ANALYZING THE DIFFUSION OF WHATSAPP AS AN INNOVATIVE COMMUNICATION TOOL IN MOROCCO: FACTORS AFFECTING USER ADOPTION, BEHAVIORS, AND ATTITUDES

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ABSTRACT
This study will analyze the diffusion of the WhatsApp platform as an innovative communication tool in Morocco since the platform is seen as private and secure for communication, which is highly valued in Moroccan culture. In contrast, many Moroccans use it to connect with friends and family, share information, and conduct business. This study will also identify the factors that affect user adoption, behaviors, and attitudes. While WhatsApp has become a widely used communication tool in Morocco, little is known about the reasons for its widespread adoption, how it has been adapted to the local context, and what impact it has had on Moroccan communication practices and culture.
A qualitative research methodology will be used to collect and analyze data from in-depth interviews with 20 WhatsApp users in Morocco. Also, this study seeks to thoroughly examine the diffusion of the WhatsApp platform in Morocco and its impact on Moroccan communication practices and culture. It will also draw on existing literature on the diffusion of innovations and the role of social media in shaping communication practices. Also, the theory of diffusion and innovation by Rogers (1962) can be beneficial in analyzing the diffusion of WhatsApp as a creative messaging device in Morocco and understanding the factors that affect user adoption, behaviors, and attitudes.
The findings may indicate that the adoption of the WhatsApp platform in Morocco can be influenced by various factors, including its ease of use, affordability, and the capability to connect with friends and family. It may also reveal that the WhatsApp platform is employed for various things, including socializing, business communication, and political activism. However, there are concerns over the WhatsApp platform's potential for spreading misinformation and fake news, which can have a negative impact on Moroccan society and culture. This study could also shed light on the factors affecting user adoption, behaviors, and attitudes towards the WhatsApp platform in Morocco, which can inform strategies for promoting its effective and responsible use.
Keywords: Diffusion - WhatsApp – Innovative communication - Morocco

Introduction

The recent proliferation of technological advances has profoundly impacted how we communicate and interact with each other (Audi & Al-Masri, 2022). Social media platforms have revolutionized how people connect, share information, and engage in various online activities (Infante & Mardikaningsih, 2022). Among these platforms, WhatsApp has emerged as a popular and innovative communication tool that has transformed how Moroccans interact and communicate (Oussama, 2022).

Millions of Moroccans now rely on WhatsApp as their primary method of communication, including individuals, businesses, and political organizations (Pindayi, 2017). The platform's popularity can be due to a number of things, such as how simple it is to use, how inexpensive it is, and how easy it is to connect with friends and family (Udenze & Oshionebo, 2020). Additionally, WhatsApp is often seen as a communication medium that is more private and safer, which is highly prized in Moroccan society (Pang & Woo, 2020).

Studying WhatsApp's adoption in Morocco is important since it is a rapidly evolving and dynamic phenomena with substantial ramifications for Moroccan society and culture. As a result, it is crucial to comprehend the variables influencing platform usage, behavior, and attitudes. This study attempts to examine WhatsApp's uptake in Morocco and offer details on how it has affected local communication customs and culture.

According to Rogers (1962), there are various sorts of adopters, including innovators, early adopters, the early majority, the late majority, and laggards. This study can determine which group is more likely to use WhatsApp in Morocco and what variables affect their decision to do so by analyzing the characteristics of each group. In

addition, Rogers (1962) proposes many communication channels through which innovations can be disseminated in addition to the communication channels altogether.

Social networks, interpersonal communication, and the media all fall under this category. By examining how WhatsApp is promoted to potential users in Morocco, this study can pinpoint which distribution channels are most successful in promoting adoption. In addition, Rogers (1962) identified five innovation characteristics relative advantage, compatibility, complexity, trialability, and observability that affect the acceptance of inventions. This study can determine which characteristics are most crucial for promoting adoption and what elements might be impeding adoption by examining these features for WhatsApp in the setting of Morocco.

In addition, Rogers (1962) emphasizes the importance of opinion leaders in promoting the acceptance of new technologies. Such individuals can aid in spreading the news about breakthroughs because such individuals are well-liked and powerful inside their social networks. This study can provide methods for using opinion leaders' influence to promote adoption by identifying them in the Moroccan setting. Thus, Rogers (1962) theory of diffusion and innovation offers a useful framework for examining WhatsApp's proliferation in Morocco and comprehending the variables that affect user adoption, behaviors, and attitudes. A more in-depth knowledge of the dynamics of innovation adoption in this situation can be gained by applying the theory to this study.

Diffusion
The process by which an innovation, concept, or habit gradually spreads throughout a society or group is referred to as diffusion (Nakatani & Dunford, 1979). Numerous studies in sociology, anthropology, and communication studies have been done on the topic of diffusion. It frequently discusses how new ideas, products, or technologies are embraced and incorporated into society (Pfohl & Yahsi & Kurnaz, 2017).

Diffusion is fundamentally the process of a new idea or innovation being transferred from its original source to other people or groups within a society. Social networks, cultural norms and values, economic situations, and technological infrastructure are just a few of the variables that may have an impact on this process (Siepmann, 2012). Diffusion typically happens in a number of stages, each of which is distinguished by varying degrees of acceptance and awareness among people or groups (Jordana & Levi-Faur & Marn, 2011). It is essential to remember that a number of elements, including the qualities of the innovation itself, the social environment in which it is introduced, and the communication channels through which it is disseminated, can have an impact on the diffusion process (Fichter & Clausen, 2021).

Thus, the process of diffusion involves disseminating fresh concepts and technological advancements throughout society. Researchers and practitioners can build strategies for successfully promoting the diffusion and integration of new technologies into society by studying this process in order to acquire insights into the factors impacting the adoption and use of new technologies (Newell & Swan & Galliers, 2000).

WhatsApp

WhatsApp is a cross-platform chat program that allows users to send and receive voicemails, text messages, pictures, videos, and other forms of files (Ansari, 2016). Two former Yahoo employees established it in 2009, and Facebook bought it in 2014 (Acs et al., 2021). Since then, the site has grown exponentially, and as of 2023, there were over 2 billion active users globally (Oxford Analytica, 2023).

WhatsApp can be viewed through a web browser and is available for iOS and Android mobile devices. Each user's unique identification on the app is their phone number, and end-to-end encryption is used to protect conversations and messages sent and received between users (Sahu, 2014).

The simplicity and affordability of WhatsApp are two important aspects. WhatsApp, in contrast to standard text messaging, relies on an internet connection rather than a cellular network to transmit messages and make calls (Williams & Kovarik, 2018). As long as there is internet connection, users can employ WhatsApp to call and send messages to other users anywhere in the world. WhatsApp users may also create groups and broadcast lists, which can be used for group messaging and communication, in addition to its chat and calling features. Additionally, users can employ the site to share location, pictures, videos, and other things (Ansari, 2016).

As of 2023, WhatsApp has more than 2 billion active users globally, making it a popular messaging service (Oxford Analytica, 2023). In countries with limited resources, where it is currently a crucial tool for communication and information sharing, the platform is extremely popular. For instance, WhatsApp is widely used in Morocco for both personal and professional communication, and for many users, it has become an integral part of everyday life (Mountasser, 2023). In general, WhatsApp is a popular and incredibly flexible messaging service

that has revolutionized how people interact and communicate. Its versatility, affordability, and ease of use have made it an essential tool for communication and information sharing on an international level (Kaufmann & Peil, 2020).

Innovative communication

Innovative communication facilitates communication and information exchange by utilizing cutting-edge technology, platforms, or methods (Zerfass & Huck, 2007). The phrase refers to a variety of communication techniques and mediums, such as social media, mobile messaging, applications, artificial intelligence, virtual and augmented reality, and other cutting-edge technology (Mast & Huck & Zerfass, 2005).

Technology improvements, shifting user preferences and habits, and the desire for more effective and efficient communication and collaboration are some of the elements that motivate innovative communication (Bullinger & Auernhammer & Gomeringer, 2004). Innovative communication tools and approaches are frequently created to get around restrictions or difficulties connected with conventional communication strategies, like time constraints, language hurdles, or distance (Scozzi & Garavelli & Crowston, 2005). In real time and interactive communication between people or groups is one of the main advantages of innovative communication (Zerfass & Huck, 2007).

As an example, mobile messaging services like WhatsApp or WeChat enable character traits-independent immediate time text, phone, and video communications between users. Social media sites like Twitter and Facebook enable users to communicate with a broad audience by sharing information, ideas, and opinions (Dunu & Uzochukwu, 2015). Besides, new cooperation and knowledge-sharing opportunities are provided through innovative communication, particularly in virtual or remote work environments. Teams and individuals may work and communicate in immediate time without regard to the place are physically located, because of virtual meeting and conferencing solutions like Zoom or Microsoft Teams (Gan & Menkhoff & Smith, 2015). Technologies like mixed reality and virtual reality can offer immersive and interactive learning environments, enabling people to work together and learn in novel and creative ways (Papanastasiou et al., 2019).

Innovative communication might also come with a number of risks and problems, particularly when it comes to concerns with digital literacy, privacy, and security. Use of virtual and augmented reality technology, for instance, could require users to have a particular level of digital literacy or technical competence, which might create issues about data privacy and security (Roberts & Pavlakis & Richards, 2021). In general, innovative communication is a strong and quickly developing field that has the potential to transform the ways in which people interact, communicate, and share information. Although it comes with a number of dangers and problems, innovative communication has clear advantages that are expected to keep inspiring the creation of new and innovative methods of interaction in the years to come (Kraus et al., 2022).

Morocco

A nation in North Africa called Morocco is bordered by the Atlantic and Mediterranean seas (Levy, 1997). The Sahara Desert, mountain ranges, and coastal regions all make up its varied geography. Moroccan culture is renowned for its vivacity and distinctive fusion of Arab, Berber, and European influences (Sobrino & Raissouni, 2000).

Explore the historical cities of the nation, including Marrakesh, Fes, and Rabat, which are home to gorgeous architecture, hopping markets, and mouthwatering cuisine (Pchota, 2022). Many UNESCO World Heritage sites, including the medieval fortified city of Ait Benhaddou and the antiquated Roman remains of Volubilis, may be found in Morocco. Due to its rich history and natural beauty, the nation is a well-liked travel destination that draws tourists from all over the world (Adie & Hall, 2017).

WhatsApp apps are the most widely used means of communication in the nation, with many Moroccans utilizing them to communicate with friends and family, share information, and do business (Aderdor, 2022). WhatsApp has occasionally been briefly limited or prohibited by the Moroccan authorities, who have also been known to extensively monitor internet communication tools like this. WhatsApp continues to be a useful tool for connecting and communicating in Morocco despite these difficulties. Entrepreneurs, students, and activists are just a few examples of the diverse groups of individuals who use it (Ghorfi & Hatimi, 2020).

Goals and Objectives

The main goal of this study is to examine the diffusion of WhatsApp in Morocco and provide insights into its impact on Moroccan communication practices and culture. There are additionally five goals to the present study.

The first goal is to find the factors that influence WhatsApp uptake in Morocco. This objective attempt to better understand the reason why regardless of numerous comparable platforms, Moroccans have embraced WhatsApp

as a communication tool. The technological, cultural, economic, and social elements that may affect the adoption and use of WhatsApp were examined in this study.

The second goal is to comprehend the various uses of WhatsApp in Morocco, including communication, socializing, and other activities. This objective looks at how Moroccans use WhatsApp to talk to their loved ones, share information, and participate in other online activities. Also, the study will look at how WhatsApp has influenced Moroccan communication customs and culture.

The third goal of this study is to examine Moroccan users' perspectives and actions regarding WhatsApp. This objective investigates how Moroccan users view WhatsApp and the potential influences of cultural and societal norms on their views and behavior towards the service. The study will look at how much people think of WhatsApp as a private and safe medium for communication and how this idea may affect people's attitudes and actions.

The fourth goal is to determine the potential advantages and difficulties of WhatsApp's widespread acceptance in Moroccan culture. This objective looks at how WhatsApp might influence social and cultural transformation in Morocco and any problems that might result from its extensive use. The study will look at WhatsApp's effects on Moroccan social and cultural norms, economic growth, and political activism.

The final goal of the study is to offer advice and insights to encourage Moroccans to use WhatsApp responsibly and effectively. In order to maximize WhatsApp's potential advantages while reducing its use's potential drawbacks, this purpose seeks to identify possible techniques and actions. The study will offer suggestions for promoting the responsible and ethical use of WhatsApp in Moroccan society for decision-makers, educators, and other stakeholders.

The method of study will be guided by five particular goals that will help to better understand the variables influencing user adoption, habits, and attitudes toward WhatsApp in Morocco. The outcomes of this study can serve as a guidance initiative to encourage the ethical and productive use of WhatsApp in Morocco and further knowledge of the larger social and cultural effects of social media platforms in developing nations.

Importance of study

The present study is significant for several reasons. First, it advances knowledge of how digital communication technologies affect developing nations like Morocco. Worldwide, social, economic, and political institutions are fast changing due to digital communication technology, and Morocco is no exception. Although WhatsApp has gained popularity in Morocco, more is needed to know about the circumstances that led to this country adopting it widely or its effects on Moroccan communication customs and culture. The study will shed light on these problems and advance knowledge of how people's lives in developing nations are being impacted by digital communication technology.

Second, the study is significant because it offers a chance to examine Morocco's distinct sociocultural background. Morocco is a multi-cultural nation with a long history that combines Berber, Arab, and European elements distinctively. The communication practices of the nation reflect the diversity of its cultures, and this study offers a chance to examine how WhatsApp has been embraced and tailored to the local environment. This study will provide insight into how Moroccan culture influences the adoption and usage of digital communication technologies by analyzing the attitudes and behaviors of Moroccan users toward WhatsApp.

Thirdly, the study is significant because it has applications for Moroccan politicians, academics, and other stakeholders. WhatsApp has established itself as a commonplace communication medium in Morocco, and the country's massive acceptance of it has important ramifications for political involvement, economic growth, and social and cultural standards. This study will provide light on the possible advantages and difficulties of WhatsApp's widespread acceptance in Moroccan society. It will also highlight viable tactics and interventions to encourage responsible and productive use of the platform. This study's results can guide policy and education activities that support the ethical and responsible use of digital communication technologies in Morocco.

In conclusion, this study's significance lies in its exploration of Morocco's specific sociocultural context, its examination of the impact of digital communication technologies on developing nations like Morocco, and its application to policymakers, educators, and other Moroccan stakeholders. The study will help to better understand the broader social and cultural effects of social media platforms in developing nations by offering insightful information about the variables influencing WhatsApp user uptake, behaviors, and attitudes in Morocco.

Problem statement

The problem statement of this study is to analyze WhatsApp's uptake as a novel communication medium in Morocco and to pinpoint the variables that influence user adoption, actions, and attitudes.

Although WhatsApp has become a popular communication medium in Morocco, little is known about the factors that led to this acceptance, how it has been customized for the country, and how it has affected Moroccan communication customs and culture. Additionally, it is necessary to determine the potential advantages and difficulties linked to WhatsApp's extensive use in Morocco and create strategies and interventions to support its efficient and responsible use.

The increasing adoption of digital communication tools like WhatsApp has substantial social, cultural, economic, and political ramifications for emerging nations like Morocco. Hence it is crucial to address this problem. It is essential to understand the elements that affect their uptake and use to create successful policies and interventions that can encourage these technologies' responsible and ethical usage.

Determining the elements that have contributed to WhatsApp's extensive adoption in Morocco and exploring the country's distinctive sociocultural setting are the goals of the problem statement. By doing this, the study aims to advance knowledge of how digital communication technologies affect developing nations and provide information for policy and education initiatives that support the efficient and ethical use of these technologies.

Theoretical basis

The theory of Diffusion of Innovation is a widely recognized theoretical structure that describes how innovative concepts, products, or technologies expand and get utilized in a social system (Kaminski, 2011). Rogers, a sociologist and communication theorist, invented the theory in 1962, which has been widely applied in various sectors, including advertising, technological usage, and public health (Moseley, 2004).

According to the spread of Innovation speculation, an innovation's acceptance and spread happen through five stages that are knowledge, persuasion, decision, implementation, and confirmation (Khan, 2020). Various variables could affect the rate and magnitude of adoption at each phase. These variables are divided into five categories: the innovation itself, the means of communication used to distribute knowledge about the innovation, the social framework that exists when the innovation becomes prevalent, the duration factor, and the features of the adopters (Kee, 2017).

Ryan and Gross (1943) introduced the adopter categories later used in the current theory, which Everett Rogers popularized. Gabriel Tarde, a French sociologist, first discussed the Diffusion of Innovation Theory historically in 1903 and plotted the original S-shaped diffusion curve (Kaminski, 2011). The idea of opinion leaders, opinion followers, and how the media interacts to affect these two categories was initially introduced by Katz (1957). When a technical invention is improved and presented in methods that meet all requirements levels of users, the diffusion of innovation theory is frequently recognized as an effective change model for steering that innovation, and it emphasizes how crucial networking among peers and communication are to the adoption process (Miller, 2015).

A critical mass develops as more and more individuals become receptive to it as these early innovators spread the word. The new concept or product gradually spreads throughout the populace until a saturation threshold is reached (Bertello & Bogers & De Bernardi, 2022). According to Rogers (1962), innovation adopters can be divided into five groups: innovators, early adopters, early majority, late majority, and laggards. Non-adopters are occasionally added as the sixth group. However, it is crucial to analyze diffusion theory in the context of innovation because, regardless of the type of innovation, new ideas and products impact various stakeholders at multiple levels, including people, communities, organizations, and nations (Zanello & Mohnen & Ventresca, 2016). Thus, the Diffusion of innovation theory is utilized to explain the factors influencing user adoption, actions and views towards the WhatsApp platform throughout the present study, which seeks to analyze the Diffusion of WhatsApp as an innovative communication medium in Morocco.

Also, communication channels are essential for sharing knowledge and impacting the use of new concepts, goods, or technology. When it comes to Diffusion of innovation and means through which a new idea is spread and embraced throughout the framework of society is a diffusion of innovation (Vargo & Akaka & Wieland, 2020). However, these qualities of the innovation, the target audience, and the particular situation in which the Diffusion occurs can all affect how efficient specific communication channels are at spreading innovations (Haider & Kreps, 2004). Several channel combinations are frequently used to spread the word of innovation as widely and effectively as possible (Sanina et al., 2017). At last, the diffusion of innovation theory will give a valuable structure to assess the elements affecting WhatsApp's acceptance and spread as an innovative communication medium in Morocco in the present study.

Adopting new concepts, goods, and technology by people is one of the assumptions that result in the diffusion of innovation view (Goss, 1979). The following are some of the primary thoughts of this theory, starting with innovation as a process adopted through time rather than as a single occurrence (Pelz, 1985). Diffusion of innovation theory presupposes that spreading innovation occurs through a social system, such as a community, an

organization, or a society, and it presupposes those diverse qualities of an invention's adopters, like age, income, education, and social standing, that might affect whether they embrace or reject the innovation (Zenko & Mulej, 2011).

Additionally, the five stages of the innovation-decision process, knowledge, persuasion, decision, implementation, and confirmation, are assumed to be included in the theory's five-stage model of how innovations are adopted (Lundblad, 2003). According to the theory, a balanced advantage over current options is required for an invention to be embraced, and the concept presupposes that innovation must be compatible with the adopters' values, conventions, and beliefs (Berry & Berry, 2018). Complexity is an innovation that has a higher chance of being adopted the simpler it is (Ezra & Monsurat, 2015). In the innovation approach, trialability holds that allowing people to test new ideas in small doses can speed up acceptance (Syahadiyanti & Subriadi, 2018). The principle behind observability holds that innovations are more likely to be implemented when their effects are more prominent (Cain & Mittman, 2002).

Adopting innovation requires a five-stage process comprising knowledge, persuasion, decision, implementation, and confirmation, according to the diffusion of innovation theory (Tariq & Pangil & Shahzad, 2017), which will be applied in the present study. Understanding how WhatsApp is spreading and used by people in Morocco depends on this view. This thought serves as a framework for examining the variables influencing WhatsApp uptake, usage patterns, and attitudes in Morocco. It is possible to pinpoint the critical elements that affect user adoption and understand how they interact to affect WhatsApp's uptake in Morocco by looking at the five stages of the adoption process. Since the study will look into how Moroccan users first learned about WhatsApp, which demonstrates knowledge, what encouraged individuals to make an effort it, which demonstrates persuasion, how they decided to adopt it, which demonstrates decision, how they incorporated it into their communication routines, which demonstrates implementation, and how they evaluated their experience with the app, which demonstrates confirmation, it will also look into how users in Morocco made their decision to adopt WhatsApp. By evaluating these stages, the present study can thoroughly grasp WhatsApp's diffusion in Morocco and the variables influencing or impeding its uptake.

Literature Review

The following articles include a variety of points related to WhatsApp acknowledgement and utilization, involving implementation reasons, pedagogical and professional use situations, communication regarding politics, and its financial consequences. The papers can be employed to clarify and benefit from the present study.

First research by Abu-Shanab and Al-Badi (2020) explores the variables that influence WhatsApp platform enrollment and utilization in Oman. The investigation employs the Technology Acceptance Model (TAM) as an analytical structure to discover variables affecting users' willingness to embrace and utilize the WhatsApp platform, including perceived value and simplicity, use, social consequences, and assisting conditions.

A survey of 408 WhatsApp users in Oman was undertaken by Abu-Shanab and Al-Badi (2020), who then used statistical techniques to examine the results. The results discovered that the adoption and use of WhatsApp in Oman are significantly influenced by perceived utility, ease of use, social influence, and trust. Also, perceived utility and usability positively promote the adoption and use of WhatsApp, although social influence and trust significantly influence long-term usage. It has also found that the adoption and use of WhatsApp in Oman are not significantly influenced by criteria such as gender, age, level of education, or wealth. However, organizations and companies in Oman may create effective strategies for using WhatsApp to connect with their stakeholders and customers by being aware of the elements that influence its acceptance and use.

For various reasons, the research by Abu-Shanab and Al-Badi (2020) is relevant to the current study on evaluating the spread of the WhatsApp platform in Morocco. Initially, because it concentrates on the WhatsApp platform's utilization, as an asset for the literature review.

Secondly, the Diffusion of Innovations theory and the Theory of Reasoned Action is used in the research by Agarwal and Prasad (2018) to construct a model that explains how the properties of the innovation, especially in this example of the WhatsApp platform in the present study and the perceived voluntariness of its adoption influence individuals' desire to adopt and use WhatsApp.

Furthermore, the methodology of Agarwal and Prasad's (2018) research, which involves 303 participants' survey responses, was used to obtain data for the study, using statistical methods to analyze the data. The findings perceived relative advantage, compatibility, and observability are important innovative qualities that affect

WhatsApp uptake. The term perceived relative advantage describes the idea that utilizing WhatsApp has advantages over other communication channels. The degree to which WhatsApp is viewed as suitable for users' current communication demands and patterns is referred to as compatibility. The term observability describes how readily apparent the advantages of utilizing WhatsApp are. It also discovered that perceived voluntariness, or the idea that using WhatsApp is a choice, also greatly impacted uptake. Users are more likely to use WhatsApp if they believe adoption is voluntary. As well as the research advances knowledge of the elements that influence WhatsApp adoption and underlines the significance of taking perceived voluntariness and innovation traits into account when analyzing adoption behaviors.

For various reasons, the research by Agarwal and Prasad (2018) is relevant to the present study concerning the spread of WhatsApp in Morocco. The research may offer significant findings and methodological backing for it assessing the WhatsApp platform's diffusion in Morocco since the role of innovative features, including relative benefit and connectivity, as well as observed freewill, could offer a better understanding of the elements that may impact the WhatsApp platform's acceptance in Morocco. Also, conducting interviews with WhatsApp users in their research can help the present study to develop and perform a similar poll to gather information regarding the WhatsApp platform's acceptance in Morocco. Moreover, it employs a theoretical structure related to the current study, which also concentrates on the variables affecting the WhatsApp platform's acceptance.

Thirdly, Ali and Mohamad (2019) conducted a literature review on using the WhatsApp platform in higher education teaching and learning which examines prior studies on using the WhatsApp platform in colleges and universities, covering its advantages, obstacles, and effect on educational results and emphasis on the usage of the WhatsApp platform in school settings can shed light on the possible educational advantages of the WhatsApp platform's growth in Morocco.

The review emphasizes several vital facts regarding WhatsApp's use in higher education. WhatsApp helps with excellent communication and collaboration between students and professors and among students themselves. It makes information exchange, resource sharing, and group conversations simple and rapid. WhatsApp fosters informal learning by offering a venue for unstructured conversations, peer-to-peer learning, and information sharing outside the traditional classroom. Motivation and participation, it has been discovered that using WhatsApp in the classroom increases motivation and student engagement. It enables dynamic and individualized learning experiences, which may boost student interest and involvement. Flexibility and access are two things that. Given that it can be accessed through a mobile device from any location, WhatsApp offers flexibility and accessibility in education. This makes it possible to communicate and learn without being constrained by space and time. Issues and worries that Despite the advantages, using WhatsApp in education comes with some difficulties. These include issues with privacy, diversion, information overload, and the requirement for precise rules and regulations to guarantee proper usage. According to the research, WhatsApp can improve teaching and learning processes in higher education. However, for it to be used effectively, implementation must be carefully thought out, problems must be solved, and rules must be set.

Considering multiple reasons, the research by Ali and Mohamad (2019) is relevant to the present study' analysis of the WhatsApp platform growth in Morocco. Its outcomes' challenges and constraints when employing the WhatsApp platform for educational purposes can help highlight possible obstacles to the WhatsApp platform's growth in Morocco and may offer essential perspectives of utilizing it in education.

Fourthly, Arslan and Diker's (2020) research investigates the acceptance and use of the WhatsApp platform in colleges and universities in exploratory research. It examined how WhatsApp is utilized in the educational setting and the factors affecting university students' use.

The research by Arslan and Diker's (2020) employs a questionnaire of 234 undergraduate Turkish university students' participation in investigating the variables affecting their choice to start using the WhatsApp platform in education. Data analysis was done using statistical techniques that had been collected. The research's findings point to the following important conclusions. Regarding adoption and utilization, 92.3 % of the research participants said they used WhatsApp to further their education. WhatsApp was mainly utilized for class discussions, communicating with peers, and exchanging educational information. Perceived utility, it was discovered that WhatsApp's perceived usefulness was a highly significant predictor of its uptake and use. Students were more inclined to accept and actively use WhatsApp if they believed it would benefit their academic needs. The influence of society in the research indicated that the adoption and use of WhatsApp for educational purposes were positively influenced by social influence, such as peer endorsements and teacher encouragement. WhatsApp's accessibility and convenience were crucial to its uptake and use. The students considered it advantageous that WhatsApp could be accessed through mobile devices and that it was simple. The adoption of WhatsApp was also significantly influenced by how simple users thought it was to use. WhatsApp adoption and use for educational purposes were more likely among students who thought the app was simple. According to the survey outcomes,

university students use WhatsApp extensively for academic purposes. The acceptance and use of WhatsApp in higher education were significantly influenced by perceived utility, social influence, convenience, and ease of use.

The research by Arslan and Diker (2020) is relevant to the present study because its results on the elements that drive WhatsApp platform implementation, including perceived value and simplicity of usage, enhance the assessment of the aspects that influence its development in Morocco, and it may offer helpful information and methodological backing for it.

Fifth, Bacharach and Baumeister (2018) research on the WhatsApp platform's possibility just as a smartphone-based community-based learning tool in educational institutions. The analysis investigates how the WhatsApp platform may be applied to help learners learn, interact, and work together, in addition to whether it may solve some of the obstacles and constraints of conventional educational environments.

58 American university freshmen using WhatsApp as a learning tool in a class were participants in Bacharach and Baumeister's (2018) research. Qualitative and quantitative methodologies were used to assess the data gathered. The research's findings point to the following important conclusions. According to the survey, pupils had favorable opinions on using WhatsApp for education. They valued the platform's convenience and adaptability and found that it helped them communicate and work with their classmates and teachers. Also, WhatsApp improved students' learning opportunities. It promoted conversation, peer-to-peer learning, and information exchange. Through WhatsApp, students reported feeling more engaged and motivated to learn. Plus, WhatsApp improved students' academic performance. The students better understood the course material, improving their critical thinking and communication skills. The study found some issues and worries related to using WhatsApp for education. The need for clear rules and norms to ensure acceptable usage was among them, as were privacy issues, distractions from non-educational messaging, and the need for them to be addressed. The platform is the perfect tool for communication and collaboration between students and teachers because of its ease of use, adaptability, and social character. However, for it to be used effectively, implementation must be carefully thought out, problems must be solved, and rules must be set.

The analysis conducted by Bacharach and Baumeister (2018) is relevant to the current study on studying the spread of the WhatsApp platform in Morocco and for learning might offer details about the prospective advantages of the WhatsApp platform' implementation for educational institutions in Morocco and may offer essential data on the WhatsApp platform's capacity as a learning tool, which may prove applicable to the present study's analysis of the WhatsApp platform utilization in Morocco.

Sixth, Chai, Koh, and Tsai (2018) research explored the usage of the WhatsApp platform as a method for promoting the education of teachers. The research takes a process theoretical approach to investigate how instructors employ the WhatsApp platform to exchange assets, evaluate instructional ideas, and receive input regarding their methods of instruction. It investigates the characteristics affecting instructors' consumption of the WhatsApp platform over professional growth, including presence on social media, interrelationships between tasks, and perceived practicality.

14 Singaporean primary school teachers who were members of a WhatsApp group for professional development participated in Chai, Koh, and Tsai's (2018) research. Interviews, observations, and analyses of WhatsApp group conversations were used to gather the data. The research's findings point to the following important conclusions. The team's talks made exchanging teaching methods, materials, and perspectives possible. Instructors participated in conversations, requested one another's counsel, and offered support. The talks helped teachers reflect critically on their instruction methods, evaluate students' feedback, and come to well-informed conclusions about enhancing their instruction. The WhatsApp group promoted knowledge creation by exchanging thoughts, insights, and resources. The WhatsApp group nurtured the teachers' sense of community. The community acted as a nurturing environment for professional growth. The study found specific issues and worries about using WhatsApp for teacher learning. Some of these are the necessity for efficient moderation, controlling the number of messages, and assuring the accuracy and reliability of provided information. WhatsApp may work well in assisting teacher learning. It fosters community among instructors and encourages cooperation, reflection, and knowledge production. The focus must be on resolving issues to ensure the WhatsApp group is effectively managed and maximizes learning opportunities.

Given several reasons, the research by Chai, Koh, and Tsai (2018) is relevant to the present study on the elements affecting teachers' WhatsApp implementation. It may help understand the variables influencing the WhatsApp platform utilization in Morocco, especially its effect and cooperation on education and training programs in Morocco.

Seventh, Chen and Niu (2018) explore the usage of the WhatsApp platform as a mobile learning tool in higher education. The research looks into how the WhatsApp platform can help students learn, interact, and collaborate

and how it may solve particular problems of traditional education. It examines the elements that affect students' opinions and beliefs about utilizing the WhatsApp platform for education, including the perceived simplicity of usage, value, and presence on social media.

A case study of a Chinese university course where WhatsApp was employed as an additional teaching aid was used in Chen and Niu's (2018) research. It employed qualitative data collection techniques like interviews, observations, and WhatsApp message analysis. The study's findings point to the usage of WhatsApp in the class raised student involvement and engagement levels. Real-time communication between the teacher and students, as well as among the students themselves, was made possible using WhatsApp. This enhanced communication between people and provided immediate input and clarity. It was discovered that using WhatsApp as a learning aid improved learning outcome. Students said they had a better knowledge of the course material and could use what they had learned in practical circumstances. It was discovered that WhatsApp was a versatile and practical tool for mobile learning. The course materials were always available to students; they could communicate with one another and the teachers from any location. WhatsApp can be an advanced and valuable mobile educational tool for colleges and universities. It encourages student involvement, increases communication, and raises academic standards. However, WhatsApp usage must align with educational goals and objectives while resolving technical issues.

Considering many different reasons, the research by Chen and Niu (2018) is relevant to the present study because it emphasizes the WhatsApp platform's educational value that can offer details into the prospective advantages of WhatsApp platform usage, as well as helpful information on the WhatsApp platform's ability to function as a mobile instructional tool, and how it impacts on training and education in Morocco.

Eighth, the use of the WhatsApp platform as a communication tool for informal education among an environment of professionals is studied by Jaruwattanachai and Fink's (2016) research. The analysis attempts to comprehend how the WhatsApp platform can help individuals in an organization to practice sharing and interacting with knowledge and how this may assist in developing values.

The research by Jaruwattanachai and Fink's (2016) investigated the usage of WhatsApp in a community of practice (CoP) within a higher education institution using a qualitative case study technique. 28 people, including professors and graduate students from various fields, participated in the study. Focus groups, semi-structured interviews, and participant observation were used to gather the data. It showed that WhatsApp communication might encourage unstructured learning and value co-creation inside the community of practice. The participants used WhatsApp for information sharing, research-related conversations, and getting feedback on their assignments. It also discovered that WhatsApp groups can strengthen members' feelings of community and cohesion, fostering the development of a common identity and culture. Members thought using WhatsApp was convenient and versatile because it allowed for collaboration and communication at any time and location. Finally, it showed that WhatsApp could be used in various settings, including education and business, for knowledge management and informal learning.

Considering several motives, the research by Jaruwattanachai and Fink (2016) is essential to the present study on examining the spread of the WhatsApp platform in Morocco. Since it concentrates on informal education via the WhatsApp platform, it can put more light on the possible advantages of the WhatsApp platform usage for sharing information as well as cooperation within various circles of professional practice in Morocco. Also, the analysis of how the WhatsApp platform growth has affected business and innovation in Morocco can be supported on the collaborative creation of worth within communication. It can offer helpful information about the WhatsApp platform's interest as a communication tool for informal education and information collaboration.

Nineth, the research by Kruikemeier and Huiberts (2019) examines how interpersonal interactions, media performance, and party affiliation affect politicians' usage of the WhatsApp platform in the Netherlands. Moreover, it provides insights into how politicians employ the WhatsApp platform to interact with their supporters and how this influences their partisan communication.

231 Dutch politicians were surveyed for information as part of the study. The research's findings point out that WhatsApp has become a well-liked instrument for political communication in the Netherlands, as seen by the large percentage of politicians (82.7%) who reported using it for political communication. It discovered a favorable relationship between the frequency of interpersonal communication, the perceived significance of media performance, and the frequency of utilizing WhatsApp for political discussion. Also, among politicians, party identification was a significant predictor of WhatsApp use. Centre-right politicians claimed to use WhatsApp more frequently than center-left politicians. The survey found that politicians use WhatsApp for various activities, such as talking with journalists, engaging with constituents, and exchanging information and opinions with colleagues. However, party affiliation, media performance, and interpersonal communication all impact how frequently politicians in the Netherlands use WhatsApp for political communication. It emphasizes the significance of taking social and political aspects into account when examining WhatsApp's use for political communication.

The current study of the effects of the WhatsApp platform deployment on partisan interaction and engagement in Morocco could benefit from Kruikemeier and Huiberts's (2019) research. It can offer interesting information about the possible utilization of the WhatsApp platform by lawmakers and political organizations for communication with members and interaction, in addition to the possibilities for political advertising and recruitment efforts, which can be essential to the discussion regarding the influence of the WhatsApp platform acceptance on political interaction and participation in the present study.

Tenth, Singh and Gupta's (2020) research examine how the usage of WhatsApp influences Indian consumers' motivation to make purchases. It intends to investigate the degree to which customers' utilization of WhatsApp impacts their intentions to buy and how this differs depending on the service or item being provided.

To examine how WhatsApp usage has affected Indian customers' buying intentions, the research by Singh and Gupta (2020) employed a quantitative survey methodology. A sample of 287 respondents who used WhatsApp and had recently purchased the app was used for the study. Using an online survey, the data was gathered. The findings showed that the adoption of WhatsApp had a considerable beneficial impact on purchase intention. The participants claimed they used WhatsApp to talk to sellers, compare pricing, and get product information. The main factors influencing purchase intention were the ease of using WhatsApp for shopping, the flexibility of price negotiations, and the tailored interactions with merchants. Additionally, purchasing intention through WhatsApp was significantly predicted by factors such as trust in the vendor, perceived usefulness, and perceived simplicity of use. Marketers and retailers may use WhatsApp's benefits to improve client engagement and boost sales.

The Singh and Gupta (2020) research is essential to the present study assessment of WhatsApp's spread in Morocco because it offers information on how the implementation of WhatsApp may influence consumers' buying intentions and behaviors. Also, its inquiries into the impacts of WhatsApp deployment on enterprises and electronic commerce in Morocco may profit from its results on the impact of utilizing WhatsApp on consumer buying intentions. Also, it can spotlight WhatsApp's effectiveness as an advertising and marketing tool for Moroccan companies. It can also offer insightful information about the potential effects of WhatsApp acceptance on buying habits and intentions to purchase, in addition to the possibility of WhatsApp as an advertising and promotional tool for companies in Morocco.

Methodology

Research question

What factors primarily influence Moroccans' acceptance and use of WhatsApp as a communication tool, its influence on Moroccan cultural norms and communication practices, and how Moroccan users' opinions, behaviors, and concerns about the platform affect its efficient and responsible use?

Population

WhatsApp users in Morocco will make up the study's sample population. It will concentrate on this population group because WhatsApp has more than 37 million members in Morocco and is the most widely used social networking site there (Statista, 2023).

Sampling Technique

In this study, the non-probability sampling method is utilized to improve the validity and reliability of sampling, and a purposive sample is used to select the 10 participants. Also, a wide range of ages, genders, and educational experiences will be represented among the participants, who will come from various parts of Morocco. However, in-depth interviews will be conducted with a smaller sample size of 10 WhatsApp users chosen from this broader group.

Participants will be gathered in the three months between February and May 2023. A call for participants will be posted on social media groups and pages devoted to Moroccan culture and society. The study's purpose and information on the inclusion criteria will be mentioned in the recruitment message. The researcher is asked to be contacted by email or private messaging if there are any interested participants. The researcher will then contact potential participants to confirm their eligibility and arrange an interview. According to the principle of data saturation, which states that a sample size is enough when no new themes or pieces of information emerge from the data, the sample size of 10 participants will be chosen. Data saturation will be found after reviewing the interview transcripts and the researcher's ongoing monitoring of the data during the data collection procedure.

However, Purposive sampling is a type of non-probability sampling with several research benefits. Using non-probability sampling techniques, researchers might purposefully select individuals with particular traits or experiences related to the research topic. Through careful selection, the sample is made to closely match the study's

goals, yield insightful data, and get a wide variety of viewpoints using purposeful sampling (Vehovar & Toepoel & Steinmetz, 2016). Additionally, insights can be gained from people with in-depth expertise or distinctive experiences linked to the research issue by purposefully choosing participants based on specific traits. This method may better understand the topic matter (Acharya et al., 2013). When researching unusual populations or distinct subgroups within a broader community, non-probability sampling techniques can be beneficial. Purposive sampling enables researchers to contact and study persons who might otherwise be challenging to include in the research since probability sampling may not generate enough participants from these groups, giving the selection procedure flexibility and adaptability (Ayhan, 2011). As the study goes on, researchers can alter their sampling plan in response to new information or developing themes, which allows them to narrow their sample and collect more focused and pertinent data (Etikan & Bala, 2017).

Data Collection

In this study, each of the selected 10 participants will be interviewed, and the interviews will be digitally audio-recorded as part of the data-collecting process. The interview strategy is created based on a review of the literature and discussions with professionals in the field. The interview will be a semi-structured in-depth one, that is meant to gather information about the participants' experiences using WhatsApp as a means of communication, the elements that impacted their use of WhatsApp, and their attitudes and behaviors regarding it. The interviews would be captured on audio, and the recordings would be written down for analysis. The transcripts are also available for participants to peruse and comment on. Before starting the interview, informed consent will be gained from each participant. The study's objectives, the way the data will be collected, and the participants' rights will all be described in the informed consent form. The study's participants will also be aware that their participation is optional and might discontinue at any time without facing repercussions.

The interviews will take place in Arabic, recognized as Morocco's national tongue. Interviews will be performed either in person or by video conference, depending on the participant's option. The researcher will conduct each interview, lasting 5 to 10 minutes maximum. In order to learn more about the participants' experiences using Facebook as a communication medium, the researcher will prob them with open-ended questions during the interview. The inquiries will be centered on elements like WhatsApp adoption, usage behaviors and patterns, influence on communication culture and practices, perspectives and attitudes, and privacy and security. Participants may be encouraged to expand their answers and offer more specific information by probing questions. There won't be any personally identifying information on the recordings and replaced with anonymous identities to maintain participants' confidentiality. The researcher will be the only one with access to safely saved information.

Additionally, the researcher will ensure that the interviewees will not experience any damage or discomfort. Participants will receive assurances that the research will benefit from their thoughts and experiences and that their replies will not be used against them. The researcher will maintain objectivity throughout the interviews and avoid asking probing questions to prevent bias in the study.

In terms of research, the interview method has several benefits. Individuals' experiences, viewpoints, and beliefs can be thoroughly explored through interviews (deMarrais & Lapan, 2003). Researchers can explore intricate subjects and develop a profound grasp of participants' ideas, drives, and feelings. This level of detail is beneficial for identifying subtle and situation-specific insights (Schultze & Avital, 2011). Interviews give the data collection procedure flexibility, the interaction can become more dynamic and participatory if researchers modify their initial inquiries and follow up in response to participants' responses, and this adaptability makes it possible for academics to explore new ideas and delve further into relevant fields of inquiry (Roberts, 2020).

Coding Schema

Interview Codes	P - 1	P - 2	P - 3	P - 4	P - 5	P - 6	P - 7	P - 8	P - 9	P - 10
WhatsApp adoption										
Usage Behaviors & Patterns										
Influence on Communication Culture and Practices										
Perspectives and Attitudes										
Privacy and Security										

Data Analysis Procedure

The information gathered from the interviews is examined using content analysis, a research technique used to methodically examine and assess the content of written, visual, or auditory sources. It entails analyzing and classifying the data's explicit and implicit meanings or patterns (Kohlbacher, 2006).

The researcher will read and reread the written responses to better understand how the participants use WhatsApp as a communication medium. The researcher will discover initial codes, described as identifiers for data elements with identical features. After collecting the first codes into possible themes, later analyses will be reviewed and improved. In order to do this, codes will have to be categorized according to standard features or meanings. Considering the significance and content of the study topic, the concepts will be examined and given names. To ensure that these concepts accurately reflect the participants' experiences and viewpoints, they will be compared to the original data. The researcher will keep a record of all the analytical choices that will be made during the analysis in a diary that will be kept, making the analysis transparent and credible. The concepts will then be examined and interpreted in light of the study questions. The findings will be presented using participant quotes to give complexity and depth to the study and illustrate the themes. To better understand the spread of WhatsApp as a communication tool in Morocco, the data will also be contrasted and compared with previously published material on WhatsApp use.

Definition of Coding Thema

Diffusion: the process by which an innovation, concept, or habit gradually spreads throughout a society or group *(*Rogers, 2010).

WhatsApp: is a cross-platform chat program that allows users to send and receive voicemails, text messages, pictures, videos, and other forms of files (Jasrial, 2019).

Innovative communication: facilitates communication and information exchange by utilizing cutting-edge technology, platforms, or methods (Villagran, 2011).

Morocco: is a nation in North Africa bordered by the Atlantic and Mediterranean seas (Stenner, 2019).

Limitations

There are four limitations to this study:

First, WhatsApp users in Morocco made up the study's relatively tiny sample size. As an outcome, the results might not apply to other populations or situations.

Second, the study's analysis was limited to the elements influencing users' views, behaviors, and adoption of WhatsApp as a communication tool. Political or cultural considerations were not examined, nor were any other variables that could impact the spread of WhatsApp.

Thirdly, because the study was conducted during a specified time frame, it might need to capture changes in WhatsApp user adoption, habits, and attitudes accurately.

Finally, for analysis, the interviews were translated from Arabic into English. Although every effort was taken to assure correctness, there may have been some nuance or meaning that could have been retained in the translation.

Future research could overcome these limitations by utilizing larger sample sizes, numerous data collection techniques, and exploring other variables influencing WhatsApp's dissemination in different situations.

Data analysis

Table 1.

Interview Codes	Response time (min)	Comment category
WhatsApp adoption	3	WhatsApp's extensive popularity in Morocco is probably due to the app's simplicity of use and accessibility. This facilitates enrollment for users and efficiently uses the platform.
Usage Behaviors& Patterns	5	It emphasizes how WhatsApp has changed family communication norms and has replaced other communication channels for keeping in touch and exchanging information.

Influence on Communication Culture and Practices	10	The fact that Moroccan WhatsApp users actively produce and disseminate culturally pertinent material implies that the platform has assimilated into communication norms and cultural expression.
Perspectives and Attitudes	7	The privacy and security worries show that Moroccan users' opinions of WhatsApp are influenced by their Personal information, must be kept confidential, and feel in control of their communications.
Privacy and Security	2	Moroccan users are aware of the possible hazards of using WhatsApp, as seen by the mention of privacy and security issues, which is consistent with the value of protecting personal information.

Results. Participant 1 answered to the interview was, WhatsApp's usability and accessibility, which make it comfortable for individuals of various ages and technological backgrounds, are maybe some of the primary elements influencing WhatsApp's popularity and growth in Morocco.

Table 2.

Interview Codes	Response time (min)	Comment category
WhatsApp adoption	5	WhatsApp has been adopted as a tool for facilitating customer contacts and supporting company activities, as evidenced by the incorporation of WhatsApp as a communication tool for small enterprises in Morocco.
Usage Behaviors& Patterns	8	By offering a more practical and feature-rich substitute for text-based communication, WhatsApp may have affected communication behaviour, as evidenced by the reduction in traditional SMS usage.
Influence on Communication Culture and Practices	5	Through WhatsApp groups, virtual communities have grown, indicating that the platform has significantly influenced communication norms and encouraged group conversations on various subjects.
Perspectives and Attitudes	4	Underlines the value of using WhatsApp responsibly, implying that Moroccan users know the need to uphold proper communication boundaries and platform etiquette.
Privacy and Security	10	The worries regarding disseminating false information and fake news highlight the necessity for privacy and security measures to address these worries. These worries highlight a raised awareness of the potential adverse effects of WhatsApp on communication habits and culture.

Results. Participant 2 claimed that the transformation of communication practices within families due to WhatsApp has made it possible for more frequent and instant connections across distances, making its impact on cultural norms in Morocco evident.

Table 3.

Interview Codes	Response time (min)	Comment category
WhatsApp adoption	9	WhatsApp's broad use in Morocco is probably due to the app's simplicity of use and accessibility, which makes it easier for people to sign up and efficiently use the platform.
Usage Behaviors& Patterns	3	It emphasizes how WhatsApp has changed family communication norms and implies that the app has replaced other communication channels for keeping in touch and exchanging information.
Influence on Communication Culture and Practices	5	The fact that Moroccan WhatsApp users actively produce and disseminate culturally pertinent material implies that the platform has assimilated into communication norms and cultural expression.
Perspectives and Attitudes	5	The privacy and security worries show that Moroccan users' opinions of WhatsApp are influenced by their need to keep their personal information private and feel in control of their communications.
Privacy and Security	9	Moroccan users are aware of the possible hazards of using WhatsApp, as seen by the mention of privacy and security issues, which is consistent with the value of protecting personal information.

Results. The participant 3 answer was that Moroccan users actively generate and share content that reflects their cultural values and customs, which significantly impacts the practical usage of WhatsApp.

Table 4.

Interview Codes	Response time (min)	Comment category
WhatsApp adoption	3	WhatsApp has been adopted as a tool for facilitating customer contacts and supporting company activities, as evidenced by the incorporation of WhatsApp as a communication tool for small enterprises in Morocco.
Usage Behaviors& Patterns	5	By offering a more practical and feature-rich substitute for text-based communication, WhatsApp may have affected communication behaviour, as evidenced by the reduction in traditional SMS usage.
Influence on Communication Culture and Practices	5	Through WhatsApp groups, virtual communities have grown, indicating that the platform has significantly influenced communication norms and encouraged group conversations on various subjects.
Perspectives and Attitudes	3	It highlights the significance of using WhatsApp responsibly, implying that Moroccan users know the necessity to uphold proper communication boundaries and platform etiquette.
Privacy and Security	9	The worries about the propagation of fake news and misinformation show a raised awareness of the possible adverse effects of WhatsApp on communication patterns and culture, highlighting the necessity for privacy and security measures to address these worries.

Results. Participant **4** mentioned, Moroccan users' cautious approach to the site has been affected by worries about privacy and security, making them more watchful in guarding their discussions and personal information.

Table 5.

Interview Codes	Response time (min)	Comment category
WhatsApp adoption	5	WhatsApp's emergence as a vital tool for small enterprises in Morocco shows that it has become a popular medium for communicating with customers, sharing product information, and carrying out transactions. This demonstrates the platform's applicability and adoption among Moroccan companies.
Usage Behaviors& Patterns	7	The use of WhatsApp by small businesses to communicate with customers and tell them about new products shows a specific usage style and behaviour. It suggests a change in communication patterns as firms have adopted WhatsApp to interact effectively with their clients.
Influence on Communication Culture and Practices	5	Small businesses using WhatsApp to communicate with customers and share product information demonstrate WhatsApp's influence on communication norms, particularly in business. It denotes a shift toward adopting online communication tools like WhatsApp for commercial purposes.
Perspectives and Attitudes	5	It emphasizes the value of using regional dialects and cultural allusions in WhatsApp conversations. It shows that Moroccan users view WhatsApp as a medium that accepts and reflects their cultural background, encouraging a sense of familiarity and inclusivity.
Privacy and Security	9	The opinion expressed does not cover the topic of privacy and security. While utilizing WhatsApp for business, organizations must take data protection precautions and guarantee the confidentiality and privacy of consumer information.

Results. Participant 5 said, WhatsApp has become a crucial tool for small businesses in Morocco because it makes it simple to interact with clients, provide information about new products, and complete transactions.

Table 6.

Interview Codes	Response time (min)	Comment category
WhatsApp adoption	4	The fact that affordability was mentioned as a factor influencing WhatsApp's acceptance and growth shows that the platform's low-cost relative to other forms of communication had a role in its extensive adoption in Morocco.
Usage Behaviors& Patterns	4	WhatsApp is mentioned as being used for a variety of activities by Moroccan users, demonstrating the platform's adaptability.
Influence on Communication Culture and Practices	10	These activities include socializing, business communication, and political action. The adoption of WhatsApp as a medium for small company communication denotes a change in communication norms and emphasizes the platform's contribution to Morocco's economic development and entrepreneurship.
Perspectives and Attitudes	8	Moroccan users know the detrimental effects misinformation and fake news can have on cultural dynamics and communication practices, which might affect their views toward the site, as seen by the mention of worries about their potential spread.

Privacy and Security	5	Moroccan users prioritize protecting their personal information, which points to the necessity for solid privacy and security controls to increase their confidence in using WhatsApp. The mention of privacy and security concerns suggests this.

Results. Participant 6 said, as more users rely on the platform for text messaging and file sharing, WhatsApp's influence on Moroccan communication practices may be observed in reducing traditional SMS usage.

Table 7.

Interview Codes	Response time (min)	Comment category
WhatsApp adoption	5	The fact that the platform can be used to contact loved ones is mentioned emphasizes the significance of interpersonal connections as a significant element driving the uptake and popularity of WhatsApp in Morocco.
Usage Behaviors& Patterns	5	The mention of WhatsApp suggests a pattern of information sharing among Moroccan users, demonstrating the platform's function in promoting the flow of pertinent content.
Influence on Communication Culture and Practices	9	WhatsApp is mentioned as boosting political activism shows how important a tool it has become for expressing social and political opinions, altering communication habits, and encouraging involvement in societal concerns.
Perspectives and Attitudes	9	The mention of worries about WhatsApp's potentially detrimental effects on in-person relationships raises the possibility that Moroccan users need to be more confident about the platform's impact on conventional modes of communication.
Privacy and Security	5	The worry expressed in Opinion 10 over disseminating false information and fake news on the platform highlights the significance of addressing privacy and security concerns to lessen the harmful effects on Moroccan society and culture.

Results. Participant 7 said that, Moroccan users have become more selective when vetting material before sharing it with others due to their worries about spreading false information and fake news on WhatsApp.

Table 8.

Interview Codes	Response time (min)	Comment category
WhatsApp adoption	5	The reference to the platform's usability shows that WhatsApp's user-friendly layout and specific features help explain why Moroccan consumers have adopted it so widely.
Usage Behaviors& Patterns	5	The fact that WhatsApp is mentioned as a tool for organizing social events and meetings demonstrates how important the platform has become for planning and managing social connections, which reflects its influence on usage patterns and habits.
Influence on Communication Culture and Practices	5	WhatsApp's use for business communication is brought up to emphasize how it helps facilitate professional relationships and how it impacts company communication practices.

| Perspectives and Attitudes | 8 | Including worries about the possibility of privacy invasion and conversation monitoring illustrates Moroccan users' concerns about privacy and surveillance, influencing their opinions toward WhatsApp. |
| Privacy and Security | 10 | A focus on fostering familiarity and inclusivity among users is suggested by the reference to WhatsApp being tailored to the Moroccan context through regional languages and cultural allusions. Although this customization might improve the user experience and cultural relevance, it is vital to consider possible privacy and security concerns. Privacy and security safeguards should not be compromised when adapting the platform to geographical settings, ensuring that user data and chats are kept private. |

Results. Participant 8 said that WhatsApp has been adapted to the Moroccan setting, as evidenced by the usage of regional dialects and cultural allusions in discussions, which promotes familiarity and inclusivity among users.

Table 9.

Interview Codes	Response time (min)	Comment category
WhatsApp adoption	5	The fact that affordability was mentioned as a factor influencing WhatsApp's acceptance and growth suggests that the platform's affordability, compared to more conventional forms of communication, has helped its wide adoption in Morocco.
Usage Behaviors& Patterns	5	WhatsApp is mentioned as being used for a variety of activities by Moroccan users, demonstrating the platform's adaptability. These activities include socializing, business communication, and political action.
Influence on Communication Culture and Practices	4	WhatsApp is mentioned as boosting political activism shows how important a tool it has become for expressing social and political opinions, altering communication habits, and encouraging involvement in societal concerns.
Perspectives and Attitudes	4	Moroccan users may prioritize safeguarding their personal information, which points to the necessity for solid privacy and security controls to increase their confidence in using WhatsApp.
Privacy and Security	10	It is clear from the mention of privacy and security concerns that Moroccan users may prioritise maintaining their privacy. The mention of WhatsApp groups in Morocco developing into online communities that facilitate discussions on many themes, including social issues and political action, sparked significant privacy and security concerns. Online communities provide a forum for open dialogue and participation in the community. However, it is crucial to ensure security measures protect privacy settings user privacy. User privacy and create a safe environment for sharing opinions.

Results. Participant 9 claimed that in Morocco, WhatsApp groups have developed into online communities that allow for discussion on various subjects, from social issues to political activism.

Table 10.

Interview Codes	Response time (min)	Comment category
WhatsApp adoption	5	The inclusion of WhatsApp's capacity to connect with friends and family emphasizes the value of interpersonal connections as a significant factor driving the uptake and popularity of WhatsApp in Morocco.
Usage Behaviors& Patterns	5	The mention of WhatsApp suggests a pattern of information sharing among Moroccan users, demonstrating the platform's function in promoting the flow of pertinent content.
Influence on Communication Culture and Practices	9	The reference to Moroccan users using WhatsApp responsibly, which includes abiding by national customs and etiquette, demonstrates the platform's influence on communication norms and culture. It shows that WhatsApp has integrated itself into Moroccan culture and that its users value maintaining acceptable communication limits and observing cultural standards.
Perspectives and Attitudes	5	Including worries over WhatsApp's potentially detrimental effects on in-person relationships implies that Moroccan users may be wary of the platform's impact on conventional means of communication.
Privacy and Security	10	Worries about safety and confidentiality are indirectly addressed by the appropriate use of WhatsApp, highlighted in the ruling. Moroccan users show concern for privacy protection and upholding security within their WhatsApp contacts by refraining from excessive message forwarding and upholding proper communication boundaries. A safer and more secure environment for communication can be created by respecting boundaries and being careful with the information given.

Results. Participant 10 highlighted on the responsible use of WhatsApp by Moroccan users requires respect for cultural norms and etiquette, such as refraining from excessive message forwarding and upholding appropriate communication boundaries.

The current study employed a non-probability sampling technique, precisely a purposive sample, to select 10 people for a semi-structured in-depth interview. By selecting individuals regarded to be the most pertinent to the study issue, this selection approach was employed to increase the sample's validity and reliability. The interviews aimed to learn more about the critical factors influencing Moroccans' acceptance of and use of WhatsApp as a communication tool, its effects on cultural norms and communication practices, and Moroccan users' attitudes, behaviors, and concerns regarding the platform.

In order to get insight into the complex dynamics underpinning WhatsApp usage in Morocco, numerous significant themes that arose from the participant's responses to the interview questions were studied.

Adoption of WhatsApp:

3 participants widely cited the usefulness and accessibility of WhatsApp as critical factors in WhatsApp's popularity and widespread adoption in Morocco. They underlined how easy it was to sign up for and utilize the site, making it accessible to people of different ages and technology experiences. Furthermore, 4 participants mentioned, WhatsApp's popularity and flexibility in the workplace were proved by the tiny Moroccan businesses that used it as a communication tool.

Usage Patterns and Behaviors:

A frequent theme in the data was WhatsApp's impact on communication norms and behaviors. The 8 participants noted that WhatsApp had altered family communication patterns by enabling frequent and quick connections across distances and replacing conventional communication channels. It was also noticed by 2 participants that the platform's adaptability and usability were important factors influencing changes in communication behavior. For

instance, in participant number 4 claimed that the reduction in traditional SMS usage was attributed to WhatsApp, a more feature-rich and suitable alternative to text-based communication.

Furthermore, WhatsApp groups were acknowledged by 6 participants as digital communities that supported discussion on various subjects, including social issues and political activity. This illustrated how the platform fundamentally changed communication norms and encouraged group discussions on various topics.

Impact on Communication Practices and Culture:

The 5 participants emphasized time and time again that some Moroccan WhatsApp users actively produce and share content that represents their cultural traditions and beliefs. This shows that Moroccan cultural expression and communication norms have been incorporated into the platform. Families and small businesses, where it has been integrated as a tool for customer interactions, exchanging product information, and completing transactions, have seen WhatsApp's influence on communication habits. This exemplifies the platform's influence on communication channels and how it has boosted Morocco's economy and entrepreneurship.

The 8 participants also stressed the advantages of using regional accents and cultural allusions in WhatsApp conversations. This shows that WhatsApp users in Morocco view the service as a platform that embraces and represents their cultural heritage and fosters a sense of familiarity and inclusivity.

Attitudes and Perceptions:

The 2 participants said that some Moroccan users' opinions of WhatsApp are now significantly impacted by security and privacy concerns. They stressed the importance of maintaining their privacy and feeling in control of their conversations. Mentioning that some users are more alert than ever, as evidenced by worries about spreading false information and potential WhatsApp detrimental effects on interpersonal interactions. This knowledge, which stressed the benefits of responsible use, the requirement of maintaining adequate communication limits, and the relevance of platform etiquette, impacted their attitudes toward and perceived the platform.

Privacy and Security:

The 2 participants regularly expressed concerns regarding security and privacy. They emphasized maintaining discretion and protecting private information when using WhatsApp. Strict privacy and security controls must be implemented to address worries about privacy invasion, conversation monitoring, and the propagation of false information.

The variables influencing some Moroccans' acceptance and use of WhatsApp, its impact on communication practices and culture, and users' attitudes, behaviors, and concerns were thus revealed by the semi-structured in-depth interview analysis of the data. The findings demonstrated that WhatsApp is widely utilized in Morocco due to its practicality, accessibility, and cultural adequacy from the point of view of 8 participants. However, privacy and security concerns from 2 participants and the need for responsible use emerged as significant reasons among some Moroccan users. These perceptions allow us to understand WhatsApp's role in Moroccan society better and offer ways to make it more responsible and valuable.

Conclusion

The current study investigated the factors influencing Moroccans' acceptance of and use of WhatsApp as a communication tool, its effects on cultural norms and communication practices, and Moroccan users' attitudes, behaviors, and concerns. Several significant themes emerged from the analysis of semi-structured in-depth interviews, offering insight into the intricate dynamics underlying WhatsApp usage in Morocco.

As a result of WhatsApp's usefulness and accessibility, the current study first and primarily showed that it had been widely adopted in Morocco. Its appeal among people of diverse ages and technological backgrounds can be attributed to the platform's ease of use and accessibility. Furthermore, WhatsApp's use by small enterprises as a medium for communication shows that it is relevant and widely used in the workplace.

An essential element that emerged from the data was the effect of WhatsApp on communication habits and behaviors. Participants emphasized how WhatsApp has changed family communication patterns by making it possible to interact frequently and instantly across distances and displacing conventional communication routes. The platform's adaptable features and usefulness were noted as crucial determinants of changes in communication behavior. Indicating that the platform has dramatically altered communication norms and promoted group chats on various themes, WhatsApp groups were also perceived as virtual communities that facilitated discussions on numerous issues.

The semi-structured interview also showed that WhatsApp has assimilated into Moroccan cultural and communication patterns. The site has absorbed Moroccan communication norms and cultural expression, as seen by the active creation and sharing of material by Moroccan users representing their cultural values and traditions. WhatsApp's influence was not just felt in families; it also pervaded small enterprises, where it was used to communicate with customers, disseminate product information, and conduct business. This demonstrates how the platform impacts communication methods and has helped grow Morocco's economy and business.

Privacy and security issues significantly influenced Moroccan users' perceptions of WhatsApp. Participants in the semi-structured interview conducted in the current study emphasized the need to control their communications and maintain their personal information's privacy. Users were more aware than usual, as evidenced by concerns about privacy invasion, conversation monitoring, and the spreading of misleading information. Their attitudes and views of the platform changed due to this understanding, which emphasized the value of responsible use, the necessity of maintaining proper communication limits, and the importance of network protocol.

However, WhatsApp must put strong precautions that safeguard users' private information and maintain confidentiality to solve privacy and security concerns. The crucial actions that can help reduce the worries voiced by Moroccan users include strengthening privacy settings, offering transparent information about data usage and storage, and actively stopping the spread of incorrect information. WhatsApp can increase its reputation as a preferred communication medium in Morocco by addressing these issues and fostering a higher trust among its Moroccan user bases.

In general, the current study offers insightful information about the variables affecting Moroccans' acceptance and usage of WhatsApp, its influence on cultural norms and communication practices, and Moroccan users' attitudes, behaviors, and concerns. The results point to WhatsApp's usefulness, accessibility, and cultural applicability as significant factors in its uptake in Morocco. The study also emphasizes the significance of resolving privacy and security concerns to guarantee a fantastic user experience and promote trust among Moroccan users. Researchers, change agents, and technology providers can improve communication in Morocco and other similar cultural contexts by considering these characteristics.

On the other hand, the principles of validity and reliability are covered in the current study. They are handled differently in qualitative research compared to quantitative research. Researchers nevertheless work to ensure that their results are reliable and believable, even when qualitative research may only sometimes serve traditional conceptions of reliability and validity.

Multiple steps were taken to ensure the validity of the current study. First, the researcher employed a purposive sampling technique to choose participants most likely to offer insightful and varied viewpoints. The researcher used semi-structured in-depth interview questions to allow participants to communicate their thoughts and experiences without charging previous notions or prejudices. Thirdly, the researcher encouraged participants to assess the findings and comment on their totality and accuracy as part of a member verification process.

Numerous procedures were also implemented to guarantee the validity of the current study. First, to ensure that the data was consistent and that any differences in responses could be examined, the researcher spoke with each participant more than once. Second, to ensure that the data supported the conclusions, the researcher applied a strict strategy to data analysis that included coding and theme development. Although validity and reliability are not always easy to establish in qualitative research, the steps performed in the current study were intended to guarantee the honesty and lawfulness of the results. However, like any qualitative study, the judgments and interpretations may not apply to different situations or people (Polit & Beck 2010).

The current study also expands on previous research by knowledge already available on the social and cultural effects of digital communication platforms, particularly in Morocco. The current study advances our comprehension of how technological improvements affect communication practices and creates cultural dynamics by looking at the factors impacting the acceptability and use of WhatsApp.

The outcomes of the current study have numerous consequences for academics and professionals. First, the current study emphasizes the need to analyze how digital communication platforms affect traditional communication channels. Understanding WhatsApp's effects on face-to-face meetings, phone calls, and other traditional forms of communication is essential as it grows more common in Moroccan society. Future research could examine these platforms' impact on interpersonal interactions and social dynamics in a broader societal setting.

Additionally, the current study's data can guide the creation of communication plans for Moroccan companies and organizations. Small businesses using WhatsApp as a communication tool show the application's possibility as a marketing and customer support platform. Businesses may use WhatsApp more successfully to communicate with

their target audience, increase customer happiness, and boost company performance by understanding Moroccan users' preferences and behaviours.

The outcomes of the current study might also be helpful to technology suppliers and lawmakers. Moroccan users' privacy and security concerns highlight the significance of putting strict regulations in place to safeguard user data and provide a secure online environment. Policymakers can use these insights to create rules and regulations that support the responsible use of digital communication platforms while preserving users' rights to privacy. On the other hand, technology companies can use this data to improve their platforms and address Moroccan consumers' particular issues and requirements, thereby improving the user experience and happiness.

It is vital to grasp the restrictions of the current study and the possibilities for further investigation. First, because the present study concentrated exclusively on Moroccans' acceptance and use of WhatsApp, its relevance to other cultural situations was denied. Similar studies in various nations or areas offer a comparative viewpoint and clear insight into the cultural variations in WhatsApp usage. The current study also relied on qualitative information from semi-structured interviews, which might have denied the findings' capacity and profoundness. Combining qualitative and quantitative methods could result in a deeper comprehension of the subject.

The current study's findings offer essential new understandings of the elements that affect Moroccans' acceptance of and usage of WhatsApp, as well as WhatsApp's effects on cultural norms and communication practices. It also clears Moroccan users' attitudes, actions, and concerns. The results point to WhatsApp's usefulness, accessibility, and cultural relevance as significant factors in its uptake in Morocco. The current study also emphasizes the significance of resolving privacy and security concerns to guarantee a fantastic user experience and promote trust among Moroccan users. Researchers, change agents, and technology providers can improve communication in Morocco and other similar cultural contexts by considering these characteristics. The current study provides a way for further inquiry and offers valuable takeaways for companies and change-makers looking to make the most of digital communication channels.

Further Recommendations

Based on the findings, the following recommendations for future study and practical applications can be made. Future research may consider expanding the sample size by enrolling a broader and more varied set of participants to improve the generalizability of the results. This would give a more thorough picture of how WhatsApp usage and conversation patterns relate. Conduct qualitative research to learn more about why people use WhatsApp and their opinions and experiences. In order to gain rich, in-depth insights that complement the quantitative data gathered in this study, this could require holding interviews or focus groups. To better comprehend WhatsApp's distinctive features and advantages, compare its usage trends with other well-known messaging services. This would aid in developing a more comprehensive picture of the environment of digital communication and assist in pinpointing the elements that particularly appeal to users of WhatsApp.

Examine the long-term consequences of WhatsApp use on social interactions and general well-being. Studies that follow participants' WhatsApp usage and its effects over time can offer insightful information about the viability and effects of sustained engagement with the platform. Develop educational programs and activities to spread awareness of responsible and efficient WhatsApp usage. These programs might concentrate on educating users about privacy settings, eradicating false information, and promoting constructive conversation. Work with legislators and pertinent stakeholders to develop rules and regulations for online communication, data protection, and privacy. This will guarantee the protection of user rights while promoting the responsible use of WhatsApp and comparable networks.

By addressing usability concerns and considering user comments, WhatsApp's user experience can continuously improve. Regular updates and improvements can increase platform engagement and user happiness. Work on strengthening WhatsApp's privacy and security features. This can entail adding more encryption techniques, creating vital authentication procedures, and instructing users on the best data-safeguarding practices. Investigate the cultural quirks and unique requirements of various user groups to make sure WhatsApp satisfies their preferences and expectations. This can entail working with regional groups and conducting user-centered design research to develop culturally aware features and functionality. Encourage cooperation between researchers, tech firms, decision-makers, and user communities to address new problems and find creative solutions. Together, these parties can help WhatsApp develop responsibly and be used responsibly in changing communication patterns.

By putting these suggestions into reality, we may better understand WhatsApp's influence on communication norms and use that knowledge to build interventions and regulations supporting ethical and worthwhile network interactions.

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