Impact of Communication Technology on Human Communication

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Abstract: *This research aims to investigate the effects of communication technology on human communication, with particular emphasis on the younger generation. The emergence of various digital communication tools, such as smartphones, social media, and the internet, has enabled faster and more convenient communication. In this regard, there is a fundamental shift in human communication from face-to-face interaction to digital media. Although digital media have facilitated global connectivity, there are concerns about the negative effects of digital media on human interaction, communication skills, and emotional intelligence. In particular, the use of digital media for communication results in distractions, decreased empathy, and shallow relationships due to the lack of non-verbal cues. Nevertheless, digital media have facilitated the maintenance of long-distance relationships and teamwork. Quantitative research methods were used to obtain data from 250 participants. The research revealed that there is an increasing trend towards digital communication among young people, but face-to-face communication is also necessary for emotional clarity and connection. The research concluded that a combination of digital and traditional communication is necessary for effective human interaction in the digital age. .*

Keywords*:* Communication Technology, Face-to-Face Interaction, Youth, Digital Era, Social Interaction, Technology Impact, Information Sharing, Network Society, Techno Ference

I. INTRODUCTION

Communication is the foundation of humanity. Through communication, people can share their ideas, express their feelings, and establish relationships. Communication, from simple gestures and oral traditions, through the development of writing and print media, has constantly been evolving alongside the development of civilization. However, the development of communication technology has taken the greatest leap forward, from the analogy age into the digital age.

The rapid development of communication technology has significantly impacted the manner in which people communicate. The development of communication technologies, including the use of smart phones, social media, instant messaging, and internet-based communication tools, has replaced conventional communication tools. According to Marshall McLuhan (1964), "the medium is the message," implying that the manner of communication not only influences the message but also influences the manner in which people think and behave.

In the digital age that we live in today, it is possible to connect with people in an instant regardless of where they are on the globe, access information in a matter of seconds, and form relationships without physical proximity to one another. This phenomenon was termed the "network society" by Manuel Castells in 1996, where digital networks reshape information flows and communities in society. This is undoubtedly a new dimension in terms of connectivity among humans.

The digital revolution that we are witnessing in society also comes with its own set of problems and concerns. While it is able to bridge physical distance among people, it also creates an emotional distance among them in the process. The

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digital revolution that we have witnessed in society in recent times has also led to a decline in face-to-face communication among people, non-verbal communication skills, and also phenomena like "techno Ference," where digital devices disrupt social interactions among people in real life. It is the youth who are at the center of this revolution. The youth are the most frequent and early adopters of communication technologies, and it is through communication technologies that the youth communicate, socialize, learn, and express themselves. The importance of understanding this particular generation's perception of communication, both through technology and face-to-face, and their level of distraction through the use of communication technologies, as well as their overall level of skill through their exposure to communication technologies, cannot be overstated.

It is from this understanding that this study aims to investigate the impact of communication technologies on human communication, particularly among the youth. The findings of this study are expected to inform educators, policymakers, and parents of effective ways of promoting healthy communication among the youth.

II. REVIEW OF LITERATURE

Dzigal & Adjaip-Velichkovski (2025) studied the effects of excessive social media usage on youth aged between 18-25 years. Excessive social media usage resulted in reduced attention spans due to notifications from social media, with students disrupting learning processes to check their notifications. In addition, online validation affected their self-esteem, causing anxiety, emotional instability, and hence the need for digital literacy training and emotional intelligence training.

The effects of smartphones, social media, and digital media on families by Kyalo (2024) involved desktop research. Technology helps people connect with each other instantly, irrespective of their distance. Excessive reliance on technology, however, results in reduced face-to-face interactions, causing damage to emotional relationships. The research noted "technoference" as a contributor to conflicts in families, with the need for digital boundaries, interaction time, and parental mediation.

Sharma & Takhar (2024) researched the way in which smartphones violate ethical standards of communication through case studies and literature surveys. Although smartphones increase connectivity, they result in "divided attention," misunderstandings caused by the lack of non-verbal cues, and privacy risks caused by excessive sharing. The research indicates that ethical knowledge and responsible use of smartphones are essential for the development of interpersonal communication in the digital world.

Syalwa, Mzuhaffar & Fadillah (2024) researched the influence of digital technology on interpersonal communication among communication science students through observations and interviews. Although digital technology expands social circles and access to knowledge, students who spend 10-15 hours a day using digital devices prefer online relationships to face-to-face relationships and lack nonverbal skills. It is necessary for educational institutions to encourage group discussions and cooperative learning to develop interpersonal communication.

Shanmugasundaram & Tamilarasu (2023) discussed the effects of digital technology, social media, and AI on cognitive functions. The consequences of excessive use of digital technologies include "continuous partial attention," information overload, and "digital dementia." The consequences of digital addiction include emotional regulation through the brain's reward system. However, it also promotes learning and productivity, making it imperative for balanced engagement and research.

OBJECTIVES OF THE STUDY:

1. To examine youngsters' perceptions of digital communication in comparison with face- to-face communication.
2. To analyse the influence of digital devices on attention, presence, and engagement during face-to-face communication.
3. To assess the impact of digital communication on interpersonal and communication skills.

HYPOTHESIS:

H0: There is no significant difference in youngsters' perception of digital communication and face-to-face communication.

H1: Digital device usage has no significant effect on attention during face-to-face communication.

RESEARCH QUESTIONS:

1. What are youngsters' perceptions of digital communication compared to face-to-face communication?
2. How do digital devices influence attention levels during face-to-face communication among youngsters?

III. RESEARCH METHLODOGY

The study, which is titled "Impact of Communication Technology on Human Communication," employed a quantitative research approach in assessing the impacts of digital technologies on the communication process, especially among the younger generation. Quantitative research is an empirical research approach that is concerned with the collection and analysis of numerical data in order to establish patterns, associations, and outcomes. In the study, data was collected in a structured form from the sample population using the survey method.The research design highlights the importance of measurable variables, including the use of digital devices, level of attention, communication style, and interpersonal skills. Independent variables are considered, which include the use of communication technology, while dependent variables are communication behaviour, communication engagement, and skill development. Using statistical tools, including frequency, cross-tabulation, and ANOVA, using SPSS software, the research examines the relationship between the variables, including hypotheses.The quantitative method enables the researcher to generalize the results to a larger population because the sample is large enough to represent the population adequately. The results demonstrate that a large number of participants prefer digital communication, implying that the world is moving away from face-to-face communication. However, the results also imply that overdependence on digital media is affecting the level of attention, emotional intelligence, and communication skills. Overall, the quantitative method is a systematic, scientific, and empirical approach to understanding the role of communication technology in shaping the way people interact in the modern world.

IV. FINDINGS / RESULT

Frequency test has been done for all the questions and Pearson Correlation is done for two variables.

Questions

Do you find digital communication is more convenient than face to face interaction?

Do you believe face-to-face communication is more meaningful than digital communication?

Descriptives

Descriptives - Digital Convinience

F2F Meaningful	N	Mean	SD	SE	Coefficient of variation
Yes	230	1.317	0.466	0.031	0.354
No	21	1.524	0.512	0.112	0.336

Results

ANOVA

ANOVA - Digital Convinience

Cases	Sum of Squares	df	Mean Square	F	p
F2F Meaningful	0.820	1	0.820	3.707	.055
Residuals	55.07	249	0.221		

Note. Type III Sum of Squares
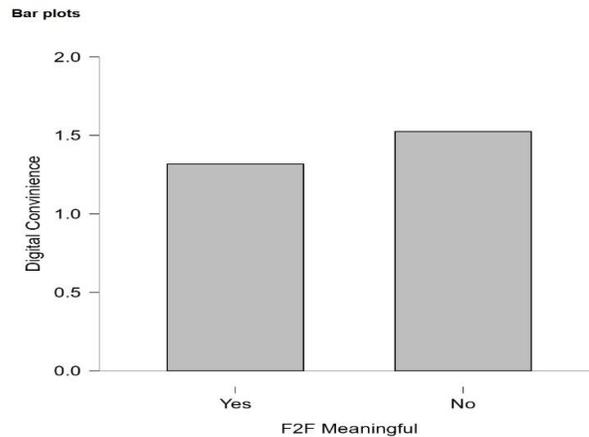
ANALYSIS:

The ANOVA results show an F value of 3.707 with a p-value of 0.055 for digital convenience.

Since the p-value is slightly above 0.05, the result is not statistically significant at the 5% level.

Descriptive statistics indicate that respondents who said "No" (Mean = 1.524) have slightly higher scores than "Yes" (Mean = 1.317).

INTERPRETATION:

There is no strong evidence to conclude a significant difference in digital convenience based on face-to-face meaningfulness. However, the p-value is close to 0.05, suggesting a marginal or borderline effect. This implies that face-to-face meaningful interaction may have a slight but not statistically confirmed influence on digital convenience.

FINDINGS:

- Majority (50.2%) of respondents are aged 18–20 years.
- Female respondents (51%) are slightly higher than males (49%).
- Most respondents are undergraduates (66.1%).
- A large portion (37.8%) spends 2–4 hours daily on screens.
- Majority (72.1%) prefer digital communication over face-to-face.
- Most respondents (94.4%) believe face-to-face communication helps understand emotions better.
- About 66.5% find digital communication more convenient.
- Majority (67.3%) feel more confident expressing themselves digitally.
- A very high percentage (92.4%) believe face-to-face builds stronger relationships.
- Around 58.6% replace in-person conversations with texting.

V. CONCLUSION

This research also shows that communication technology has profoundly influenced the communication and interaction of individuals, especially youths. The increased use of communication technology, including smartphones and social media, has revolutionized communication to be faster, more convenient, and boundary-less. Despite the benefits of communication technology, face-to-face communication is irreplaceable. The majority of the participants agreed that communication plays a critical role in understanding emotions using non-verbal communication, such as facial expressions, tone of voice, and body language, which are not possible in communication technology. The increased dependency on communication technology may impair communication skills and increase social isolation. The impact

of communication technology is two-fold: it promotes communication and information sharing, but it also undermines the quality of human interaction. For introverts, communication technology may be a confidence booster, but it is a point of worry. In conclusion, it is important to have a balanced and mindful approach to communication technology. In order to preserve meaningful human relationships in this digital age, it is important to integrate digital convenience and the richness of face-to-face interaction.

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