

Canales virtuales de comunicación en las PYMES provincia de Cotopaxi

Virtual communication channels in the PYMES in the province of Cotopaxi

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Palabras clave:

Canales virtuales,
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videoconferencias,
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Resumen

Introducción: los canales virtuales de comunicación en las PYMES han tomado un gran papel dentro de las organizaciones. Con esta investigación buscamos resaltar el impacto positivo que se ha dado en la actualidad, buscando su implementación dentro de las organizaciones, sin embargo, se presentan algunas dificultades debido a que no todos se familiarizan con el uso de la tecnología. **Objetivo:** el propósito de este estudio fue evaluar el uso de los canales virtuales de comunicación en las PYMES provincia de Cotopaxi. **Metodología:** el estudio realizado emplea una investigación combinada utilizando la metodología de un enfoque cuantitativo, nivel descriptivo y de corte transversal, para investigar la integración de los canales virtuales de comunicación en las PYMES en la Provincia de Cotopaxi, utilizado cuestionarios, la población tomada en cuenta fueron colaboradores y propietarios, analizando estadísticamente los datos para identificar tendencias y correlaciones. **Resultados:** los resultados se obtuvieron mediante encuestas estructuradas dirigidas a las PYMES de la provincia de Cotopaxi. Las encuestas proporcionaron datos cuantitativos sobre el uso de los canales virtuales, plataformas y redes sociales, también demostrando un contexto cualitativo de las personas, analizando estadísticamente los porcentajes y tendencias clave. **Conclusión:** Las diferentes PYMES investigadas de Cotopaxi demuestran enfrentar desafíos al adoptar los canales virtuales de comunicación a causa de barreras tradicionales, económicas y de actualización constante, tomando en cuenta que estos canales permiten un fortalecimiento en la innovación y difusión de información, es recomendable la capacitación constante del personal a cargo de la promoción y difusión de productos ofertados por las empresas. **Área de estudio general:** Administración. **Área de estudio específica:** Comunicación. **Tipo de estudio:** Artículo original

Keywords:

Virtual channels,
communication,
telephone calls,
SMEs, video

Abstract

Introduction: the role of virtual communication channels in SMEs has become increasingly significant within organizations. This research aims to highlight the positive impact of these channels in today's business environment and advocate for their implementation within organizations. However, there are

conferences,
WhatsApp.

challenges to this adoption, as not everyone is familiar with the use of technology. Objective: The purpose of this study was to evaluate the use and adaptation of virtual communication channels in SMEs in the province of Cotopaxi. Methodology: The study carried out uses a combined investigation using the methodology of a quantitative approach, descriptive and cross-sectional level, to investigate the integration of virtual communication channels in SMEs in the Province of Cotopaxi, using questionnaires, the population considered were collaborators and owners, statistically analyzing the data to identify trends and correlations. Results: The findings were obtained structured surveys targeted at SMEs in the province of Cotopaxi. The surveys provide quantitative data on the use of virtual channels, platforms, and social networks, while also offering a qualitative context of the participants. Statistical analysis was conducted to identify key percentages and trends. Conclusion: The different SMEs investigated in Cotopaxi demonstrate that they face challenges when adopting virtual communication channels due to traditional, economic, and constant updating barriers, considering that these channels allow a strengthening of innovation and dissemination of information, constant training is recommended. of the personnel in charge of the promotion and dissemination of products offered by the companies. Specific area of study: Communication. Type of study: Original article.

Introduction

Today, both small and medium-sized businesses (SMEs) and large corporations use a variety of virtual communication channels. These channels include applications such as WhatsApp, video conferencing platforms such as Zoom, Google Meet and Microsoft Teams, as well as phone calls and emails.

Social media is a fundamental tool for the continuous development of SMEs, since they can promote various products to their clients, increasing their trust and loyalty. It is a more effective and direct form of communication that speeds up any process that is in progress.

According to studies conducted by Cabello & Giró (2020), a growing trend has been observed in the adoption of new technologies that are replacing the use of paper. This change has made email an important resource due to its speed and security for sending information. On the other hand, telephone calls continue to be a frequent means of communication, which indicates that, despite technological advances, this traditional method is still relevant in the business field.

Digital platforms have transformed formal communication channels, creating an environment in which information and communication technologies (ICT) are used not only to monitor activities but also to facilitate effective and efficient communication. This phenomenon of digitalization in communications allows companies to adapt to current demands for speed and security in the management of information, thus improving their response capacity and operational efficiency.

According to Terrón (2019), digitalization has taken on a fundamental role today, allowing SMEs to be constantly updating their technology. Business success lies in the implementation of strategies that will help them maintain their position in the market. Social networks mark important changes in technological development, due to the scope and impact it has had within society, both on individuals and companies, allowing them to have greater communication in a dynamic, efficient and feasible way to develop business connections that help meet the demands of today's world.

The importance that digitalization has acquired in the current landscape, especially for small and medium-sized businesses. In an ever-changing business environment, these organizations benefit significantly from keeping up with the latest technologies. Business success, according to the author, lies in the effective implementation of strategies that allow SMEs to maintain and improve their position in the competitive market.

One of the most transformative elements of this digital age is the use of social media. These platforms have not only revolutionized personal communication, but have also had a profound impact on the business realm. Social media offers SMEs a dynamic, efficient, and cost-effective way to interact with both current and potential customers, as well as other businesses. This enhanced interaction facilitates the creation and maintenance of essential business connections that are vital to meeting the demands of the modern world.

In the specific context of SMEs in the province of Cotopaxi, the use of virtual communication channels has become indispensable. These channels allow local companies not only to survive but to thrive in an increasingly digitalized market. The ability to quickly adapt to technological innovations and take advantage of social media translates into greater competitiveness and the possibility of reaching and maintaining a broader and more diverse customer base.

In the field of SMEs, the effectiveness of virtual communication is considered a crucial factor. This importance lies in the need to maintain fluid and effective communication between employers and employees, especially in situations where physical presence in the workplace is not possible. This premise becomes even more relevant when one of the team members is unwell for health reasons, since the possibility of participating in meetings via videoconference ensures the continuity of collaboration and decision-making.

SMEs make use of various communication channels to meet their information exchange needs. Among these, emails and phone calls stand out. Although some may consider these methods to be monotonous or not very dynamic, for other companies they turn out to be the most practical and appropriate tools for sharing information with partners and suppliers. This fact underlines the diversity of preferences and needs regarding communication in the business environment.

However, it is essential to recognize that, despite the effectiveness of phone calls as a means of direct contact, there are factors that can limit their effectiveness. Telephone signal coverage and the availability of appropriate mobile plans are critical aspects that must be considered. These elements can significantly influence the ability to carry out effective and uninterrupted communication, thus affecting the operational dynamics of the company.

Virtual communication in SMEs in the province of Cotopaxi is an essential component to ensure team operation and coordination, especially in situations of physical absence or health. The choice of communication channels, whether videoconferences, emails or phone calls, must be strategic, taking into account the advantages and limitations of each to optimize the transmission of information and business collaboration.

In the current context, small and medium-sized enterprises (SMEs) face various challenges in the implementation and effective use of virtual communication channels. One of the main problems lies in the lack of knowledge on how to properly use these channels, both in external and internal communication. This situation is aggravated when considering the need to adapt these channels to facilitate fluid and efficient communication.

The main objective of this research is to evaluate the use and adaptation of virtual communication channels within SMEs located in the province of Cotopaxi. This research not only aims to improve the use of these digital tools, but also to propose solutions that allow a substantial improvement in their use.

Something relevant is technological competitiveness, which is why SMEs acquire innovative ICT strategies and tend to be adaptable to different market changes. This

allows companies to compete not only in the location where they carry out their sales, but also by reaching international markets where technology plays a very important role in differentiating and creating value for the client.

But at the same time we must get to know the context of Ecuador and compare it with other countries, where it is evident that Ecuador maintains a small percentage of people in SMEs who are trained to put into practice Information and Communication Technologies, and others are not, which causes them to have great challenges to cover economically.

It is important to mention that the International Labor Organization (2017) maintains that ICTs have drastically changed the lives and work environment of people in the 21st century. It is also important to highlight that, along with email, they are based on the Internet, such as video conferencing and mobile applications for sharing videos.

In the 21st century, there has been a great positive change, because it streamlines both the internal and external tasks of the organization, by applying virtual communications effectively, giving SMEs the option to grow and expand, giving sustainable and balanced development that goes hand in hand with Information and Communication Technologies.

The proper management of virtual channels in the promotion of a company is crucial today, as they allow reaching a wide and diverse audience quickly and effectively. Using online platforms, such as social networks, websites and emails, companies can reach potential customers globally, interact directly with them and receive feedback in real time. This interaction facilitates the adaptation of new product promotion strategies, which increases the visibility of the company, strengthens its brand and generates greater business opportunities.

However, the digital divide, i.e. the lack of familiarity with these virtual channels, can negatively affect local business competitiveness. This gap limits opportunities for economic and social progress, but can be overcome or acquired through self-learning. Improving SMEs through mastery of virtual channels allows them to compete in local and international markets, thus increasing their income and the well-being of the business community.

It is essential to study the importance of virtual channels in the dissemination of SMEs, especially in the province of Cotopaxi, and to understand how to use them correctly to optimize their implementation. By properly applying the knowledge acquired, companies can optimize both time and vital resources of the organization, improving their efficiency and effectiveness in the market.

Virtual communication channels are powerful tools for SMEs, allowing them to reach a global audience, receive immediate feedback and quickly adapt to market demands.

Bridging the digital divide through education and continuous learning is essential to improving the competitiveness and economic progress of these companies.

Through social media, websites and messaging apps, SMEs can interact directly with their customers, offer special promotions, receive real-time feedback and strengthen their presence in the digital market. It is important to consider a strategic use of the different virtual channels, allowing local companies to grow, diversify their income and maintain competitiveness in an increasingly digital environment, in this world that has become totally digital.

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Digital transformation in the business sector, especially in SMEs, has become a topic of analysis of global importance. This is a result of the accelerated advancement of the inclusion of new technologies brought about by the fourth industrial revolution. In this regard, its priority as a factor of competitiveness and success within organizations has been discussed and valued, to the point that it is asserted that organizations that have not made decisive progress in this field will encounter significant competitiveness problems in the short and medium term (Terrón, 2019).

Digital transformation in the business world, especially in small and medium-sized enterprises, has emerged as a topic of analysis of global relevance. This phenomenon is attributed to the rapid advancement of the inclusion of new technologies, driven by the industrial revolution. The discussion around this topic has emphasized its importance as a crucial factor for competitiveness and success within organizations. It has been stated that companies that do not decisively adopt these technological innovations will face serious competitiveness problems both in the short and medium term.

In the context of SMEs in the province of Cotopaxi, this analysis takes on a particular dimension. Virtual communication channels, in this sense, play a fundamental role. The digitalization of communication not only allows for greater efficiency in the transmission of information, but also facilitates interaction with customers and suppliers, optimizes internal processes and opens up new market opportunities. The ability to adapt to these new communication channels can make the difference between a company's success and stagnation in an increasingly competitive environment.

Furthermore, the implementation of virtual communication channels in Cotopaxi SMEs not only responds to a need for technological modernization, but also to a demand in today's market that values the speed and accessibility of information. These technological tools allow SMEs to stay connected and relevant, improving their ability to respond to customer needs and adapt to market changes.

Generally, SME employees do not have the necessary skills for digital transformation, as they are tied to daily activities and their availability to develop new solutions is limited. In addition, SMEs have limited financial resources and cannot afford significant external advice; therefore, demands for digital capabilities must be low and also time-efficient. Limited financial resources mean that SMEs depend on the success of the projects they undertake; the economic return must exceed the cost assumed in the digital transformation project (Goerzig & Bauernhansl, 2018).

Small SMEs face significant challenges in their digital transformation process, mainly due to the lack of adequate skills among their employees and the restriction of their financial resources. SME employees are generally focused on the daily tasks of the company, which limits their availability to develop new technological solutions and adapt to the demands of digitalization.

Investment in digitalisation projects must be careful and strategic, as SMEs cannot afford costly failures. Efficiency in the use of time and resources is essential, and any digital transformation project must ensure a return on investment that exceeds the costs incurred. In this context, demands on digital capabilities must be managed in a way that is both low and efficient, allowing SMEs to adapt without compromising their financial stability.

Another significant aspect is the influence on the international competitiveness of SMEs. In a recent research, Martínez and Gutiérrez (2023) found that SMEs that implement advanced ICT strategies tend to be more innovative and flexible in the face of market changes.

One of the key factors influencing the global competitiveness of SMEs is their ability to adopt and use ICT. In Cotopaxi Province, as in many other regions, SMEs face significant challenges in terms of staying competitive in a globalized and ever-changing market.

Recent research by Martínez and Gutiérrez (2023) presents compelling evidence that SMEs that adopt advanced information and communication technology (ICT) strategies tend to be more innovative and better able to adapt to market fluctuations. First, advanced ICT improves the operational efficiency of firms by automating processes, allowing them to respond more quickly to market demands.

Secondly, ICT facilitates communication and collaboration both internally and externally. Virtual communication channels such as email, video conferencing and online

collaboration platforms enable SMEs in Cotopaxi to maintain fluid and effective communication with their employees, customers and suppliers, regardless of their geographical location. This is particularly relevant in a globalised environment where interactions with international business partners are increasingly common.

Furthermore, the use of advanced ICT strategies is also associated with an increased ability to access new markets. SMEs can use e-commerce and digital marketing platforms to reach a global audience, overcoming the limitations that traditionally restricted their growth. This not only increases their potential customer base, but also allows them to diversify their revenue streams and reduce their dependence on local markets.

In the specific context of Ecuador, SMEs face additional challenges related to limited technological infrastructure, lack of access to financing for ICT investments and the digital skills gap among employees.(Rodriguez & Mendivelso, 2018). Although the Ecuadorian government has implemented programs to promote digitalization and improve telecommunications infrastructure, these efforts have not yet reached all regions of the country equitably (Romero et al., 2012).

In Ecuador, SMEs face a series of challenges that hinder their development and competitiveness, especially in the area of ICT adoption. These challenges include insufficient technological infrastructure, limited availability of financing for ICT investments and a significant gap in employees' digital skills, key aspects highlighted by Rodriguez Mendivelso (2018).

Ecuador's limited technological infrastructure imposes significant constraints on SMEs, affecting their ability to do so, which is compounded by the difficulty of accessing adequate financing to invest in modern technologies. Without solid financial support, many SMEs are forced to operate with outdated technological resources, putting them at a competitive disadvantage compared to companies that can afford to make these investments.

Furthermore, the lack of digital skills among employees is another considerable obstacle. Training and capacity building in digital skills is essential for SMEs to be able to make the most of the technological tools available. However, this skills gap prevents many companies from optimising their processes and services through ICT, thus limiting their potential for growth and adaptation in an increasingly digitalised market.

The Ecuadorian government has recognized these challenges and has implemented programs aimed at promoting digitalization and improving telecommunications infrastructure.(Romero et al., 2012) highlight these government efforts, which include initiatives to expand internet access and improve connectivity in various regions of the country. However, despite these advances, there is a disparity in the distribution of these

benefits, as improvements in infrastructure and access to digitalization programs have not reached all areas of Ecuador evenly. The most remote and less developed regions, such as certain parts of the Cotopaxi province, continue to face significant barriers to the effective adoption of digital technologies.

Particularly in the province of Cotopaxi, there is a growing interest in adopting virtual communication channels, but their progress is hampered by insufficient technological infrastructure, limited access to financing, and a considerable gap in the digital skills of their employees. Government efforts have begun to address these problems, but a more comprehensive and equitable approach is needed to ensure that all regions of the country can benefit from the advantages offered by digitalization.

Virtual communication

It is a medium that uses technology to stay in touch regardless of location. Technological advances have introduced various means of communication such as online meetings, websites, and instant messaging, which have increased its popularity as a means or intermediary of communication (Conislla, 2021). Virtual communication creates connections between people with different backgrounds, but with common interests through the exchange of information (text, photographs, audio, video).

Virtual work communication channels

Email

Email acts as a channel for disseminating various types of information and is ideal for performing important personal and business information management functions, as well as managing tasks, contacts, and documents. In fact, many people use an email inbox to organize their responsibilities, such as storing information and scheduling.

Email is used constantly during work hours and sometimes when employees are at home, so it must remain available at all times. Downtime of just thirty minutes can have serious consequences for employee productivity and institutional revenue. (Almaguer-Perez & Hernandez-Yeja, 2021, p. 200)

The speed and efficiency with which it facilitates communication between coworkers, clients and suppliers is crucial. In addition, email provides an electronic version which can be used to record conversations, organize and track work.

Phone call

Telephone calls allow immediate interaction with the interlocutor regardless of the distance; however, in the workplace this use is very frequent since it is easy to access and often avoids the need to be present in person. For this channel to be effective within a

company, it is important that the information provided must be clear, coherent and concise to avoid erroneous messages. In SMEs, this channel is used to communicate with suppliers (product or input orders), customers (who ask about their products, schedules, etc.) and prospects who are interested in knowing or consuming the products and for this they seek more information through calls.

Types of communication

Social networks

Social media are essential tools for interacting and establishing communications with customers, promoting products and services, as well as obtaining feedback and improving their experience. Digital transformation is the process of change that a company must undertake to adapt to the digital world, combining digital technology with its knowledge and some traditional processes to differentiate itself and be more efficient, competitive and profitable. It must be accompanied by a mental evolution to open up to this new concept (Guerra et al., 2024, p. 60 - 61).

Social media allows companies to contribute to brands through different communication strategies, mainly by publishing content that helps develop a personal relationship with each customer. Therefore, this generation and its presence on social media represents a great opportunity for business marketing, in an environment where information, advertising and entertainment have merged (Guerra et al., 2024, p. 63).

Facebook

It is a social network that has multiple purposes, such as connecting and communicating between people and groups; sharing both personal and commercial content; and facilitating interaction between communities and brands. It stands out in marketing and advertising.

Facebook is a social network created in 2004 by Mark Zuckerberg, which was born with the mission of giving users the power to share and making the world more open and connected. People use Facebook to keep in touch with their friends and family, to discover what is happening in the world, to share and express what matters to them.

In the business world, Facebook has been the social network that has contributed the most to the development of commercial profiles, among other communication alternatives, it offers its users the possibility of creating fan pages (Fan Pages) that publicly project brands, characters, goods, services, etc., with the sole purpose of achieving a solid presence on the social network and closely linking with its consumer audience (Alcívar & Sánchez, 2021, p. 1326).

Instagram

It is a visual-focused social network where users can share photos and short videos, add effects to them, and also interact with other people's posts through comments and “likes.”

Instagram is one of the social networks with the greatest influence on society and acts according to statistics, therefore, it becomes an ideal medium for companies in any sector to take advantage of the versatility of functions that it has and create creative content as part of their marketing strategies.

It is important to know the various options that this tool offers for the business field. For this reason, the objective of this study is to explain the functions that Instagram offers within its interface that can be used for appropriate business marketing strategies (Campines, 2023, pp. 3492 – 3493).

WhatsApp

WhatsApp is an instant messaging social network that can be used by multiple smartphone operating systems. This application was created and developed by the Silicon Valley company. It allows you to send and receive messages, as well as photos, videos, audios, various types of documents, and to be able to create and have various types of groups.(Calero, 2020).

Instant Messaging

It is a method of real-time communication between two or more people using text. This text is sent through connected devices, to a network such as the Internet or through mobile data, regardless of the distance between the connected devices.

Instant messaging was born from the Internet platform, which has generated changes of great impact in society, a technology that has come to reform the way we think and do things. With the Internet and its associated applications such as the World Wide Web (WWW), social networks and instant messaging, the communication process is revolutionized and facilitates what is common even at long distances, since it generates a space where a great variety of signs and symbols of non-verbal communication converge. These means of communication constitute spaces free of formalities that allow language to be handled at will in the communication process. The technology that instant messaging represents is both enabling and limiting in the communication process (Alcántara et al., 2022, p. 39).

Therefore, instant messaging aims to facilitate real-time communication between two or more people from different locations at a minimum cost, as long as they are connected to an Internet network.

Collaboration platforms

It is a type of business software that combines extensive social networking functionalities with work processes. Its purpose is to drive innovation by integrating knowledge into business operations, thereby enabling employees to share information and address business problems effectively and efficiently.

Videoconferencing

The use of video conferencing has become a necessity to continue with daily work life. There are several activities that are carried out such as formal online meetings and events; but there are also implications for constant use since you would have to pay memberships if you want to access premium options. “We are referring to those that allow live and simultaneous video conferences or group video calls, the best-known digital platforms being Zoom, Microsoft Teams, Google Meet, among others.” (Leturia et al., 2021, p. 55). The most widely used tools are Zoom, Google Meet, and Teams, because they even include work video conferences, which, as a result of technological advances, serve to keep users connected without a time limit.

Impact of communication channels on employees

SMEs benefit from the communication channels used, as they can receive various information at any time. On the contrary, their adverse effects are mainly observed during telephone calls and video conferences, where the transmission of messages is hampered by an inadequate coverage signal. However, the use of the internet is of great importance due to the fact that some people may not have access to an internet connection, which can hinder their ability to connect and understand the meeting.

SMEs

Small and medium-sized enterprises represent a considerable number in the economies of each country, therefore, thanks to their contributions they contribute to development, demonstrating efficiency, effectiveness and creativity, driving organizations to be more competitive in the market, demonstrating the importance of companies in generating wealth, with SMEs being the main actors for the growth of a country.

SMEs have a high market share, demonstrating their importance for Ecuador's economy and job creation, as they can adapt to changing market environments. Furthermore, SMEs are important as they contribute to the country's wealth and development, since due to their size they are malleable and better adjust to the needs of customers (Saavedra et al., 2023, p. 199).

Types of Small and Medium Enterprises – SMEs

Small businesses

According to the Ecuadorian Standardization Service (INEN, 2024) it states that:

It is that production unit that has 10 to 49 workers and a value of Annual gross sales or income between one hundred thousand one (US\$ 100,001.00) and one million (US \$ 1,000,000.00) United States dollars.

They are considered independent organizations established to generate profits, and whose purpose is to produce, transform or provide services to satisfy specific needs and desires that exist in society.

Medium-sized companies

“Whose production unit has 50 to 199 workers with an annual gross sales or income value between one million and one (USD 1,000,001.00) and five million (USD 5,000,000.00) United States dollars” Ecuadorian Standardization Service (INEN, 2024). Medium-sized companies can gain a competitive advantage by optimizing their management, processes, and organizational capabilities.

Characteristics of SMEs

The difference lies in their size, limited resources, culture, among others. The transition of companies changes over time, which helps generate jobs. As mentioned Uganda et al. (2019) states the following:

They are mainly framed in the capital constituted; the number of workers, which ranges from 16 to 250 people; the supply of a wide market; and the obtaining of some fiscal advantages by the State, because they are an important source of employment. In addition, these are in the process of growth, the small one tends to be medium and this one aspires to become large. (p. 68)

Beyond the number of employees and the size of their infrastructure, small businesses have many distinctive characteristics that allow them to differentiate themselves from other types of companies. In addition, they are very diverse according to their economic activity.

Methodology

The present research had a quantitative approach, descriptive level and cross-sectional. In this regard, Moreta et al. (2023) points out that the quantitative approach to data

collection is used to test hypotheses based on both numerical measurements and descriptive analysis, in order to create behavioral models. On the contrary, Guevara et al. (2020) states that descriptive research is carried out to represent a reality in all its essential elements. Likewise, Rodríguez & Mendivelso (2018) define that the cross-section is classified as a discrete observational study and normally has two purposes: descriptive and analytical.

Quantitative Approach: It is a research methodology based on the collection and analysis of numerical data to identify patterns, using statistical and mathematical techniques to measure variables and generalize the results to a broad population, allowing objective conclusions.

On the contrary, Guevara et al. (2020) state that descriptive research is carried out to represent a reality in all its essential elements. Likewise, Rodríguez & Mendivelso (2018) define that the cross-section is classified as a discrete observational study and normally has two purposes: descriptive and analytical.

Descriptive level: This methodology allows us to describe situations, problems, events, where a descriptive study can be carried out, that is, when we want to say what that event or situation is like, how it manifests itself. This type of study is aimed at specifying the properties, qualities, attributes or significant characteristics of a certain object or subject of research.

Descriptive research works on factual realities, and its fundamental characteristic is to present us with a correct interpretation. It describes various aspects, components, features or dimensions of the phenomenon under investigation (Antúnez 2021).

The cross-sectional approach in the research involves identifying and addressing crucial issues that cross disciplinary boundaries, promoting a collaborative and multifaceted approach to solve complex problems, analyzing the economic, cultural and political impacts of globalization in different places in the province of Cotopaxi in order to generate an impact on sales, in this way SMEs will learn about the strengths and weaknesses of the places and use them to their advantage.

Non-probability convenience sampling allows the sample to be chosen according to the convenience of the research to be chosen arbitrarily and how many participants there may be in the study (Hernández, 2021).

The SMEs selected for the surveys were: La Sagrada Familia, Lady Sport, Vinos “El último Inca”, Centro Veterinario “El Campo”, D Juanes, CF Shoes, these companies were selected because of the product they offer, taking into account that although they use machinery and technology in accordance with technological advances, there is still a need

to emphasize virtual channels, which allow a better dissemination of the products that each one offers.

The population and sample that formed part of the research belongs to the personnel that works in small and medium-sized companies, starting with the owners and their collaborators of the cantons of Latacunga, Pujilí, Salcedo, Sigchos and La Mana of the Province of Cotopaxi, showing below in detail the number of workers that there are in each one of them.

The application of the questionnaire was carried out in seven SMEs in the city of Latacunga, Pujilí, Salcedo, Sigchos and La Maná, Cotopaxi Province, such as:

Table 1

Small and Medium Enterprises in the Province of Cotopaxi

SMEs	Location	Guy
1. The Holy Family	Salcedo	Small
2. Lady Sport	The Manna	Small
3. “The Last Inca” Wines	Sigchos	Small
4. Veterinary Center “El Campo”	Latacunga	Small
5. D. JUANES	Pujili	Small
6. CF Shoes	Latacunga	Small
7. Jimenez and Sons INLADEC	Latacunga	Median

Note: Small and medium-sized companies in the province of Cotopaxi are subject to investigation

The results focus on small and medium-sized enterprises (SMEs) in the province of Cotopaxi. This study identifies and classifies various companies within this province to better understand their distribution and characteristics.

The preliminary analysis of small and medium-sized enterprises (SMEs) in the province of Cotopaxi shows a notable predominance of small businesses in the region, with six out of seven companies classified within this category. This finding suggests a local economic structure characterized by the frequency of smaller-scale entities.

The companies mentioned cover a variety of sectors, from retail (CF Shoes) to manufacturing (Lady Sport) and services (Centro Veterinario “El Campo”). This diversity is beneficial for the economic strengthening of the province of Cotopaxi, as it reduces dependence on a single sector.

Results

From the data obtained during the research, the most relevant questions were taken and those related to the use and adaptation of virtual communication channels in SMEs. After doing the analysis, the following results were obtained:

Table 2

Familiarization with virtual communication channels

Alternative	Knowledge			Percentage
	Small	Median	Total	
Totally disagree	0	0	0	0%
Disagree	0	0	0	0%
Neutral	5	0	5	33%
OK	3	1	4	27%
Totally agree	6	0	6	40%
Total	14	1	15	100%

Note: Prior knowledge about virtual communication channels in SMEs

The results obtained from the study on familiarization with virtual communication channels show a complete absence of negative responses, with 0% of respondents “strongly disagree” and “disagree” with their familiarization. 33% of participants remained Neutral, suggesting confusion or a basic level of knowledge in the use of tools. On the other hand, a significant majority, with 67% of positive responses (27% agree and 40% fully agree), demonstrate a high level of comfort and competence in the use of virtual communication channels. In view of the results, it is very encouraging, as it suggests that most individuals feel comfortable and familiar, which is crucial in an increasingly modern environment. However, a portion of neutral responses highlights the need to reach an optimal level of familiarization.

Table 3

The use of social networks (WhatsApp) within SMEs has improved the relationship between work teams

Alternative	Efficiency in communication			Percentage
	Small	Median	Total	
Never	0	0	0	0%
Hardly ever	0	0	0	0%
Occasionally	1	0	1	7%
Almost always	5	1	6	40%

Always	8	0	8	53%
Total	14	1	15	100%

Note: WhatsApp within SMEs has improved the relationship between work teams.

The study on the use of WhatsApp in SMEs and its impact on relationships between work teams shows mostly positive results. Thus, respondents indicated that the use of WhatsApp “Never and Almost Never” improves work relationships, suggesting that this tool does not have a negative impact on communication between teams. Only 7% of participants mentioned that it improves relationships “Occasionally”, while 40% indicated “Almost Always” and 53% “Always”. The results show that the vast majority (93%) of respondents perceive WhatsApp as an effective tool to improve interaction and collaboration between work teams. The absence of negative responses and the predominance of positive responses highlight the importance of WhatsApp in facilitating more fluid and efficient communication in SMEs. Therefore, it is recommended that SMEs continue to use and optimize its use to strengthen work relationships and improve task coordination.

Table 4

Communication and interaction between collaborators using WhatsApp is easy

Satisfaction with virtual channels				
Alternative	Small	Median	Total	Percentage
Totally disagree	0	0	0	0%
Disagree	0	0	0	0%
Neutral	4	0	4	27%
OK	5	1	6	40%
Totally agree	5	0	5	33%
Total	14	1	15	100%

Note: Communication and interaction between collaborators using WhatsApp in the SMEs.

As can be seen, the ease of use of WhatsApp to communicate and interact between collaborators shows positive results. It was possible to analyze that in the alternatives “Totally disagree and Disagree”, it was observed that no respondent found it difficult to use the WhatsApp social network for professional communication. 27% of respondents remained neutral, indicating moderate acceptance with a basic level of familiarity. However, a clear majority (73%) responded positively, with 40% “agreeing” and 33% “totally agreeing”, and most employees accept that the WhatsApp social network is easy to use. These results are effective for interactions in the work environment. These results suggest that it is a useful tool for communication between work teams. The absence of negative responses and the large number of positive responses indicate wide acceptance

and ease of use. However, the percentage of neutral responses suggests that incorporation can be improved through training programs and better digital communication practices.

Table 5

Phone calls allow you to resolve customer issues or concerns more efficiently

Alternative	Impact on customer relations			Percentage
	Small	Median	Total	
Totally disagree	0	0	0	0%
Disagree	0	0	0	0%
Neutral	3	0	3	20%
OK	6	1	7	47%
Totally agree	5	0	5	33%
Total	14	1	15	100%

Note: Resolving problems or concerns through phone calls.

The results of the study on the effectiveness of phone calls in resolving customer issues and concerns indicate a largely positive perception. No negative reactions were noted, meaning that no respondents consider phone calls to be inefficient. A full 20% remained neutral, suggesting a moderate to varying perception of effectiveness depending on the situation. A significant majority, with 47% responding “agree” and 33% responding “strongly agree,” indicates that 80% of participants viewed phone calls as an effective tool for resolving customer issues. These results imply that phone calls are widely accepted as an effective method for resolving issues and providing support.

Table 6

Connectivity is a problem during video conferencing and chatting

Alternative	Challenges and barriers in the use of virtual channels			Percentage
	Small	Median	Total	
Totally disagree	0	0	0	0%
Disagree	2	1	3	19%
Neutral	4	0	4	27%
OK	4	0	4	27%
Totally agree	4	0	4	27%
Total	14	1	15	100%

Note: Connectivity represents inconsistencies during a video conference and using WhatsApp.

The results reveal that perceptions of connectivity during videoconferences and chats are varied, although with a tendency towards identifying problems. 19% of respondents “disagree” and 27% remain neutral regarding the statement that connectivity represents a

problem, 54% of respondents (27% “agree” and 27% “strongly agree”) acknowledge that there are difficulties with connectivity on these platforms. These results show that, although there is a minority that does not experience major problems and a neutral consensus that could have a mixed perception due to varying experiences, the majority recognizes that connectivity can be an obstacle during virtual interactions. This highlights the importance of improving the technological infrastructure and offering adequate support to optimize the user experience and ensure efficient and fluid communication in the work environment.

Discussion

To carry out this section, the following question will first be answered: Is it possible to improve the level of knowledge of the use of virtual communication channels in SMEs?

When any member of an SME does not have solid knowledge on a certain subject, it will cause a low level of knowledge and even more so when it comes to the use of virtual communication channels; since we are currently in constant evolution with respect to technology, therefore, the human being must keep up with technology. Continuous education for employees will allow them to know more in the short term and be able to take advantage of the benefits of these channels.

To carry out the contrasts with other research, the question of the use of WhatsApp in work teams was considered as a basis, it facilitates communication and interaction and the resolution of problems with telephone calls and connectivity in video conferences.

Regarding the results of the research, it was compared with the research carried out by Duro & Alarcón (2021) where it mentions that 81.3% of respondents say they quite or very much agree with the statement "the information arrives immediately", in this case it is related to this study since for a better relationship to exist between work teams, the information must arrive immediately, therefore in the 7 SMEs it is concluded that the 53% say that the relationship between work teams has always improved thanks to the use of WhatsApp (table 3).

Therefore, it was compared with a news item made by Sánchez (2023), entitled “Connectivity is an important factor for the development of SMEs”, where it establishes that the Special Report: Small Business Trends reports that 55% assure that communication channels must adapt to new interaction needs, make communications more flexible and strengthen relationships with consumers, on the contrary, respondents agree (40%) that using WhatsApp is easier for them for communication and interaction between collaborators.

A phone call allows the resolution of customer problems or concerns more efficiently, since it is a direct way to communicate with them (in SMEs, 80% of employees say that

it does help), while, in a study carried out by Torres-Cortset al. (2021) mention that 41% resolve different doubts through calls and this is because most companies, regardless of their size, are more formal and are governed by a service line where the client can go to resolve doubts, concerns or problems.

Finally, connectivity will always be a limitation for those people who do not have a good Wi-Fi signal, which is why in SMEs there are 81% of employees for whom it does represent a problem. problem during video conferencing (Zoom, Google Meet and Teams) and social network (WhatsApp), on the other hand, according to INEC (2022), they mention that only 40% represents a limitation for them since they do not have internet or cannot pay for it.

Conclusions

- It is concluded that a large part of the respondents are familiar with virtual communication channels, which allow for a greater flow of information, but there is also a significant number that should be given attention and trained on the virtual channel system in order to update them on technological knowledge and thus disseminate important information to the people who require it.
- It has been concluded that WhatsApp plays a very important role in SMEs, offering several specific benefits, respondents have stated that using this application is very important and easy to use and has diverse functionalities, that by adopting them in SMEs they can maintain an easy fluidity of communication between clients, suppliers and business partners, allowing to maintain stable and reliable business relationships, taking into account that when creating a WhatsApp for the company, there is the possibility of a backup allowing to recover all information related to the company, for this reason strengthening the learning about this application, allows a better management of it.
- It is concluded that WhatsApp is a technological application that plays a very important role in the process of transferring information, because it allows to strengthen work relationships and facilitates the coordination of activities, the most important thing is that it facilitates interaction with people from different places in the world, allows you to save chats, photographs, videos, it is easy to use, you only need to connect to data and there is no limit to sending messages, this facilitates interaction between people, most of those surveyed say they are satisfied with this application, but at the same time it is important to provide more information and training to the minority of people who do not know much about it, in order to be on par with technological advances.
- It is concluded that, according to the respondents, the vast majority agree that telephone calls in the context of SMEs are an essential tool to resolve concerns or problems in a personalized way, demonstrating interest in the opinion of each of

them, contributing to customer relations by effectively responding to their concerns, but the smaller part that focuses on neutral must always be taken into account, because they need more information about the benefits of telephone calls, which allows for improving the dissemination of information and reaching more people.

- It is concluded that connectivity in videoconferencing and chat can negatively impact the effectiveness and ease of information flow. Most of those surveyed have stated that connectivity is a problem in communication, for this reason it is important not only to manage these platforms but to look for new alternatives. It is also important for companies to invest in reliable network infrastructure, as well as in advanced communication technologies that can adapt to variations in connection quality, thus guaranteeing a more stable and effective communication experience.

Conflict of interest

There is no conflict of interest in relation to the submitted article.

Bibliographic References

Alcántara Hernández, RJ, Cerón Islas, A., Peñaloza Otero, ME, & Figueroa Velázquez, JG (2022). Instant messaging as a media ecosystem under the INNIS model. An analysis of its social and technological impact. *FACE: Journal of the Faculty of Economic and Business Sciences*, 21(3), 34–48. <https://doi.org/10.24054/face.v21i3.1133>

Alcívar Hidalgo, KA, & Sánchez Briones, YA (2021). Facebook as a Social Media Marketing tool in times of Pandemic (Covid-19). *Venezuelan Journal of Management*, 26(96), 1321-1335. <https://doi.org/10.52080/rvgluz.26.96.20>

Almaguer-Pérez, D., & Hernández-Yeja, A. (2021). Good practices for the secure deployment of the email service. *Scientific Journal*, 41(2), 199-212. <https://www.redalyc.org/journal/5043/504371973006/html/>

Cabello, S.A., & Giró Miranda, J. (2020). Communication channels and strategies of the educational community. *Ehquidad: The International Journal of Welfare and Social Work Policies*, (13), 79-98. <https://www.redalyc.org/articulo.oa?id=672174443004>

Calero González, M.A. (2020). WhatsApp and internal communication at Promart, Santa Clara, 2019 [Undergraduate thesis, César Vallejo University, Lima, Peru] https://repositorio.ucv.edu.pe/bitstream/handle/20.500.12692/52455/Calero_GMA-SD.pdf?sequence=1&isAllowed=y

- Campines Barría, FJ (2023). Instagram social network and its functions applied to business marketing. *Ciencia Latina Multidisciplinary Scientific Journal*, 7(4), 3489-3499. https://doi.org/10.37811/cl_rcm.v7i4.7204
- Conislla, A. (2021). Virtual communication as a means of communication [Essay]. San Juan Bautista Private University Association. https://www.researchgate.net/publication/356814269_La_Comunicacion_Virtualcomo_Medio_de_Comunicacion
- Duro, L. & Alarcón, P. (2021). Study on the use of WhatsApp within an organization: Recommendations for use that contributes to the maintenance of relationships between workers. *Institute of Occupational Safety - IST*. <https://www.ist.cl/wp-content/uploads/2021/04/ESTUDIO-SOBRE-EL-USO-DE-WHATSAPP-AL-INTERIOR-DE-UNA-ORGANIZACION-RECOMENDACIONES-PARA-A-USE-WHICH-CONTRIBUTES-TO-CARE-OF-THE-RELATIONSHIPS-BETWEEN-THE-WORKERS..pdf>
- Goerzig, D., & Bauernhansl, T., (2018). Enterprise architectures for the digital transformation in small and medium-sized enterprises. *Procedia CIRP*, 67, 540-545. <https://doi.org/10.1016/j.procir.2017.12.257>
- Guerra Castellón, E.E., Núñez Torres, E., Velastegui López, L.E., & Mena Guevara, J.G. (2024). Diagnosis of the social networks of the mintur accommodation business groups. *Digital Explorer*, 8(2), 59-74. <https://doi.org/10.33262/exploradordigital.v8i2.2961>
- Guevara Alban, GP, Verdesoto Arguello, AE, & Castro Molina, NE (2020). Educational research methodologies (descriptive, experimental, participatory, and action research). *Recimundo - Scientific Journal of the World of Research and Knowledge*, 4(3), 163-173. <https://www.recimundo.com/index.php/es/article/view/860/1363>
- Hernández González, Osvaldo. (2021). Approach to the different types of non-probabilistic sampling that exist. *Cuban Journal of Comprehensive General Medicine*, 37(3), http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S0864-21252021000300002&lng=es&tlng=es.
- Leturia, MF, Mongelos, VA, Gochicoa, AE, & Cerdá, F. (2021). Analysis of the general legal aspects of digital videoconferencing platforms and, in particular, of ZOOM. *Perspectives*, (3), 56-66. <https://revistas.ucalp.edu.ar/index.php/Perspectivas/article/view/143>

- Moreta Rivera, A. X., Verdesoto Bastidas, A. V., & Benavides Echeverría, I. E. (2023). The relationship between financial stress and the productivity of workers who make up the TESSACORP group of companies in the period 2022. UTC Prospects "Journal of Administrative and Economic Sciences, 6(1), 24-38.<http://investigacion.utc.edu.ec/index.php/prospectivasutc/article/view/496>
- Rodríguez, M., & Mendivelso, F. (2018). Cross-sectional research design, Sanitas Medical Journal, 21(3), 141-147.<https://revistas.unisanitas.edu.co/index.php/rms/article/view/368>
- Romero Reyes, RJ, Rico Lugo, SD, & Barón Velándia, J. (2012). Impact of an ERP system on the productivity of SMEs. Tecnura, 16(34), 94-102.<https://www.redalyc.org/pdf/2570/257024712009.pdf>
- Saavedra Tenesaca, JA, Tenecela Espinoza, DA, & Araujo Ochoa, GI (2023). Analysis of the importance of SMEs in the economy of Ecuador. Visionario Digital, 7(4), 196-211.<https://doi.org/10.33262/visionariodigital.v7i4.2779>
- Sánchez, J. (2023). Connectivity is an important factor for the development of SMEs. El Universo.<https://www.eluniverso.com/noticias/economia/la-conectividad-es-un-factor-importante-para-el-desarrollo-de-las-pymes-nota/>
- Ecuadorian Standardization Service [INEN]. (2024). SMEs and Popular and Solidarity Economy Organizations are a key piece for the country's economy.<https://www.normalizacion.gob.ec/mipymes-y-organizaciones-de-economia-popular-y-solidaria-son-una-pieza-clave-para-la-economia-del-pais/>
- Terrón García, Paula. (2019). Digitalization, from option to obligation [Undergraduate thesis, Comillas Pontifical University, Madrid, Spain].<https://repositorio.comillas.edu/xmlui/handle/11531/27896>
- Torres-Corts, AM, Díez, B., López-Arellano, EM, & Pena-Pachón, L. (2021). Impact of telephone calls in a home hospitalization unit. Hospital a Domicilio, 5(3), 153-159.<https://dx.doi.org/10.22585/hospdomic.v5i3.133>
- Ugando Peñarte, M., Sabando, A., Zapata, A., Villalón, A., & Sabando, B. (2019). Financial modeling and forecasts of external funds required in the context of SMEs in Santo Domingo de los Tsáchilas, case of Ecuador. Sinapsis, 11(2), 65 – 78.<https://app.eam.edu.co/ojs/index.php/sinapis/article/viewFile/226/418>

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