



Digital metamorphosis: Unraveling the evolution of global language in the technological culture



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ABSTRACT

Article History

Received: 25 July 2023

Revised: 18 September 2023

Accepted: 1 November 2023

Published: 5 December 2023

Keywords

Digital communication
Global language
Language change
Language transformation
Linguistic diversity
Modern technology
Social media.

Modern technology and culture have profoundly changed global language perspectives, as reflected in traditional norms of interaction and communication. This paper studied the recent updates and changes that happened due to the widespread of modern technology, focusing on the influence of digital tools, artificial intelligence, social media, and other new media platforms. Quantitative and qualitative data collection methods were used in this research to bring the impact of modern technology on new language development, language diversity, and communication designs. The data for this research was collected from those Indians who migrated to Western countries for higher studies and better job opportunities, as well as from their friends and family members. They regularly connect to friends and family members over digital platforms, which may result in the evolution of their traditional language changes. The findings of this research highlight the dynamic relationship between digital interactions, current language, and digital culture. Today, communication and interaction do not have any barriers because of the evolution of global language into a digital metamorphosis. More than syntax symbols and modern nuances communicate in digital platforms. The change in language leads to cultural changes, and it is an important area to study and evaluate the modern changes in our communication medium. This research also provides valuable information in the field of language and technology and paves the way for further research in this rapidly developing field.

Contribution/ Originality: This study highlights the impact of modern technologies, including digital tools, artificial intelligence, social media, and new media, on language development and cultural change, particularly in the context of the Indian diaspora. This study focuses on the intersection of technology, language, and culture in a specific way, apart from previous research in this area.

1. INTRODUCTION

The proliferation of digital technologies, particularly smartphones and tablets, and the widespread use of Internet-enabled devices, has ushered in an era of unprecedented connectivity and rapid communication across geographic and cultural boundaries. The 21st century has witnessed an unprecedented technological revolution, which has entered every aspect of human life where language and communication are used. The advent of modern technology has had a profound impact on the world's linguistic landscape, changing how people communicate and transcend borders and cultures. It revolutionized not only the interaction of people but also the nature of modern communication and the use of language. In recent years, the rapid integration of technology into various aspects of

daily life has accelerated language change, creating both promising opportunities and serious challenges. Modern technology has brought significant changes in language practices across the world. The impact of digital tools, social media platforms, artificial intelligence, and other technological developments on language evolution, language diversity, and communication patterns has resulted in various language acquisition and practice changes.

With the changes in digital technology, an era of unprecedented interconnection has ushered in, which has enabled rapid communication between people of different linguistic and cultural backgrounds across geographic boundaries. With the ubiquity of smartphones, tablets, and other internet-enabled devices, there has been a tremendous change in how people communicate and in the way of modern communication and language approaches. "It is interesting to focus on the language of audio-visual (screen)media culture, which has become the most popular. Screen culture is a special type based on a synthesis of technology and creativity, and the screen is the material carrier of its texts" (Kirillova, 2020). The widespread use of social media platforms such as Facebook, Twitter, Instagram, and WeChat have changed how people communicate and share information. The availability and use of these platforms have facilitated communication and encouraged the development of new languages, such as emojis, memes, and hashtags.

The study of language development is intrinsically linked to issues of identity and culture. As technology continues to reshape communication practices, individuals and communities are learning to preserve their linguistic heritage by adapting to the demands of a rapidly changing digital world. Moreover, the global dominance of minority languages due to technological influences can affect minority languages and cause language impairment. It is vital to develop strategies to understand the complexities of language change in the digital age to address these challenges, promote linguistic diversity, and preserve cultural identity. Additionally, artificial intelligence (AI) and machine learning technologies have further transformed the language industry. Natural language processing (NLP) algorithms have made significant progress in enabling complex language understanding and production. AI-powered language translation tools like Google Translate ease language communication and break down previously perceived language barriers. However, the use of language by AI also raises concerns about the accuracy, cultural nuances, and diversity inherent in algorithms. The advances of AI have affected language use and language diversity in a significant way, it could reduce language barriers and limitations.

Modern technology-based global language transition is a multidimensional phenomenon with far-reaching implications. The combination of digital devices, social media platforms, artificial intelligence, and other technological advances is changing how people communicate worldwide. Language learning apps and online platforms have become incredibly popular, allowing users to learn new languages conveniently and at their own pace. These digital tools have the potential to enhance language learning and language diversity. However, it also raises issues such as oversimplification of learning idioms and the possibility of reinforcing linguistic stereotypes. The modern world is constantly dealing with technology for their day-to-day affairs, and as a result, the traditional language system has been drastically changed; instead, the need to originate a new language formula has been felt. An accurate and systematic study is needed to understand modern language culture in a technologically advanced society.

It is therefore evident that contemporary technology influences both language and communication with the advancement of digital revolution and it brought new dimension to communication process. In this context, it is necessary to examine how modern technologies affect language learning. The current study explored the complex interplay between technology and language and highlighted the impact of digital innovations on language development, language diversity, and communication patterns in an interconnected world. The purpose of this research was to focus on the changing norms of a modern interactive system; and investigate how the English language has become more acceptable to multilingual-speaking communities across the globe. It also collected evidence how the technology and communication system of the 21st century have brought effective and fruitful interpersonal communication systems. Furthermore, this research clarified modern linguistic evolution and the rise

of new linguistic cultures that are taking place around our contemporary social life. Examining the unique characteristics of social media platforms and their role in shaping new linguistic styles and subcultures helped us understand how communication drives linguistic innovation in the digital age. As mentioned above, the emergence of artificial intelligence and technology-assisted translations have also reduced linguistic gaps and cultural divides. This study also critically examined the importance of artificial intelligence and machine translation for linguistic diversity and cultural communication.

Hence, through this study, an attempt was made to shed light on embracing linguistic diversity and facilitating meaningful cross-cultural communication in technologically advanced societies. It investigate the consequences of these changes by answering some specific research questions characterizing multiple aspects of this phenomenon. The following are the research questions incorporated in this research study.

1. How have modern technologies, including digital tools, social media platforms, and artificial intelligence affected the development of languages and communication practices worldwide?
2. How has the proliferation of social media platforms affected linguistic diversity and the emergence of new linguistic phenomena?
3. What are the implications of artificial intelligence and machine translation for linguistic diversity and cultural communication?
4. How do individuals and local communities deal with the challenges and opportunities of the digital age to preserve their linguistic heritage and cultural identity?
5. How important are online language learning apps and platforms for linguistic diversity and language learning?

In essence, this research aimed to achieve the following goals.

- To understand how modern technology is shaping the evolution of global languages.
- To actively contribute to discussions surrounding diversity, cultural identity, and ethical language practices in the age of digital technology.

It is hoped that the findings of this study would usher new implications of modern technologies for language teaching and global language standards. This study also would encourage and promote investigation into the impact of various linguistic displays on the global linguistic landscape. It would contribute to the conversation about language learning in the digital age by examining the impact of language learning apps and online platforms on language acquisition, diversity, and learning. In addition, the study would expose how individuals and communities face the challenges and opportunities of the digital age in preserving linguistic heritage and cultural identity. It would also show the strategies used to balance technological progress and protect cultural and linguistic resources.

2. LITERATURE REVIEW

Crystal (2001) provides a comprehensive review of the literature on the effects of the Internet on language use and communication by examining the linguistic aspects of online communication, including email, chat, and social media platforms. This study explores the impact of the Internet on written language by introducing new elements such as abbreviations, emoticons, and links. This work summarizes previous research to demonstrate the role of digital communication in language development, sociocultural behavior, and the development of online communities. Crystal's work is a text in Internet linguistics, providing valuable insight into how language changes in the digital age. Similarly, Baron (2008) reviews the impact of digital communication technologies on language use, and explores the linguistic aspects of continuous communication in the online and mobile world through an interdisciplinary lens. The work covers text messaging, social media, and email, explaining their impact on writing, communication, and communication style. Drawing inspiration from various scholarly sources, the study thoughtfully considers the evolving linguistic landscape considering the ubiquity of technology. Thurlow and

Mroczek (2011), in their seminal work on digital discourse, provided a view of language use in new media contexts. This work explores the impact of digital communication platforms such as social networks, online forums, and virtual communities on language learning. The authors draw inspiration from various sources to explore new language norms, knowledge creation, and communication in digital environments. Alongside existing research, the study provides a critical overview of the changing relationship between language, technology, and society.

Herring (2013) overviews aspects of discourse in Web 2.0 environments. This work examines known, reinterpreted, and emerging aspects of language use in social media, blogs, and wikis and explores the user-generated, interactive, and integrative aspects of language that shape communication on digital platforms. Integrating critical research, this chapter provides valuable insights into the changing nature of discourse in the Web 2.0 era. Additionally, Crystal (2011) provides his view on Internet language learning. This student's guide covers various aspects of the Internet, including the development of Internet terminology, the impact of social media on language, and the emergence of digital communication methods. Crystal's study provides a comprehensive overview of linguistics from a wide range of sources, making it an invaluable resource for students and researchers to understand the complexities of language in the digital age. In another study, McCulloch (2019) provides an interesting literature review on language change through Internet communication and explores the use of Internet-specific language features such as emoji, memes, and Internet slang. The work explores how online interactions shape the development of language and social identity, providing insight into the dynamic relationship between Internet culture and language practices.

In their research article, Danet and Herring (2007b) present a literature analysis on the interrelationship of multilingualism, identity, and online communication. The study examines how people construct their identities through multilingual practices in cyberspace, highlighting the role of digital platforms in shaping language choices and linguistic ideologies. Furthermore Danet and Herring (2007a) provide a comprehensive view of multilingual aspects of online communication. Their work explores language use, the politics of language in digital environments, and language ideologies, highlighting how communication on the Internet affects linguistic diversity and cultural identity. Androutsopoulos (2006) presented a brief overview on the relationship between sociolinguistics and computer-mediated communication (CMC) in his journal article. Emphasizing the role of CMC in changing communication patterns, the report highlights key themes and research directions in the study of change in language use and online contexts.

Wang (2020) reviews social media's impact on Chinese language development. The study examines how the unique linguistic resources of social media platforms contribute to linguistic change and innovation in the Chinese-speaking digital community. Likewise, Tagg (2012) provides an overview of fan culture and its influence on media representation. The study examines how fan-generated content and online communities contribute to the development of language and the creation of new ways of thinking in the media world. Baron (2015) provides a comprehensive review examining the impact of digital technology on reading habits. His work explores the effects of reading on screens such as e-readers and tablets and how it differs from traditional reading in print. The study summarizes previous research analyzing the impact of digital reading on comprehension, attention, and memory. It explores the challenges and benefits of reading in a digital world and highlights the evolving relationship between technology and literacy. In his journal article, Zappavigna (2011) reviews Twitter's linguistic features as a communication platform and examines how users form partnerships through language use on Twitter and highlights ambient recognition as a unique forum feature. This study integrates existing research to analyze the Twitter community's discourse practices and social dynamics, providing valuable insights into the language of online social networks.

In his journal article, Van Dijck and Poell (2013) analyze the logic of social media platforms. This study examines the fundamental principles, algorithms, and functions shaping user interaction and social network content delivery. Integrating existing research, the authors provide an essential insight into the social impact of social

network logic and shed light on the dynamics of online communication and information dissemination. Miller (2011), in another article, explores the impact of digital technologies on culture and society. The work examines changes in cultural practices, identity, and power structures in the digital age. Miller's interdisciplinary research explores digital culture's social, political, and economic impact and provides a holistic understanding of technology's impact on the modern human experience.

Crystal (2006) provides a comprehensive overview of Internet linguistics literature. The study covers many aspects of language use on the Internet, including email, instant messaging, and social networking and integrates existing research examining linguistic properties of digital speech, such as emotion, acronyms, and language forms. This work examines language in the context of the Internet and provides valuable insight into the evolving nature of communication in the digital age. Kress and Van Leeuwen (2001) present the different modes of communication in contemporary society. This book explores how communication involves many imaginary resources, such as language, images, sounds, and gestures. Inspired by various disciplines, the authors examine how different media, including print, television, and the Internet, shape meaning formation. A synthesis of existing research, this work provides valuable insight into the multidimensional nature of communication and its implications for understanding contemporary discursive practices.

Ong (1982) comprehensively reviews the shift from spoken to written culture. This work explores how writing and printing technologies have changed human knowledge and communication and uses information from various sources to analyze the impact of spoken and written modes of expression on culture, thought, and memory. This study synthesizes existing research to provide a deeper understanding of the impact of literacy on human consciousness and society. Thorne (2003) narrates the role of artifacts and technology in cross-cultural communication. This study examines how digital tools and platforms facilitate language learning and cross-cultural interaction and uses interdisciplinary research to explore the impact of technology on language use and cultural exchange in various contexts. This article summarizes existing research and highlights the complex interplay between technology, culture, and language learning.

Kapoor, Tamilmani, and Rana (2018) aim to review the development of social network research from its inception to the present and provide insight into future directions. The authors emphasize the role of social networks in facilitating connections between users from different backgrounds and creating a dynamic and interconnected social fabric. The search in social networks provides language and literature developments in an advanced realm. Kelly-Holmes (2019) focuses on language development and the dynamic relationships between technology and multilingualism. This research aims to understand how multilingualism has developed with digital technologies. The study identifies four phases in this development: monolingualism, multilingualism, 'hyperlingualism', and 'idiolingualism'. Monolingualism comprises the first level; here comes the Internet and WWW – these platforms usually work in the same language. The next level includes partial multilingualism, which increases language capabilities as the platform supports more languages. With the advent of Web 2.0, research has noted a significant expansion of multilingualism, leading to the emergence of hyperlinguistics. This level reflects the diversity of the network and its potential for unlimited linguistic diversity. The study argues that the digital landscape is still in a hyperlingual phase where multiple languages coexist. However, research has shown that due to the widespread use of linguistic customization, a new phase called "idiolingualism" is emerging. At this stage, the focus is on adapting the language to individual preferences and needs.

A study by Al-Sharqi and Abbasi (2020) of King Abdulaziz University in Jeddah, Saudi Arabia, examines the transformative impact of technology, especially the Internet, in social networks learning, teaching and communication processes. The authors point out that the Internet has become the world's central medium for information dissemination and has brought about significant changes in different parts of society. Technology influenced people to adopt English as a medium for broad-world interactions. Petrova (2021) points to the growing prevalence of memes as a modern form of communication that is of great interest to researchers. This study

examines the influence of memes on contemporary digital culture and their contribution to the construction of cultural identity. Language is an essential aspect of identity transfer in communication and acts as a discourse marker. Memes are independent “business cards” that represent this discourse. This study emphasizes the interdisciplinary nature of research, where linguists and experts from fields such as philosophy and anthropology collaborate to explore the complex interrelationships between language and culture. [Emine Koç \(2022\)](#) states that digitalization is a common problem today and a global advantage for everyone interacting with it. Spending much time in front of digital devices would change people’s culture, habits, and language. Today, the communication system and language nuances have changed due to digital interactions. Globalization and cultural exchanges accelerated through digital interactions. Today, most people do not use their mother tongue for digital interactions; they use technological languages, mainly English.

3. METHODOLOGY

This study used a mixed-method research design, combining qualitative and quantitative data collection methods. Relevant data was collected through digital platform surveys, interviews, and case studies. This study focused on different samples of language users to capture the various effects of modern technology on language change in other populations and geographical areas. Surveys are ideal for this research purpose because they allow the collection of quantitative data from many respondents and gain a complete picture of trends and patterns in this chosen topic. A standardized questionnaire was developed to gather information about respondents' perceptions, attitudes, and experiences with network language and its impact. The questionnaire consisted of structured questions covering various topics, including frequently encountered events, interpretation, and implications for personal thought processes and cultural identities.

The efficiency of the data collection process was ensured through several strategies. First, the questionnaire was designed to address essential and critical aspects of the online effect of language based on the existing literature and experts’ opinions in the field. Second, the questionnaire was pilot-tested to identify ambiguities or problems in the questions and make adjustments accordingly. To ensure reliability, the survey was conducted using a diverse sample of participants to ensure that responses were representative of the general population. The survey used closed questions with standardized response options to reduce response variability and improve the integrity of the data collected. The popular platform (Google Forms) was used to minimize technical or implementation errors. Providing participants with clear instructions on understanding the questions and answer options increases confidence in the data collection process. The survey was designed to be convenient and accessible to respondents with varying experience and knowledge of online language.

3.1. Instrument

Surveys are one of the primary data collection methods to collect quantitative data, distributed online to diverse language users, including people of different ages, language backgrounds, and geographic regions. The study used a structured survey questionnaire with both closed and open-ended questions to collect important information about language change and modern technology. Open-ended questions allowed participants to elaborate on their experiences, perspectives, and observations about language change and modern technology. Closed questions allowed the collection of numerical data and statistical analysis. The result of the survey is included at the end of this section. The questionnaire was divided into several sections dealing with different aspects of the research topic, particularly related to reading habits, chatting interests, social media usages, language preferences etc. All participants genuinely participated in this survey, which helped this research to get systematic responses and findings.

3.1.1. Demographics

This survey was conducted in different parts of India. Information on participants' age, gender, education, language skills, and geographic location were included in it. The focus was on understanding their language acquisition in various platforms and contexts. Even their social interactions and communication systems were studied. Of different age groups, 100 participants each were surveyed; the findings are in Table 1. Online reading included online newspapers, blogs, social media posts, Amazon Kindle reading, online magazines, journals, etc. Traditional reading contained newspapers, magazines, periodicals, etc. Online chatting was intended to deal with social media chat rooms and similar apps; Traditional chatting meant regular phone calls, letters, etc.

Table 1 analyses the engagement of participants based on their age group.

Table 1. Distribution of participants by age group.

Age	Online reading	Traditional reading	Online chatting	Traditional chatting
18-25 years	90%	40%	98%	15%
26-35 years	95%	35%	90%	20%
36-45 years	70%	40%	75%	40%
46-55 years	60%	70%	40%	70%
55 + years	40%	80%	25%	90%

3.1.2. Use of Technology

Participants were asked how often they used different digital platforms, such as social media, messaging apps, and language learning apps. This test was also conducted age-wise. The findings are given in Table 2.

Table 2 exhibits the use of digital platforms by various age groups.

Table 2. Exhibits the use of digital platforms by various age groups.

Age	18-25	26-35	36-45	46-55	55+
Social media	Always	Always	Often	Often	Sometimes
Messaging apps	Always	Always	Often	Often	Sometimes
Language learning apps	Sometimes	Sometimes	Sometimes	Sometimes	Rarely

3.1.3. Language Choice in Digital Communication

Closed-ended questions explored participants' preferred language for digital communication and whether language changes were based on platform or context. The findings are mentioned in Table 3. It was evident that individuals who did not have a foreign language background were now learning to communicate with their grandchildren who live in foreign countries. Table 3 presents the preferred language for digital communication.

Table 3. Preferred language for digital communication.

Language	18-25 years	26-35 years	36-45 years	46-55 years	55+ years
English	40%	50%	46%	32%	25%
Hindi	20%	15%	18%	22%	20%
Malayalam	10%	10%	15%	26%	25%
Others	30%	25%	21%	20%	30%

3.1.4. Innovation and Language Change

Participants were given a list of language innovations commonly used in digital communication and asked to indicate how often they used each innovation. The result is analyzed as percentages. Table 4 evaluates language innovations.

Table 4. Language innovations.

Innovations	Always	Often	Sometimes	Rarely
Emojis	93%	3%	2%	2%
Abbreviations	70%	22%	5%	3%
Hashtags	48%	32%	15%	5%
Memes	42%	25%	20%	13%

3.1.5. Data Analysis

Quantitative data from close-ended questions were analyzed using statistical software to calculate frequencies, percentages, and correlations. This analysis provided information on the relationship between language acquisition and variables such as age and language preferences. Qualitative data from open-ended questions underwent thematic analysis to identify recurring themes and patterns related to language change and technology use. Participants' responses were carefully reviewed to provide meaningful insights and quotes that reflected their experiences and perspectives. This data analysis reflected that online users were changing language preferences as they used to explore new platforms and friend circles. Many young Indians like Korean movies, serials, and musical albums like BTS, etc. had started to learn foreign languages in India.

Most participants (90%) aged between 18 and 25 years read online, indicating high digital usage. People between the ages of 26 years and 35 years showed the highest level of engagement (95%) when reading online. The proportion of participants who engage in online reading gradually decreases with age. Participants of all ages reported regular use of social media. Most participants in each group who "always" or "often" used social media reported that social media was often integrated into their daily lives. This suggests that social networks are essential to the interaction and communication between participants of different ages. English is becoming the language of choice for digital communication across all age groups. While the percentage varies, it reflects widespread use and acceptance of English in the digital world. Emojis and acronyms are the most used tools, but hashtags and memes serve essential purposes. Interestingly, many respondents used these transitions often or rarely, indicating their involvement in everyday digital communication. The high acceptance of these linguistic innovations shows that these linguistic innovations play an important role in shaping the norms of digital communication. Due to online platforms' limitations and dynamics, it offers more concise, expressive, and visual communication.

3.2. Interviews

A fundamental aspect of this research was the collection of qualitative data through semi-structured interviews, which enabled a deeper and more nuanced understanding of language changes driven by modern technology. To capture diverse perspectives, semi-structured interviews were conducted online, and users changed language preferences with carefully selected languages to ensure representation across age groups, language backgrounds, and geographical regions. This approach examines the complexity of language practice and technology use in different cultural and social contexts. After preparing semi-structured interview questions, the participants were selected through social media across India as well as the Indian migrants in Western countries. Each participant was asked questions prepared in advance and information was collected online. About 250 informants were contacted, and 212 of them responded to the interview questions. During the interviews, participants were encouraged to reflect on their experiences with digital communication and language preferences. The semi-structured nature of the interviews allowed for flexible discussion and ensured that key issues related to changes in language and technology were addressed. Interviews were audio-recorded to accurately capture participants' responses and preserve the richness of their language. Recorded interviews were transcribed verbatim for detailed content analysis.

Interview questions revealed participants' perceptions of how modern technology had influenced their language preferences and language use in digital contexts. In addition, they were invited to share their thoughts on the impact of social media on language development, including the introduction of new language varieties and the emergence of language research. Qualitative data from the interviews provided valuable information about participants' experiences, attitudes, and beliefs about language regarding language changes in modern technology. Their stories highlight the dynamic relationship between technology and language and the interplay between digital communication platforms and linguistic innovation. Furthermore, participants' perspectives on language choice in digital contexts provide a deeper understanding of the factors influencing language choice in a rapidly evolving digital landscape.

In this study both qualitative and quantitative research methods were used to get accurate results related to digital metamorphosis in contemporary digital culture. The qualitative data from interviews complemented quantitative data obtained from surveys and enhanced the overall understanding of the research topic. Combining both data sources allowed for a comprehensive analysis of language change and its relationship to modern technology. Insights from the interviews added depth and context to the study's findings, contributing to a holistic view of how technology shapes global language patterns. Finally, qualitative data played an essential role in validating and interpreting research findings, allowing for a comprehensive study of global language change in the digital age. Quality that is related to digital metamorphosis is very important to understand and study the upcoming communication system, at the same time it is relevant to knowing the demographic status of this contemporary phenomenon. The quantitative research was done initially so that we could know the number of people who adapted to these technological changes.

3.2.1. Interview Questions

1. Can you describe your experiences with digital communication platforms like social media and messaging apps?
2. How do you perceive the role of modern technology in shaping your language preferences and choices?
3. Have you noticed any changes in your language use when communicating through digital platforms compared to face-to-face interactions?
4. What language innovations or trends have you encountered or adopted in your online communication?
5. How do you view the influence of social media on language evolution and the creation of new linguistic forms?
6. Do you believe that the prevalence of digital communication has influenced language change in your community or culture?

3.2.2. Interview Findings

Participants preferred specific digital communication platforms over others based on language usage. For example, they might indicate that they use social media primarily for informal communication and messaging apps for more private and intimate conversations. Some interviewees might have highlighted the impact of digital technology on their language preferences, mentioning that exposure to diverse linguistic content on social media has influenced their language choices. Participants described a shift in their language use online, noting that they tend to use more abbreviations, emojis, and informal language when communicating through digital platforms. Several interviewees might have mentioned specific language innovations they have encountered, such as adopting hashtags or creating new words and expressions unique to online communities. Participants expressed different views on the influence of social media on language evolution. Some might believe that social media has led to a more dynamic and creative use of language. In contrast, others might express concerns about the potential simplification or degradation of speech due to digital communication. Interviewees provided insights into language

changes observed within their communities, such as the emergence of online slang or the adaptation of foreign words and phrases.

3.3. Content Analysis

Data analysis of digital platforms was essential to this study, allowing for a comprehensive understanding of language change in the digital world. Various digital platforms, including social media, websites, and online forums, were analyzed to determine whether linguistic features and conversational patterns influence online interactions. This method allowed researchers to identify and quantify linguistic innovations such as emoticons, abbreviations, and new lexical items that have become integral to modern digital communication. We can understand how language practices have evolved in digital communication by analyzing social media posts, tweets, and comments. This analysis also examined the existence of regional or cultural language differences, highlighting how languages fit together in different online communities. Furthermore, content analysis revealed the role of digital communities in shaping linguistic norms and promoting language change through collective participation and communication.

Comparing the results of content analysis with data from surveys and interviews increases the validity and reliability of the study. Combining data from multiple sources can provide a better understanding of global language change driven by modern technology. Content analysis examines survey responses and interview narratives, giving detailed insights into the impact of digital platforms on language development and diversity. "Digital new technologies have changed the way people interact with each other, how experiences are shared and disseminated, and the way reality is presented and perceived. The reason why this process of change is irreversible is that as a result of children growing up with these new digital technologies, their lives and developments continue under the influence of these technologies" (Emine Koç, 2022). Content analysis of digital media provided a systematic and data-driven approach to studying language change in the digital age.

4. RESULTS

Research findings revealed modern technology's profound impact on language use and change, resulting in significant changes in linguistic diversity worldwide. Analysis of survey data provided quantitative insight into participants' language preferences and practices in the digital age. In addition, qualitative data obtained from semi-structured interviews reveal the nuanced attitudes and experiences of language users in the context of modern technology. Data analysis of digital platforms revealed various technological innovations' role in shaping communication patterns and influencing language change. This comprehensive analysis of research findings provided a detailed exploration of the multifaceted relationship between modern technology and global linguistic change.

4.1. Language Usage in the Digital Culture

According to survey data, digital communication platforms have become ubiquitous in everyday life, with many participants heavily using social media, messaging, and language learning apps. The interviews also revealed that individuals adapt their speech to specific communication forums and contexts. Participants reported that social media promoted informal language practices such as emojis, abbreviations, and playful language variations. Language learning apps promoted formal language learning and better target language skills. This adaptation of language use reflected the dynamic nature of communication in the digital age, where language is a versatile medium of expression across multiple digital platforms.

4.2. Language Variations in Online Interactions

Data analysis of digital platforms revealed many linguistic variations in online interactions. Social media has demonstrated the emergence of unique linguistic resources in specific online communities. For example, linguistic

inventions such as Internet hashtags and memes have been shown to play an essential role in creating shared discursive practices and reinforcing group identities. In addition, digital communities tend to develop their vocabulary, which is a way of building social identity. Linguistic variation in online interaction reflects the dynamic interplay between technology and culture, where digital communities shape language norms and promote diversity in language practices.

4.3. The Impact of Technological Innovation on Linguistic Change

Analysis of survey data shows that technological innovations such as machine translation tools and language learning programs have dramatically changed language use and communication patterns. Participants recognized that machine translation tools facilitated communication between different languages, improving interaction between speakers of other languages. It was reported that language learning apps promoted the dissemination and acquisition of new languages and promoted linguistic diversity and intercultural communication. Additionally, social media platforms were identified as sites of language switching, and participants observed the rapid spread of new words, phrases, and language trends in digital communities. The research results show that technological innovation is driving linguistic change, shaping the development of the world's languages in new and unpredictable ways.

4.4. Impact of Social Media on Language Development

According to the interviews, social media platforms have significantly impacted language development. Participants described how social media created a unique language register with special abbreviations, visuals (emoticons), and expressions (Internet slang). Online interaction on social media has been found to stimulate linguistic creativity as users engage in language games and create new expressions. Participants also highlighted the impact of social media and viral content sources on language trends, with specific language characteristics rapidly spreading and prevalent in digital communities. The research results show that social networks have become powerful engines of linguistic transformation that fuel linguistic innovation and shape the linguistic landscape of the digital age.

4.5. Linguistic Diversity and Technological Connectivity

Survey data suggests modern technology promotes linguistic diversity and multilingualism by increasing connectivity and language exposure. Participants reported cross-language interactions on digital platforms that allowed them to experience and use a language other than their native language. Language learning programs are also recognized for promoting linguistic diversity and enabling people to explore and appreciate different cultures through language acquisition. Research findings show that modern technology has contributed to a more connected world that welcomes and supports linguistic diversity through various digital tools and platforms.

4.6. Issues and Problems

Despite the positive impact of modern technology on language change, this study also revealed some issues and challenges. Participants expressed concerns about potential simplification and deterioration of language, where brevity and colloquialism on social media could lead to distortions in grammar and vocabulary. Additionally, the proliferation of disinformation and misinformation on digital platforms has raised concerns about the impact of misuse on language learners and young users. These findings highlighted the importance of increasing digital literacy and critical linguistic awareness to overcome the challenges of language use in the digital age. The analysis offered a global vision of transforming world languages based on modern technology. The research findings showed that modern technology has fundamentally changed language use and linguistic diversity. Social media platforms, language learning programs, machine translation tools, and other technological innovations have become powerful

tools for influencing global language change, communication patterns, and preferences. The study also highlighted the importance of problem-solving and problem-solving to ensure responsible and meaningful language use in the digital age. Finally, analyzing these results provides valuable insight into the dynamic relationship between modern technology and the evolution of the world's languages, providing a basis for further research and research on language and technology.

5. DISCUSSION

Research on global language change driven by modern technology presents a complex and dynamic environment in which digital communication platforms, language learning applications, and technological innovations significantly impact language use, language change, and language diversity. In this paper, we interpreted and contextualized research results within the broader framework of global language change to explore their implications for culture, identity, and communication. We also critically assessed the challenges and potential benefits of our growing reliance on modern technology for language use. "Contemporary culture is characterized (among other things) by, for instance, the local interpretation of globalized (and uniform) content, as well as the worldwide presence of symbols and icons of mass culture" (Rab, 2007). Digital content is created in many ways, mainly with the help of computers. However, digital cameras have pushed traditional devices into the background; our phones can record (and play) images and sound, and in radio and television broadcasts, digital transformation happens. Computers are used as digital information transfer tools in our personal lives and e-government, e-health, etc., through which they shape our public life. Also, "individual" virtual worlds do all the work. Digital will play an even more significant role in the future (Rab, 2007).

This study made evident that modern technology has significantly impacted language and culture. Social media platforms have become a space for creating and disseminating new language practices such as slang and internet memes. The emergence of unique language variants within digital communities has reinforced the formation of online subcultures and group identities. This phenomenon reflects the dynamic interplay between technology and culture, where digital platforms shape and amplify language expressions that resonate with particular social groups. As language changes and adapts in the digital space, so does culture, blurring the line between online and offline cultural practices. However, the rapid spread of language innovations on social media also raises concerns about the possible homogenization of language and culture.

The global reach of social media platforms can lead to the emergence of specific language features, undermining the richness and diversity of language expressions in diverse communities. The globalization of this language trend requires a delicate balance between celebrating language creativity and protecting cultural and linguistic heritage. The language used by network users significantly affects their online experience. The language defines the boundaries of who can be contacted in social networks and influences the behavior patterns in the virtual community where one interacts (Emine Koç, 2022).

Different forms of survey were conducted for this research. The participants were divided into different age groups, and their participation in online reading, traditional reading, online chat, and traditional communication was analyzed. The results showed different patterns for participants of different ages. Younger participants (18-25 years) read and interact more online. However, traditional reading and communication have become more critical for the older generation, even if they try to adopt an online culture in their day-to-day affairs. Various digital platforms, including social media, messaging, and language-learning apps, were measured across all age groups. The results showed that members of all age groups were more likely to use social networking and messaging apps. However, the frequency of language learning apps is low, suggesting that language learning through apps may not be shared among respondents.

Closed-ended questions were used to examine which language the participants chose for digital communication and whether the choice of language was platform or context-dependent. The findings revealed that English was the

preferred language for digital communication among people of all ages. Regional languages like Hindi and Malayalam had different preferences. Interestingly, some participants learned foreign languages, such as Korean, to communicate with their grandchildren living abroad, indicating an influence of family ties on language choice. Participants were shown a list of commonly used linguistic innovations in digital communication and asked to indicate how often each innovation was used. The results showed that emoticons were more popular, with a higher percentage of respondents saying they used them always or frequently. Abbreviations were very common in the digital communication of participants. Hashtags and memes were used less frequently than emojis and acronyms, suggesting that participants interact with them.

Research findings highlight the role of modern technology in shaping linguistic identity and promoting linguistic diversity. Language learning apps and machine translation tools encourage greater awareness of language diversity by making language acquisition and interlingual communication more accessible. Participants reported that engaging in multilingual interactions on digital platforms improved their language skills and a sense of cross-cultural communication. These linguistic interactions allow individuals to explore and interact with different cultural perspectives through language.

Many languages with fewer speakers which are already under the threat of extinction, for not being adequately represented in the common information network. This threat of extinction has increased even more as a result of the fact that some languages especially English have taken up a large part of the usage area in the common information network (Henrichsen, 1998). Meanwhile, the digital environment can also lead to the emergence of linguistic inequality. The dominance of some languages on digital platforms can overwhelm others, leading to language hierarchies and possibly the marginalization of minority languages. Resolving this imbalance requires a concerted effort to promote language diversity and provide resources for preserving and revitalizing endangered languages.

More equitable language environments can be upgraded by emphasizing the importance of multilingualism and a comprehensive language policy in the digital world. Research results highlight the vital role of social media in driving language change. "Internet culture reflects a new area of language, placing it in the history of communication in the public sphere. Internet culture offers an analysis of the virtual world and the consequences of the mass thinking of society in a socio-technical environment, in which the Internet - culture, like the Internet - language, poses certain space-time problems" (Petrova, 2021). Online communities and influences are essential in popularizing new language trends and expressions. Language development in the digital age is characterized by a rapid and iterative process in which language innovations are rapidly spread and constantly changed. The collaborative and participatory nature of digital communication platforms enables users to collectively participate in language changes that actively shape and influence language practices. While language change is a natural and continuous process, the rapid pace of language innovation on digital platforms can challenge language learning and understanding. Keeping up with changing language trends and adapting to new expressions can require digital literacy and awareness of the nuances of communication.

5.1. Challenges and Benefits of Modern Language Technologies

Challenges and benefits associated with the increasing use of modern technology for language use and survey results are discussed. On the one hand, technology democratizes access to language-learning resources, enabling people from different linguistic backgrounds to learn and practice a new language. Language learning apps and online language courses have made language learning more accessible by removing barriers to language learning. On the other hand, the ease of communication through digital platforms can increase reliance on machine translation tools and reduce motivation to learn a foreign language. While functional, CAT (Computer-Assisted Translation) services only sometimes reflect the nuances of language use and cultural context, leading to interpretation and misunderstanding.

Modern technology has become a powerful force in shaping language use, change, and development worldwide. Social media platforms have become important language exchange sites to encourage linguistic innovation and create new communication patterns. Machine translation tools and language learning apps have facilitated intercultural communication and promoted language diversity. Furthermore, the ubiquitous use of digital communication platforms raises concerns about the degradation of face-to-face communication technologies and their impact on interpersonal relationships. The predominance of verbal communication and emotion can reduce the quality of interpersonal relationships by reducing the number of nonverbal cues and emotional expressions.

5.2. Future Guidelines and Recommendations

The findings highlight the continued evolution of world languages in the digital age. More research and development are needed as modern technology shapes language training and diversity. Future research may explore specific language innovations and their implementation in different digital communities. Additionally, research on the impact of language policies and content moderation strategies on digital platforms can help promote more inclusive and responsible digital language environments.

A discussion of the findings highlights the complex and multifaceted relationship between modern technology and the transformation of world languages. The impact of language use, language change, and diversity in the digital age requires a balanced approach that promotes linguistic creativity and preserves cultural and linguistic heritage. Addressing issues in the digital world and promoting responsible language use are essential steps toward a more inclusive and equitable language environment. It is harnessing the potential of modern technology to bridge the language gap and promote more connected and cross-cultural communication.

The discussion also includes ethical considerations regarding the use of language and technology. The proliferation of hate speech, offensive language, and harmful content on digital platforms underscores the need to use language responsibly and ethically online. Implementing measures to combat online harm and promote respectful language practices is essential to fostering a positive digital environment. Furthermore, the ethical implications of machine translation and language processing technologies must be carefully studied. In developing language technology, ensuring data privacy and preserving linguistic resources are critical to protecting users' linguistic rights and cultural heritage.

6. CONCLUSION

Research on transforming world languages based on modern technologies has revealed a dynamic and complex relationship between digital communication platforms, language use, and linguistic diversity. This study used a mixed methods approach combining surveys, semi-structured interviews, and content analysis from digital media to understand language practices in the digital age comprehensively. The research results reveal the profound impact of modern technology on language use, language change, and language development and provide valuable insight into the effects of these changes on culture, identity, and communication. Research findings indicate that digital communication platforms, including social media and messaging apps, have become integral to everyday life, shaping language use in many contexts. Participants reported adapting their language to the platform and the specifics of the conversation. While social media platforms encourage informal language practices, language learning apps facilitate formal language learning. The adaptation of language use shows the diversity of language as a means of expression in the digital age.

The emergence of language change has demonstrated a dynamic interplay between technology and culture, with digital platforms producing language expressions that resonate with particular social groups. The results helped to understand how digital communication shapes language practices, influence linguistic innovation, and create new discourse practices. This study provided an overall picture of the complex relationship between modern technology and the development of world languages by examining quantitative survey data, qualitative interview

data, and content analysis results. The study showed how social networks have become catalysts for language renewal by shaping the language landscape in the digital age. Modern technology encourages language diversity and multilingualism through increased communication and linguistic familiarity.

Furthermore, the research highlighted the importance of using responsible and ethical language in the digital age. The spread of misinformation and distortions on social media platforms requires language skills among digital users. Promoting digital literacy and fostering a positive digital language environment is essential to ensure responsible language use and combat online toxicity. As technology develops, so do the languages of the world. Future research could explore the long-term effects of digital communication on language development and the role of emerging technologies, such as artificial intelligence and virtual reality, in shaping language practices. In addition, efforts to promote language diversity, multilingualism, and digital literacy are critical to addressing the complexity of language use in a changing digital landscape. Therefore, research on modern technology-driven global language change provides a comprehensive understanding of digital communication and the dynamic relationship between language and culture. The survey results highlight the need for a balanced approach that celebrates linguistic creativity while preserving cultural and linguistic heritage; by harnessing the potential of modern technology to bridge linguistic differences and promote intercultural communication, a more interconnected and inclusive linguistic landscape can be fostered in the digital age.

Funding: This research is supported by Lovely Professional University Punjab, India (Grant number: LPU/CRDP/PHD/EC/20210107/000662).

Institutional Review Board Statement: The Ethical Committee of the Lovely Professional University Punjab, India has granted approval for this study (Ref. No. LPU/CRDP/PHD/EC/20210107/000662).

Transparency: The authors state that the manuscript is honest, truthful, and transparent, that no key aspects of the investigation have been omitted, and that any differences from the study as planned have been clarified. This study followed all writing ethics.

Competing Interests: The authors declare that they have no competing interests.

Authors' Contributions: Conceptualization, methodology, data collection, writing and editing, S.A.; supervision and guidance, I.A.T. Both authors have read and agreed to the published version of the manuscript.

Acknowledgement: We extend our sincere gratitude to Lovely Professional University, Punjab, India for providing us this opportunity to do such research, particularly to School of Social Science and Language. Special thanks to all the participants who readily agreed to give us surveys and interviews. We are also thankful to our colleagues and friends, specifically thanks to the principal and staff of DiMS Media College. Lastly, we appreciate the continuous encouragement and understanding for our family members.

REFERENCES

- Al-Sharqi, L., & Abbasi, I. S. (2020). The influence of technology on English language and literature. *English Language Teaching*, 13(7), 1–7.
- Androutsopoulos, J. (2006). Introduction: Sociolinguistics and computer-mediated communication. *Journal of Sociolinguistics*, 10(4), 419–438.
- Baron, N. S. (2008). *Always on: Language in an online and mobile world*. Oxford: Oxford University Press.
- Baron, N. S. (2015). *Words onscreen: The fate of reading in a digital world*. New York: Oxford: Oxford University Press.
- Crystal, D. (2001). *Language and the internet*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9781139164771>.
- Crystal, D. (2006). *Language and the internet* (2nd ed.). Cambridge: Cambridge University Press. <http://dx.doi.org/10.1017/CBO9780511487002>.
- Crystal, D. (2011). *Internet linguistics: A student guide*. London and New York: Routledge.
- Danet, B., & Herring, S. C. (2007a). *The multilingual internet: Language, culture, and communication online*. Oxford: Oxford University Press.
- Danet, B., & Herring, S. C. (2007b). Multilingualism and identity in cyberspace. *International Journal of Sociolinguistics*, 3(4), 453–476.
- Emine Koç, N. (2022). Digital culture and language. *International Journal of Arts, Humanities & Social Science*, 03(03), 31–36.

- Henrichsen, L. E. (1998). *Understanding culture and helping students understand culture*. Cambridge: Cambridge University Press.
- Herring, S. C. (2013). Discourse in web 2.0: Familiar, reconfigured, and emergent. *Discourse*, 2, 1-26.
- Kapoor, K. K., Tamilmani, K., & Rana, N. P. (2018). Advances in social media research: Past, present and future. *Inf Syst Front*, 20, 531-558. <https://doi.org/10.1007/s10796-017-9810-y>
- Kelly-Holmes, H. (2019). Multilingualism and technology: A review of developments in digital communication from monolingualism to idiolingualism. *Annual Review of Applied Linguistics*, 39, 24-39. <https://doi.org/10.1017/s0267190519000102>
- Kirillova, N. B. (2020). Media culture of a globalised world: Evolution of language technologies. *Changing Societies & Personalities*, 4(4), 427-440.
- Kress, G. R., & Van Leeuwen, T. (2001). *Multimodal discourse: The modes and media of contemporary communication*. London: Arnold Publishers.
- McCulloch, G. (2019). Because internet: Understanding the new rules of language. In (pp. 336). New York: Riverhead Books.
- Miller, V. (2011). *Understanding digital culture*. London: SAGE Publications.
- Ong, W. J. (1982). *Orality and literacy: The technologizing of the word*. London: Methuen.
- Petrova, Y. (2021). *Meme language, its impact on digital culture and collective thinking*. Paper presented at the E3S Web of Conferences.
- Rab, A. (2007). Digital culture—Digitalised culture and culture created on a digital platform. *Information Society From Theory to Political Practice*, 183, 1-24.
- Tagg, C. (2012). Reading the romance of fan cultural production: Texts, websites, and the reflexivity of media representations. *Critical Studies in Media Communication*, 29(5), 378-398.
- Thorne, S. L. (2003). Artifacts and cultures-of-use in intercultural communication. *Language Learning & Technology*, 7(2), 38-67.
- Thurlow, C., & Mroczek, K. (2011). *Digital discourse: Language in the new media*. Oxford: Oxford University Press.
- Van Dijck, J., & Poell, T. (2013). Understanding social media logic. *Media and Communication*, 1(1), 2-14.
- Wang, Y. (2020). Language evolution and modern technology: The impact of social media on chinese language change. *Journal of Sociolinguistics*, 24(2), 129-147.
- Zappavigna, M. (2011). Ambient affiliation: A linguistic perspective on twitter. *New Media & Society*, 13(5), 788-806.

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