

The Role of Telecommunication Technologies in Communication

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Abstract: *As I grew up, I could see technology “growing up” as well. By “growing up” I mean evolving. I could see my own family going from no phone in the house and using the only landline phone around, owned by a neighbour, or going a few kilometers away to use a “card phone”, i.e. a public coin- and phonecard-operated payphone, to having mobile phones with “buttons” and then computers, and now, to having touchscreen phones, always connected to the Internet, being able to transfer money any minute, day or night, to videocall me, or to read the news. However, with the unlimited access to information and apps for different purposes also comes danger. Unfortunately, my family’s data has somehow been leaked, probably due to online shopping, and consequently, we receive phishing messages quite often. Luckily, we have been reading about them and so far, we have never been victims of such cyberattacks. The aim of this research paper is to describe the evolution of telecommunication technologies in communication.*

Keywords: *communication, evolution, telecommunications, technologies, telecommunication technologies*

1. Introduction

Today's well-known concept of "access to information" had a long way to go until it ended up the way we know it nowadays. Before, people could read the news only from the newspaper. It was delivered once a day, and they could only read about the events that had happened the previous days and maybe some forecasts. It was impossible to learn about the live events that were happening. Some time ago, the only way to communicate with people was through letters, fax, and then, landline phones.

Television, the way we know it today, was developed through a series of innovations in the US and the UK between 1920 and 1930. Today, we benefit from slim screens, a lot of colours and high-definition resolution. Letters have become text messages, and there is no longer need to wait until meeting someone - we can now videocall!

Communication, with everything it includes, has gone a long way to become the way we know it today.

2. Evolution of communication

The origins of human communication are based on spoken language, which enables people to convey information, emotions and develop social relationships. Oral stories and traditions play a vital role in the transmission of knowledge and culture from generation to generation.

The appearance of writing around 3200 BC revolutionised communication. The earliest forms of writing, such as cuneiform and hieroglyphs, allowed information to be recorded and transmitted over greater distances and across generations. The Phoenician alphabet, and later, the Greek alphabet, simplified writing and expanded access to knowledge.

The development of writing materials, such as papyrus in ancient Egypt and parchment in ancient Greece and Rome, facilitated the creation and dissemination of written documents, allowing for better preservation of information.

Johannes Gutenberg's invention of the printing press in the 15th century was a major leap in communication. Printing enabled the mass production of books and other written materials, democratized access to education and information, and spurred the Renaissance and Reformation.

In the 19th century, the invention of the telegraph and the telephone revolutionised long-distance communication. The telegraph enabled the rapid transmission of messages via the Morse code, while the telephone facilitated direct voice communication, shortening distances and improving response times.

In the 20th century, radio and television brought information and entertainment directly into our homes. Radio enabled large-scale broadcasting of news and programs, and television added a visual dimension and became a major source of information and entertainment.

The advent of computers and the Internet in the second half of the 20th century ushered in a new communication era. The Internet has changed the way we get information, communicate and collaborate, enabling instant exchange of global data.

With the advent of messaging apps, written communication has become much simpler, faster and more efficient in conveying personal and professional messages. And hence, communication started to evolve more and more quickly.

And hence, communication started to evolve more and more quickly. Communication has undergone a significant transformation in the last twenty years, thanks to the emergence of social networks such as Facebook, Twitter, Instagram and LinkedIn. These platforms have revolutionized the way we connect with others, enabling instant interactions and the creation of online communities. They have become

indispensable tools for cultivating personal connections, facilitating business growth, and spreading valuable information.

The introduction of smartphones merged multiple communication functions into one portable device. They have transformed communication through constant accessibility and through applications that facilitate interaction and information.

Today, artificial intelligence and virtual assistants such as Siri and Alexa are improving the communication experience even more, by providing personalized assistance and automating daily tasks.

The evolution of communication has been characterized by continuous innovation, with each stage bringing significant improvements to the way people transmit and receive information. From oral communication to advanced digital technologies, progress has been constant and has had a profound impact on society.

Today, we have various communication channels, such as face-to-face channels, which include interviews, public statements, courses and speeches; written channels, which include newspapers, posters, letters, books and press releases; and last but not least, technological channels, which include television, radio, computers and telephones.

To maximise communication impact, the channel should be chosen carefully. To this end, several aspects should first be considered, such as the target audience, the information being conveyed or the prior knowledge that the receivers may or may not have related to the topic.

3. Evolution of telecommunication technologies

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Mobile communication refers to the technologies and services that facilitate the transmission of voice, data and multimedia between mobile devices, such as mobile phones, cellular networks or various telecommunications standards that make possible the mobility of users and access to the Internet from anywhere. Mobile communication is not only limited to smartphones, but also includes other portable devices such as tablets or laptops.

Mobile communication began in the 1940s, with the appearance of the first mobile radio networks, used by emergency services or the armed forces. Given that it was the first time the world came into contact with mobile networks, it should be mentioned that they were limited to a small coverage area, and radio frequencies were used for voice

transmission. With the advent of the first generation of mobile communications (1G), only 40 years later, analog technology was used, and voice calls were also facilitated. However, the first mobile communications technologies limited the capacity and quality of calls.

In the 1990s, the second generation (2G) brought the switch to digital technology, offering better sound quality and introducing text messaging (SMS) services. 2G marked the beginning of the modern era of mobile communications, allowing not only voice calls but also simple data transmission. In the early 2000s, the third generation (3G) enabled higher data speed and mobile Internet access, paving the way for complex mobile applications and multimedia.

The fourth generation (4G), launched around 2010, revolutionized mobile communications by offering data speed up to 100 times faster than 3G, enabling high-quality video streaming and online gaming. Today, the fifth generation (5G) promises even higher data speed, ultra-low latency and the ability to connect large numbers of devices simultaneously, transforming the Internet of Things (IoT) and other advanced applications.

4. Conclusions

In conclusion, human communication has evolved dramatically from its origins in spoken language to the advanced digital technologies of today. Initially, oral stories and traditions were crucial for passing down knowledge and culture. The advent of writing around 3200 BC marked a revolutionary shift, allowing information to be recorded and transmitted over distances and across generations. Innovations such as the Phoenician and Greek alphabets, papyrus, parchment, and Gutenberg's printing press further democratized access to information and spurred societal advancements.

The 19th century saw the telegraph and telephone revolutionise long-distance communication, while the 20th century introduced radio and television, bringing information and entertainment into homes. The rise of computers and the Internet in the late 20th century ushered in a

new era of instant global data exchange. Social networks and smartphones have further transformed communication, making it more accessible and efficient.

Today, artificial intelligence and virtual assistants enhance the communication experience by providing personalized assistance and automating tasks. The evolution of communication channels (face-to-face, written, and technological) mirrors continuous innovation, each stage significantly improving how people transmit and receive information. To maximise communication impact, it is essential to carefully choose the appropriate channel, considering the target audience, the information being conveyed, and the receivers' prior knowledge.

In light of the present research, it can be argued that it is not easy to consider other perspectives and manage a difficult situation, but surely empathic communication can be very helpful in a work team. The findings only apply to the HR department at FORVIA HELLA Timișoara. There are, however, some general guidelines. The Empathic communication guide provides the following seven tips: Put yourself in the other person's position, Be honest, Listen actively, Be understanding, Investigate, Be supportive, and Make compromises.

The results confirm some of the theories, such as claiming that nonviolent communication is an intelligent strategy in the internal communication of an HR department. Empathy completely changes the work environment and increases communication quality. Moreover, it may even improve efficiency and facilitate authentic connections within a professional group. It is also interesting that empathic communication is an ingenious way to solve difficult situations or conflicts among group members. As a negotiation strategy, the art of collaboration dominates in this context, because emphasis is placed more on relationships than on interest. Of course, creativity and out-of-the-box thinking can only bring advantages to the group. Channeling energy towards the creative resolution of any difficult situation is indisputable evidence that

nonviolent communication can be used as a smart negotiation strategy, in both personal and professional life.

Bibliography:

1. Anescu, A. *Utilizarea tehnologiilor de comunicații în comunicare, Dissertation paper*, June 2024, pp. 8-9.
2. *** <https://ro.pinterest.com/pin/145170787981203774/> (last accessed June 2024).
3. *** <https://ro.pinterest.com/pin/111323422032489189/> (last accessed June 2024).
4. *** ChatGPT <https://chatgpt.com/> (last accessed June 2024).