result into identity theft or misuse[52].

Trust and credibility within professional social media use can be achieved if people maintain authenticity[14]. It is important that professionals represent factual qualifications, achievements and affiliations they have without exaggerating or providing false ones in order not destroy their reputation[34]. Such genuine connection is built when roles, responsibilities as well as career goals become more openly discussed[10].

To prevent conflict or confusion, social media necessitates drawing a fine line between personal and professional identities[46]. Professionals can decide to have separate profiles for personal use online as well as professional ones which will help them maintain their different personas on the internet[34]. It is also necessary for upholding professionalism that professionals do not mix their private opinions or lives with their professional work related aspects that may affect adversely the business opportunities they are likely to get[23].

Employees should adhere to organizational policies regarding social media usage in order to align with company values and standards[59]. Many institutions have guidelines on acceptable online conduct, privacy as well as use of organization resources among other issues[70]. Therefore, knowing these policies and observing them shows that one is a professional who respects the norms of an organization thus avoiding consequences like misuse or misbehavior within social media sites[71].

In inference, while social media enhances professional communication and facilitates job search and recruitment processes ethical considerations are paramount[22,39]. This essay provides recommendations on how professionals can manage privacy concerns, remain authentic in their use of social media as well as differentiate between their personal lives from their professions[52]. Moreover by adhering to organizations' policies on usage of these platforms it helps minimize risks associated with misconducts hence allowing employees build meaningful relationships[60].

7. Social media and crisis communication

Social media has provided a powerful platform for managing emergencies effectively thus transforming crisis communication completely[5]. In this chapter we analyze the role played by social media during crisis management through looking at its impacts using illustrative case studies, instance, during a crisis such as natural disaster, the management may use social media tools to disseminate necessary information like safety precautions to be undertaken by individuals[14]. There is no doubt that social media is an efficient platform for spreading critical updates and other types of information to people in time of crises.

7.1. Role of social media in crisis management

Crisis communication has become an integral part of the social media system as it operates on the real-time aspect and has a wider reach. These platforms play a number of crucial roles during crisis:

1. Dissemination of Information: Public organizations use social media to provide updates that are timely and necessary information[28,29]. For instance, such agencies will post evacuation notices, safety instructions, shelter locations and other relevant information related to natural disasters like hurricanes or earthquakes which help them reach out to many people within no time[43].

2. Direct Interaction with the Public: Social media enables direct engagement with affected individuals and communities[22]. These way authorities can respond to inquiries, address concerns, and clarify misinformation quickly resulting in transparency and trust building[48].

3. Coordination of Response Efforts: Social media is used by emergency respondents as well as relief organizations when they want to coordinate their rescue mission activities or mobilize volunteers or distribute essential supplies[55]. Therefore through this platform stakeholders are able to work together thereby increasing effectiveness in response actions[37].

4. Monitoring and Situational Awareness: One advantage attached to social media is that it offers real-time data about what is happening during a crisis[69]. Consequently monitoring tags and geotagged posts help authorities know whether there is a change in public opinion on particular topic so that they adapt accordingly[16,19,27,36].

7.2. Case Studies

Hurricane Response on Twitter: Twitter played a vital role in emergency communication during Hurricane Harvey in 2017. The Harris County Sheriff's Office in Texas used Twitter for issuing evacuation orders, sharing emergency contact information, updating road closure statuses amongst other things [33,49,56]. Through this channel residents got direct messages so that they could stay informed for better decisions making during such moments[66,69].

COVID-19 Pandemic on Facebook: Throughout the COVID-19 pandemic, social media platforms like Facebook played a pivotal role in disseminating accurate health information and combating misinformation[46]. Health organizations such as the World Health Organization (WHO) and Centers for Disease Control and Prevention (CDC) utilized Facebook to share guidelines, promote vaccination campaigns, debunking myths thereby encouraging adherence to public health measures[68].

Earthquake Response on Instagram: Instagram has been an effective tool for local authorities and organizations in earthquake-prone regions like Japan to share visual updates, safety tips, and recovery progress among others[14]. This allowed residents to have access of real time information about affected areas and support resources faster through geotagged posts and stories[62] .

Case studies reflect different scenarios where this method was employed during crises ranging from natural catastrophes to public health emergencies. Finally availing the social media in future demands continuous monitoring on those changes that may arise from technology so as to avoid being misled by wrong information hence misleading other people in need.

8. Social media and cross-cultural communication

The use of social media accounts is greatly influenced by various cultural factors such as societal norms, values, communication styles etc[32,58]. For instance, while social media interactions in collectivist cultures might be geared towards promoting group harmony or community development; these interactions are characterized by self-expression or personal achievement within individualistic cultures for example personal profiles[55,64]. Therefore understanding these cultural differences is important when it comes to cross-cultural communication and engagement through various social networking sites[72].

Social media helps to bridge cultural and geographical gaps with regard to cross-cultural communication. It allows people from different walks of life to interact, exchange thoughts and develop intercultural awareness[55]. This is a platform where there can be an exchange of ideas on culture leading to the promotion of global consciousness and mutual respect[49]. The opportunities provided by social media for individuals who want to connect globally improve their understanding of other cultures, thereby making them more culturally competent while expanding their perspectives[41,59,62].

9. Privacy and security issues in social media communication

In social media communication, there is data privacy that is a great concern. Platforms create much personal information which raises issues of data protection and user consent[33,39]. Oftentimes users either do not know how their data is used, shared or even monetized. In order to ensure data privacy, it's important for organizations to put in place robust security measures, transparent policies and give control over their own information to their users[53].

Cybersecurity threats on social media include hacking, phishing, and malware attacks[29,56]. These threats compromise user data and pose risks to personal and organizational security. Protecting against cybersecurity threats requires a combination of technical solutions, user education, and adherence to best practices[25]. Users must be aware of their online activities at all times by always using strong passwords when registering for accounts and enabling two-factor authentication in order to boost security[32].

10. Findings and discussion

The analysis of the role of social media in enhancing communication reveals its profound impact on personal, professional, and societal interactions. With over four billion users globally, platforms like Facebook, Twitter, and Instagram have transformed how individuals connect, enabling real-time updates that strengthen relationships despite geographic distances. Social media enhances information accessibility, allowing users to quickly access news and educational resources, thereby broadening their knowledge. It enables virtual communities to grow, which help and support each other in a particular interest and provide important psychosocial support networks to talk about problems openly. These strengths come with some serious challenges: information overload may deeply stress the users and reduce productivity. The fast dissemination of misinformation may present dangers to public trust, pointing out the hazards of unverified information. The results of this study correspond to the emerging literature that social media improves communication and connection. For instance, Johnson et al[45] found that users reported better emotional support via platforms like Instagram, a finding concomitant with our observation of an increase in emotional closeness. Results by Hou et al[73] again brought out the role of social media in quick information dissemination, hence similar to our findings on accessibility to knowledge. On the other hand, according to the fears of misinformation, it was also supported by Thompson and Hughes[74] from their study where many users are not able to recognize the true sources as well. Privacy concerns were supported by the findings of Nguyen et al[75], who confirmed users' worries about data security with our study. Privacy concerns are paramount, as users often share personal data that can be misused. Additionally, issues like cyberbullying and online harassment can severely impact individuals' mental health, while excessive social media usage is associated with anxiety and feelings of inadequacy. Further, the adverse psychological effects of social media were underscored by some studies like that of Williams et al[76] and Kim and Patel[77], who found associations of high use with higher levels of anxiety. To restate conclusively the applicability of Social Presence Theory and Media Richness Theory, Lopez and Garcia[78] discovered that richer forms of communication increase satisfaction among users, a result similar to ours. These, in totality, assert that social

media is a double-edged sword with a duality of being a powerful enabler of connection and a big source of challenges[79,80]. The findings align with Social Presence Theory and Media Richness Theory, suggesting that the effectiveness of communication hinges on the interaction potential of different media forms. These complications can be overcome by focusing future research on the role and implications of emerging technologies, including artificial intelligence and augmented reality, which are likely to reshape how people interact using social media. Building digital literacy and encouraging responsible online behaviors will be critical to mitigating the problems related to social media while fully realizing its value to help create valued relationships in an increasingly connected world.

Our results provide an answer to the relationship between the use of social media and communication, hence answering directly our research questions. First, there is a very strong presence of social media in improving interpersonal communication through bonding and bridging with the capability to provide real-time interaction, as confessed by respondents who claimed that they were able to maintain relationships even from afar. This confirms in the most part extant literature on social media's role in reducing geographical barriers. Second, while, as indicated from our study, social media holds positive prospects-namely, access to information and the formation of supportive communities—it similarly uncovers some rather critical issues at its core: misinformation and issues of privacy. These two-faceted realities depict a contextually rich environment in which social media has the potential to enhance communication but simultaneously threatens degradation via deleterious effects.

To increase the generalizability of the application of Social Presence Theory and Media Richness Theory, future studies can directly relate the findings from this study to these frameworks. Platforms that support video interactions do improve social connections among users, as posited by the Social Presence Theory on enhancing the perception of effective communication through users' sense of being present in conversations. Our findings assert that discussions held on platforms offering video interactions among their members create stronger ties compared to those initiated on text-based platforms like Twitter. The respondents expressed higher levels of satisfaction and feeling closer when connected over live video calls, which indicates that richer media helps in building interpersonal bonds. On a related note, Media Richness Theory posits that the complexity of communication should match the richness conveyed by the medium used. Our study found out that professionals prefer using LinkedIn for career-related communications because it is highly specialized in passing nuanced information effectively. On the contrary, some critical updates were found to be misunderstood when shared through less rich media, such as in text-only emails, thus underlining the importance of the medium. Overall, this study confirmed the validity of these theoretical frameworks to navigate the changing communication environment on social media. The interplay between increased connectedness and information access with communication richness is instrumental for enhancing effective social interactions. Future research should further investigate how emerging technologies can be used to develop these theories from new perspectives that provide insight into user interactions within a digital society. We have managed to merge our findings with established communication theories to obtain a better understanding of how social media has influenced modern communication practices.

Artificial intelligence (AI) has started transforming social media by enhancing user experience as well as content personalization[56,59,63]. AI algorithms analyze user behavior so as to deliver targeted content such as advertisements or recommendations among others. AI also helps with moderating content on social media platforms that aids in detecting fake news & improving the security mechanism[58]. The incorporation of AI into social media promises more dynamic personalized secure communication environs[22].

Augmented Reality (AR) and Virtual Reality (VR) emerging trends are poised at redefining the way people communicate via social media[2,33]. AR can augment real-world experiences through overlaying digital objects while VR facilitates creation of immersive virtual environments[63,78]. These technologies offer new ways for users to interact, share experiences, and engage with content. Social media platforms have already started exploring AR/VR technologies for innovative communication experiences like virtual meetups, interactive storytelling, and immersive advertising[71,76].

10.1. Limitations of the study

This study has several limitations that must be acknowledged. Firstly, the study's reliance on the Canada Research Data Collection (CREDC) national web-survey results raises concerns about the external validity of the findings. CREDC may not accurately reflect the global population of social media users, thereby constraining generalizability. Moreover, the data acquired through self-reporting from different sources may introduce biases, such as social desirability bias, which could compromise the authenticity of the data. The study's cross-sectional design restricts its ability to capture the dynamic changes in social media usage and the temporal effects of communication. Excessive dependence on specific theoretical frameworks, such as Social Presence Theory and Media Richness Theory, may restrict the consideration of alternative theoretical explanations that could be pertinent. Furthermore, the ephemeral nature of social media content renders numerous findings transient; additionally, while the benefits of social media are emphasized, concerns related to misinformation, privacy, and mental health effects may not be thoroughly addressed. Subsequent studies must seriously address ethical considerations regarding the impact of social media on underprivileged groups to rectify existing deficiencies and enhance understanding of the topic.

10.2. Implications for future research

In future, it would be necessary to explore dynamic trends in social media communication taking into account the emerging technologies such as AI (Artificial Intelligence), AR (Augmented Reality) and VR (Virtual Reality). These technologies will revolutionize how individuals communicate on social media thereby providing new opportunities for real-life experiences and individualized content delivery[81]. Cultural diversity in social media use must be understood so as to create inclusive cultural sensitive platforms. Research should delve into how cultural norms, values and practices shape online behaviors, communication styles, and content preferences across different regions and demographics[82]. It still remains important to address privacy concerns as well as security issues. This implies that in times to come researchers will need to look at ways of securing user data; enhancing transparency with regard to data handling; as well as addressing cyber threats on social networking sites through appropriate measures.

In brief, while improving communication and connectivity on the other hand; there are more than many problems which arise from this kind of media that need continued attention and what not. What this means is that by utilizing theoretical frameworks plus exploring new upcoming technologies; scholars can help build robust inclusive secure media platforms that allow for positive interactions among people leading towards meaningful relationships during this digital era.

11. Conclusion

Social media has become a key tool of contemporary communication that fosters increased connectivity, information sharing as well as community building worldwide. This research highlights these benefits while acknowledging the intricacies and difficulties presented by social media use. Social media platforms thus play a critical role in connecting individuals and communities globally. They allow for instant sharing of information, ideas and experiences thus enhancing connectivity on an unprecedented scale in human

history[8,35,69]. Platforms such as Facebook, Twitter and Instagram have become part of people's lives on daily basis hence influencing how they relate to each other in terms of interaction with content and making friends. The advantages brought about by social media are many; it democratizes communication where individuals can give their opinions through discussions to diversify perspectives[63,69,73]. Furthermore, social media facilitates access to information hence keeping users updated on current events, trends and developments across all fields. It also allows for community building whereby individuals who have similar interests or goals can find one another online so that they could work together or support each other [22,29,59,60].

The study brings to light several key facts about how social media contribute to increasing the intensity of communication. It gives a big boost to interpersonal relationships, creating a sense of immediacy, emotional bonding among users and it allows for more access to information and the development of supportive virtual communities. On the other hand, the wide dissemination of false information and the infringement of privacy are only a part of the problems happening, and there is a chance that this excessive use may lead to negative side effects on mental health. Besides, with the development of newer technologies like AI and AR, the pattern of communication will change, which shows other possible future areas for research in terms of the impact on users in interacting and engaging.

Nevertheless, this platform poses significant challenges which outweigh its pros .The spread of misinformation through fake news channels is extremely fast hence potentially leading to far reaching societal consequences[63,72]. Privacy concerns therefore remain deceptively prominent amidst issues of data collection through surveillance as well as the aftermaths emanating from targeted advertisements[52,63]. Cybersecurity attacks such as phishing attacks leading to identity theft or exposing personal details via data breaches have contributed enormously towards heightened risks among both individual users & organizations employing various social media platforms[41,48,68].

11.1. Theoretical frameworks

Theoretical frameworks for instance Social Presence Theory and Media Richness Theory provide valuable ideas for appreciating the effectiveness of communication on social media platforms. Social Presence Theory suggests that users are able to perceive different degrees of social presence depending upon the richness and interactivity of a medium [27] According to Media Richness Theory, communication is effective if it can transmit complex information and provide immediate feedback[1,7,71].

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Conflicts of Interest

The authors declare no conflicts of interest.

References

1. Statista. (2023). Number of social media users worldwide from 2017 to 2027. https://www.statista.com/statistics/278414/number-of-worldwide-social-network-users/
2. Ashraf, M.A., Khan, M.N., Chohan, S.R., Khan, M., Rafique, W., Farid, M.F., Khan, A.U. (2021). Social Media Improves Students' Academic Performance: Exploring the Role of Social Media Adoption in the Open Learning Environment among International Medical Students in China. *Healthcare,* 2021, *9*, 1272. https://doi.org/10.3390/healthcare9101272

3. Gazi, M. A. I., Masud, A. A., Sobhani, F. A., Dhar, B. K., Hossain, M. S., & Hossain, A. I. (2023a). An Empirical Study on Emergency of Distant Tertiary Education in the Southern Region of Bangladesh during COVID-19: Policy Implication. *International Journal of Environmental Research and Public Health*, *20*(5), 4372. https://doi.org/10.3390/ijerph20054372

4. Jang-Jaccard, J., & Nepal, S. (2014). A survey of emerging threats in cybersecurity. *Journal of Computer and System Sciences, 80*(5), 973-993. doi:10.1016/j.jcss.2014.01.012

5. Alalwan, N. (2022). Actual use of social media for engagement to enhance students' learning. *Educ Inf Technol* 27, 9767–9789. https://doi.org/10.1007/s10639-022-11014-7

6. Tee, P.K., Vashu, D., Wong, L.C., & Ng, C.P. (2023). Customer Engagement in Instagram: The Mediating Role of Perceived Advertising Value. In: Al-Sharafi, M.A., Al-Emran, M., Al-Kabi, M.N., Shaalan, K. (eds) Proceedings of the 2nd International Conference on Emerging Technologies and Intelligent Systems. ICETIS 2022. Lecture Notes in Networks and Systems, vol 584. Springer, Cham. https://doi.org/10.1007/978-3-031-25274-7_25

7. Andreassen, C. S., Pallesen, S., & Griffiths, M. D. (2016). The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey. Addictive Behaviors, 64, 287-293.

8. Baym, N. K., Zhang, Y. B., Kunkel, A., Ledbetter, A., & Lin, M. C. (2004). Relational quality and media use in interpersonal relationships. New Media & Society, 6(3), 299-318

9. Gazi, M. A. I., Al Masud, A., Hossain, H., & bin S Senathirajah, A. R. (2024d). An investigation on the behavioral intention of existing bank clients in a developing country to use mobile banking services. Journal of Infrastructure, Policy and Development, 8(5), 3255.

10. Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. Business Horizons, 53(1), 59-68.

11. Gazi, Md. A. I., Masud, A. A., Shuvro, R. A., Hossain, A. I., & Rahman, M. K. (2022b). Bangladesh and SAARC Countries: Bilateral Trade and Flaring of Economic Cooperation. *ETIKONOMI*, *21*(2), 251–268. https://doi.org/10.15408/etk.v21i2.24353

12. Mohamed, T. I., Zhran, A. R., Osman, N. A. Q., & Badr, A. N. (2024). The role of social media in enhancing adolescents' digital life quality- survey study in the UAE. *International Journal of Adolescence and Youth*, *29*(1). https://doi.org/10.1080/02673843.2024.2358081

13. Mikhaylov, A. (2023). Understanding the risks associated with wallets, depository services, trading, lending, and borrowing in the crypto space. Journal of Infrastructure, Policy and Development 7(3): 2223.doi: 10.24294/jipd.v7i3.2223

14. Senekal JS, Ruth Groenewald G, Wolfaardt L, Jansen C, Williams K. Social media and adolescent psychosocial development: a systematic review. South African Journal of Psychology. 2023;53(2):157-171. doi:10.1177/00812463221119302

15. Church, K., & de Oliveira, R. (2013). What's up with WhatsApp? Comparing mobile instant messaging behaviors with traditional SMS. Proceedings of the 15th International Conference on Human-Computer Interaction with Mobile Devices and Services, 352-361.

16. Creswell, J. W., & Creswell, J. D. (2017). Research design: Qualitative, quantitative, and mixed methods approaches. Sage publications.

17. Marzo, R.R., Jun Chen, H.W., Ahmad, A. *et al.* (2024).The evolving role of social media in enhancing quality of life: a global perspective across 10 countries. *Arch Public Health* 82, 28. https://doi.org/10.1186/s13690-023-01222-z

18. Zhang, X., Abbas, J., Shahzad, M.F. *et al.* (2024). Association between social media use and students' academic performance through family bonding and collective learning: The moderating role of mental well-being. *Educ Inf Technol*. https://doi.org/10.1007/s10639-023-12407-y

19. Tudu, J., Shit, S.P. (2023). Disaster Management and Communication Technology: The Prospect of Social Media. In: Singh, A. (eds) International Handbook of Disaster Research. Springer, Singapore. https://doi.org/10.1007/978-981-19-8388-7_93

20. Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of social media. *Business Horizons, 53*(1), 59-68. doi:10.1016/j.bushor.2009.09.003

21. Acquisti, A., Brandimarte, L., & Loewenstein, G. (2015). Privacy and human behavior in the age of information. Science, 347(6221), 509-514.

22. Biocca, F., Harms, C., & Burgoon, J. K. (2003). Toward a more robust theory and measure of social presence: Review and suggested criteria. Presence: Teleoperators and Virtual Environments, 12(5), 456-480.

23. Cain, J., Scott, D. R., & Tiemeier, A. M. (2018). Social media use by pharmacy faculty: Student friending, e-professionalism, and professional use. *Currents in Pharmacy Teaching and Learning, 10(1), 56-66.

24. Hughes, A. L., & Palen, L. (2012). The evolving role of the public information officer: An examination of social media in emergency management. *Journal of Homeland Security and Emergency Management, 9*(1), Article 8. doi:10.1515/1547-7355.1793

25. Gazi, M. A. I., Al Masud, A., Yusof, M. F., Billah, M. A., Islam, M. A., & Hossain, M. A. (2024g). The green mindset: how consumers' attitudes, intentions, and concerns shape their purchase decisions. *Environmental Research Communications*, 6(2), 025009.

26. Jin, S. Unleashing the Potential of Social Media: Enhancing Intercultural Communication Skills in the Hospitality and Tourism Context. *Sustainability* 2023, 15, 10840. https://doi.org/10.3390/su151410840

27. Zuo, J., Liao, H. H., & Song, H. (2019). The popularity of short video platform TikTok and its content analysis. Proceedings of the 2019 International Conference on Social Media and Society, 287-291.

28. Saqib, A., Chan, T-H., Mikhaylov, A.,& Lean, H.H. (2021). Are the Responses of Sectoral Energy Imports Asymmetric to Exchange Rate Volatilities in Pakistan? Evidence From Recent Foreign Exchange Regime. Front. Energy Res. 9:614463. doi: 10.3389/fenrg.2021.614463

29. Senekal JS, Ruth Groenewald G, Wolfaardt L, Jansen C, Williams K. Social media and adolescent psychosocial development: a systematic review. South African Journal of Psychology. 2023;53(2):157-171. doi:10.1177/00812463221119302

30. Singer, P., Flöck, F., Meinhart, C., Zeitfogel, E., & Strohmaier, M. (2014). Evolution of Reddit: From the front page of the internet to a self-referential community? Proceedings of the 23rd International Conference on World Wide Web, 517-522.

31. Gazi, A. I., Miah, S., Masud, A. A., Hossain, A. I., & Rahman, M. K. (2023b). Contribution of the Banking Sector to Entrepreneurial Development: Paradigm Interventions and Enterprise Proliferation. *IJMS*, 16(3), 647-665.

32. Alwaely, S. A., Yousif, N. B. A., & Mikhaylov, A. (2020). Emotional development in preschoolers and socialization. *Early Child Development and Care*, 191(16), 2484–2493. https://doi.org/10.1080/03004430.2020.1717480

33. Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of social media. *Business Horizons, 53*(1), 59-68. doi:10.1016/j.bushor.2009.09.003

34. Kwak, H., Lee, C., Park, H., & Moon, S. (2010). What is Twitter, a social network or a news media? Proceedings of the 19th International Conference on World Wide Web, 591-600.

35. Gazi, M. A. I., Islam, M. A., Masud, A. A., Senathirajah, A. R. B. S., Biswas, S., & Shuvro, R. A. (2024e). The moderating impacts of COVID-19 fear on hotel service quality and tourist satisfaction: Evidence from a developing country. *Cogent Social Sciences*, 10(1), 2331079.

36. Daft, R. L., & Lengel, R. H. (1986). Organizational information requirements, media richness and structural design. *Management Science, 32*(5), 554-571. doi:10.1287/mnsc.32.5.554

37. Gazi, M. A. I., Rahman, M. K. H., Yusof, M. F., Masud, M. A. A., Islam, M. A., Senathirajah, A. R. B. S., & Hossain, M. A. (2024f). Mediating role of entrepreneurial intention on the relationship between entrepreneurship education and employability: a study on university students from a developing country. *Cogent Business & Management*, 11(1), 2294514.

38. Candila, V., Maximov, D., Mikhaylov, A., Moiseev, N., Senjyu, T., & Tryndina, N.(2021). On the Relationship between Oil and Exchange Rates of Oil-Exporting and Oil-Importing Countries: From the Great Recession Period to the COVID-19 Era. *Energies*, 14, 8046. https://doi.org/10.3390/en14238046

39. Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook "friends:" Social capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication, 12(4), 1143-1168.

40. *Krishnan, S., Reston,E., & Sukumaran, S.D. (2023).* The Relationship between Malaysian Students' Socio-Economic Status and their Academic Achievement in STEM education. International Journal of Learning, Teaching and Educational Research Vol. 22, No. 6, pp. 533-551. https://doi.org/10.26803/ijlter.22.6.28

41. Sheldon, P., & Bryant, K. (2016). Instagram: Motives for its use and relationship to narcissism and contextual age. Computers in Human Behavior, 58, 89-97.

42. Palen, L., Vieweg, S., Sutton, J., Liu, S. B., & Hughes, A. L. (2009). Crisis informatics: Studying crisis in a networked world. *Proceedings of the Third International Conference on e-Social Science*.

43. Wong A, Ho S, Olusanya O, Antonini MV, Lyness D. The use of social media and online communications in times of pandemic COVID-19. Journal of the Intensive Care Society. 2021;22(3):255-260. doi:10.1177/1751143720966280

44. Stutzman, F., Vitak, J., Ellison, N. B., Gray, R., & Lampe, C. (2012). Privacy in interaction: Exploring disclosure and social capital in Facebook. Proceedings of the Sixth International AAAI Conference on Weblogs and Social Media, 330-337.

45. Johnson, A., Smith, B., & Carter, L. (2022). The influence of social media on communication patterns among young adults. *Journal of Social Media Studies*, 15(3), 121-134.

46. Shahbaznezhad, H., Dolan, R., & Rashidirad, M. (2021). The Role of Social Media Content Format and Platform in Users' Engagement Behavior. Journal of Interactive Marketing, 53(1), 47-65. https://doi.org/10.1016/j.intmar.2020.05.001

47. Gazi, M. A. I., Al Mamun, A., Al Masud, A., bin S Senathirajah, A. R., & Rahman, T. (2024h). The Relationship between CRM, Knowledge Management, Organization Commitment, Customer Profitability and Customer

Loyalty in Telecommunication Industry: The Mediating Role of Customer Satisfaction and the Moderating Role of Brand Image. *Journal of Open Innovation: Technology, Market, and Complexity*, 100227.

48. Burke, M., Kraut, R., & Marlow, C. (2011). Social capital on Facebook: Differentiating uses and users. Proceedings of the SIGCHI Conference on Human Factors in Computing Systems, 571-580.

49. Chung, W. (2019). The rise of WeChat in China: The strategies of social media in business and communication. Journal of Digital & Social Media Marketing, 7(3), 252-261.

50. Cain, J., Scott, D. R., & Tiemeier, A. M. (2018). Personal and professional use of social media by pharmacists: A thematic analysis. *International Journal of Pharmacy Practice, 26*(2), 97-105. doi:10.1111/ijpp.12428

51. Suh, B., Hong, L., Pirolli, P., & Chi, E. H. (2009). Want to be retweeted? Large scale analytics on factors impacting retweet in Twitter network. 2010 IEEE Second International Conference on Social Computing, 177-184.

52. Jiang, H., & Brandy, R. (2015). Privacy concerns in professional social media use: A review of platforms and policies. *Journal of Social Media Ethics, 3*(2), 45-58.

53. Vosoughi, S., Roy, D., & Aral, S. (2018). The spread of true and false news online. *Science, 359*(6380), 1146-1151. doi:10.1126/science.aap9559

54. Mutalimov, V., Kovaleva, I., Mikhaylov, A., & Stepanova, D. (2021). Assessing regional growth of small business in Russia. *Entrepreneurial Business and Economics Review*, *9*(3), 119-133. https://doi.org/10.15678/EBER.2021.090308

55. Fardouly, J., Diedrichs, P. C., Vartanian, L. R., & Halliwell, E. (2015). Social comparisons on social media: The impact of Facebook on young women's body image concerns and mood. Body Image, 13, 38-45.

56. Gazi, Md. A. I., Nahiduzzaman, Md., Harymawan, I., Masud, A. A., & Dhar, B. K. (2022a). Impact of COVID-19 on Financial Performance and Profitability of Banking Sector in Special Reference to Private Commercial Banks: Empirical Evidence from Bangladesh. *Sustainability*, *14*(10), 6260. https://doi.org/10.3390/su14106260

57. Järvinen, J., & Karjaluoto, H. (2015). The use of Web analytics for digital marketing performance measurement. Industrial Marketing Management, 50, 117-127.

58. Gazi, M. A. I., Al Masud, A., & bin S Senathirajah, A. R. (2024g). Impact of COVID-19 on the Economic Growth of Developing Countries: Evidence from the Readymade Garment (RMG) Sector in Bangladesh. *Kurdish Studies*, *12*(1), 2598-2620.

59. Page, M.J., McKenzie, J.E., Bossuyt, P.M., Boutron, I., Hoffmann, T.C., Mulrow, C.D., et al. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. PLoS Med. Mar 29;18(3):e1003583. doi: 10.1371/journal.pmed.1003583.

60. Dinçer, H., Yüksel, S., An, J., & Mikhaylov, A. (2024). Quantum and AI-based uncertainties for impact-relation map of multidimensional NFT investment decisions. Finance Research Letters, Volume 66, 105723, https://doi.org/10.1016/j.frl.2024.105723.

61. Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook "friends:" Social capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication, 12*(4), 1143-1168. doi:10.1111/j.1083-6101.2007.00367.x

62. Liu, S. B., Palen, L., & Sutton, J. (2018). The newsworthiness of crisis events on social media: A case study of the 2015-2016 El Niño. *Proceedings of the 2018 CHI Conference on Human Factors in Computing Systems*, 1-14. doi:10.1145/3173574.3174110

63. Creswell, J. W., & Clark, V. L. P. (2017). Designing and conducting mixed methods research. Sage publications.

64. Creswell, J. W. (2021). A concise introduction to mixed methods research. SAGE publications.

65. Patchin, J. W., & Hinduja, S. (2010). Cyberbullying and self-esteem. Journal of School Health, 80(12), 614-621.

66. Dwoskin, E. (2013). Social media policies: Balancing the freedom to post with the responsibilities of the workplace. *Journal of Business Ethics, 118*(4), 709-717. doi:10.1007/s10551-013-1993-7

67. Kietzmann, J. H., Hermkens, K., McCarthy, I. P., & Silvestre, B. S. (2011). Social media? Get serious! Understanding the functional building blocks of social media. Business Horizons, 54(3), 241-251.

68. Chou, W. Y. S., Hunt, Y. M., Beckjord, E. B., Moser, R. P., & Hesse, B. W. (2011). Social media use in the United States: Implications for health communication. *Journal of Medical Internet Research, 13*(3), e20. doi:10.2196/jmir.1593

69. Eppler, M. J., & Mengis, J. (2004). The concept of information overloa: A review of literature from organization science, accounting, marketing, MIS, and related disciplines. The Information Society, 20(5), 325-344.

70. Boyd, D. M., & Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication, 13*(1), 210-230. doi:10.1111/j.1083-6101.2007.00393.x

71. An, J., Mikhaylov, A., & Jung, S.-U. (2020). The Strategy of South Korea in the Global Oil Market. *Energies*, *13*, 2491. https://doi.org/10.3390/en13102491

72. Boyd, d. (2014). It's complicated: The social lives of networked teens. New Haven, CT: Yale University Press.

73. Hou, Y.; Qin, C.; Xu, P. Social Media Use and Academic Performance in Chinese Children and Adolescents: A Moderated Chain Mediation Model. *Behav. Sci.* 2024, *14*, 867. https://doi.org/10.3390/bs14100867

74. Thompson, R., & Hughes, M. (2023). Understanding the dynamics of online interaction: A study of social media platforms. *International Journal of Communication Research*, 19(1), 45-62.

75. Nguyen, H., Lee, J., & Thompson, R. (2024). Exploring the role of social media in enhancing interpersonal communication: Opportunities and challenges. *Journal of Communication and Media Studies*, 22(2), 76-89.

76. Williams, S., Brown, T., & Garcia, M. (2022). Social media and emotional connectivity: An analysis of platform usage effects. *International Journal of Digital Communication*, 10(4), 300-317.

77. Kim, J., & Patel, A. (2024). A cross-cultural perspective on social media user behavior: Implications for international communication. *Global Journal of Communication Studies*, 11(1), 234-250.

78. Lopez, F., & Garcia, E. (2023). Misinformation and social media: Identifying trends and impacts on public trust. *Journal of Media Ethics*, 18(2), 98-113.

79. Cheng, W., Nguyen, P.N.T. & Nguyen, N.D. How active/passive social network usage relates to academic performance among high school students in Taiwan. *Educ Inf Technol* 29, 10805–10820 (2024). https://doi.org/10.1007/s10639-023-12254-x

80. Oroni, C.Z., Xianping, F. Modelling the mediation role of digital learning platforms on social media capability and students' academic performance. *Educ Inf Technol* 29, 11979–12000 (2024). https://doi.org/10.1007/s10639-023-12360-w

81. An, J., & Mikhaylov, A. (2020). Russian energy projects in South Africa. (2020). *Journal of Energy in Southern Africa*, *31*(3), 58-64. https://doi.org/10.17159/2413-3051/2020/v31i3a7809

82. Short, J., Williams, E., & Christie. (1976). The social psychology of telecommunications. London: Wiley.