Analysis of Types in Business Communication using the TOPSIS Method

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Abstract. *Information interchange between employees and others outside the corporation is referred to as business communication. To accomplish organizational objectives, managers and staff interact with one another through effective communication. This seeks to reduce mistakes and enhance administrative procedures. The four basic types of communication are verbal, non-verbal, visual, and written communication. The four primary business communication styles are typically upstream, downward, sideways, and external. Within a company, there is no "correct" method of communication. Therefore, communication is a means to make communication between people easier, understandable, and, above all, clear. In everyday language, means of communication are often equated with media. Communication is key in business to provide bold, concise statements regarding branding, strategy, and customer service. A company builds a brand that conveys a consistent message that is specific to its target market. Internal communication fosters teamwork and cooperation and helps employees and management get along. Relationship building with your team, consumers, and stakeholders demands good communication. Poor communication can destroy relationships, which may also result in lost sales and a tarnished reputation. Improving your communication skills with your team, suppliers, and customers is crucial for workplace interaction and raising employee productivity. Through communication, different programs and policies, crucial issues, organizational goals, and other topics are communicated to employees, improving their knowledge and enhancing their ability to carry out their duties more effectively. Communication research is at the cutting edge of theory and research in the communication field. It serves as a global forum for academics and professionals interested in recent findings in the domains of communication and related areas. Three different types of communication can be distinguished: verbal communication, which involves asking questions; textual communication, which involves interpreting someone's meaning and asking them to clarify what they mean; and nonverbal cues, which entail observing someone and inferring their intentions. Communication is fundamental to self-expression and meeting one's needs. The ability to communicate effectively is crucial for career progress. Effective communication abilities can help you comprehend and understand others, easing your path and interactions with people in your daily life. The TOPSIS method of ranking is evaluated based on enhanced ambiguity comparison with weighted average. Multiple response is one of the typical approaches used in TOPSIS to improve problems, reduce uncertainty, determine the weight of each response, and manage it continuously. Types of business communication include personal communication, external communication, formal communication, informal communication, mass communication, vertical communication, horizontal communication, and downward communication. Communication can be categorized based on the parties involved, formality, and other types. Personal communication ranks first, while formal communication has the lowest rank among the types of business communication.*
Keywords: MCDM, Internal communication, External communication, Formal communication, Informal communication and Downward Communication.

1. INTRODUCTION

The awareness of one's own historic past and sense of belonging, acquired through formal or informal association with communities that share similar knowledge, values, beliefs, attitudes, practices, and ways of life, should be emphasized more in business communication. This new emphasis adds to the field's longstanding interest in understanding how other people perceive collective group culture, without taking away from it. The benefits of nationality in the past could be diminished by a broader understanding of cultural identification. It is important to emphasize factors that are directly relevant to business, such as social class and industry affiliation, as well as topics that deepen intercultural business communication studies and demonstrate how culture not only unifies people, but also distinguishes them as distinct individuals [1]. Individuals who have landed jobs in legitimate companies do not usually write letters in business community colleges. Instead, they exchange quick faxes back and forth to achieve their objectives while representing their firm. Additionally, during company training, there were numerous inquiries and requests regarding "fax models" — such

as where to find a fax manual, the proper protocol for sending a fax, and which words or phrases to use to conclude a fax. I got the impression that we were all a bit confused, regardless of whether we were academics, students, or businesspeople [2]. Corporate communication can be either similar or different depending on various factors, such as the course objectives, level or quantity of the course, and often the instructor's academic background. Communication is taught in both English departments as well as professional schools, whereas effective organizational courses are mostly taught as part of the speech-language pathology communication education system in academic institutions. If not acknowledged, regional and ideological loyalties resulting from such variations may highlight the significant differences between the two communication types [3]. Corporate communication skills are crucial in minimizing errors that waste time and money. Miscommunication has a financial cost that can lead to lost production. Professional career advancement and lifelong employment are valuable personal objectives for workers. To achieve career success, Glenn (2008) emphasized the importance of three essential business abilities, including strong communication skills, knowledge, and analytical abilities [4]. Corporate communication specialists and practitioners are aware of what is happening in their firms. The emergence and impact of new internet technologies have enabled new opportunities for dialogue, training, and analysis. One of the most popular interactive online technologies is the computer network known as the Internet, which connects a wide range of computing networks every year. The number of networks connected to the Internet, just the Network (computers acting as gateways to any subnetworks connected to the Internet), increased from 213 in August 1981 to 727,000 in January 1992 to 2,217,000 in February 1994, with a potentially higher number of 20 million users in 146 countries [5]. Given the constraints of time in business data transmission classrooms and the concerns of business management lecturers about covering everything in the course (Wardrobe & Bayless, 1999), a didactic dilemma arises: What additional subjects should business management instructors cover, and how should they order the subjects in their curricula? To answer these questions, the opinions of interviewers, employers, and students were obtained (Maes, Weldy, & Icenogle, 1997; Peterson, 1997) (McPherson, 1998), and the literature on corporate communication (Plutsky, 1996) and alumni have been extremely helpful. In order to assess the relevance of learning different communication skills, including spoken and written communication abilities, the inquiry solicited the views of another core group of business professors who were not teaching information flow [6]. Business communication is the exchange of both verbal and nonverbal messages within an organization (Murphy, Hildebrand, & Thomas, 1997; Ober, 2001; Roebuck, 2001). According to Hanna and Wilson (1998), business communication involves the creation, transmission, reception, and interpretation of communications in individual, group, public, and mass media contexts. Hines (2005) notes that effective corporate communication is crucial to planning, directing, coordinating, and managing corporate resources to accomplish formal or informal goals. [7]. A formal framework for business writing, called the Formal Speech for Marketing Communications (FLBC), was developed to provide greater expression and flexibility than traditional frameworks. The concept was first introduced in Kimbrough and Lee's seminal paper from 1986, which defined a message as a communication and a speech act as having four components: communicator and listener, illusion, information, and context. FLBC-II further distinguishes three types of speech actions: assertion, request, and query, which can represent various communication types such as read/review/comment messages, staff action alerts (instructions), and reservations (confirmations). A study by Halsne and Kata (2002) examined how different teaching techniques in a course on enterprise communication affected learner-content interactions and found no appreciable differences in learning outcomes among the techniques. Similarly, other researchers (such as White, 2000) have also evaluated this framework and found no significant disparities in learning outcomes between traditional on-campus instruction and digital instruction. [8, 9]. The use of CC facility in internal business communication, such as office memos, is already common practice. However, in the ingrained emails analyzed in this paper, the CC facility is used for slightly different purposes. Additionally, embedded emails are becoming increasingly important as internal documents that can be used as evidence in legal cases. Other internal communication papers, such as office memos, are also used to keep track of business activity. These various forms of internal communication play an important role in ensuring that company communication is effective and that decisions are made based on reliable information [10]. The exploratory design presented in this paper focuses on examining the credibility of company spokespeople and customer reviews represented by quotations in multiple communication vehicles used only by public relations practitioners. By doing so, it brings new awareness and scholarly focus to the significant area of brand trust. The investigation's focus on business-to-business contacts with a merchant audience distinguishes it from earlier studies on source trustworthiness and client endorsements, which mainly concentrated on consumer audiences [11] The paper also highlights the importance of emphasizing the understanding of another's cultural feeling of soul in business communication. By having common information, opinions, values, perceptions, customs, and ways of life, it is possible to develop a broader understanding of cultural identification, including characteristics directly connected to business, such as social class and industrial affiliation. This emphasis can enrich intercultural communications studies and help distinguish culture as a unifying force that also distinguishes people as unique individuals [12].

2. MATERIALS AND METHOD

2.1. *Internal communication:* Effective communication within an organization is a comprehensive process that includes information sharing across pipelines and messaging services to achieve company goals. Communication is shared across teams and the organization in various forms, such as verbal, written, and digital. Video clips and audio messaging are

examples of internal communication that heavily rely on leadership. While providing written documentation of direction and practice changes is important, people need to see a familiar face and hear a familiar voice to get that extra assurance.

2.2. External communication: Messages are the mechanisms that facilitate interaction with people and organizations outside of your own organization, including customers, corporations, suppliers, shareholders, investors, government agencies, and law enforcement. When staff members communicate with individuals or organizations outside of their own company, it is considered external communication. This can include communication with staff members of other firms, clients, stakeholders, and more. Some forms of communication strategies that can be used for external communication include letters, newsletters, online networks, media releases, and social media. Marketing strategies and techniques can also complement each other.

2.3. Formal communication: Formal communication refers to the dissemination of actual news through authorized and predetermined methods and outlets. Due to the constrained information flow, effective communication requires conscious effort. Formal communication follows a chain of command and a hierarchical organizational structure. On the other hand, informal communication is also known as "grapevine" communication, which is different from formal communication. Examples of formal communication include business letters, reports, orders, and more. Examples of informal communication include face-to-face communication, phone discussions, and other forms of dialogue.

2.4. Informal communication: Informal communication is a type of communication that occurs in a natural and unstructured way. The grapevine is another term used for a system of unofficial communication. Informal communication allows information to flow freely in all directions, without concern for authority or position. Examples of informal communication can include talking to someone at the grocery store, writing an email about your holiday, sending a birthday card, or using nonverbal gestures. In the workplace, informal communication is often referred to as the "grapevine".

2.5. Personal communication: Personal communication can take the form of private correspondence, notes, emails, telephone chats, or even personal interviews. As personal messages cannot be retrieved by others, they are only cited in the text and not included in the reference list.

2.6. Mass communication: The dissemination and exchange of information to a large portion of the public through the use of mass media is considered to be mass communication. Thanks to technology, a variety of media can be employed to disseminate information more effectively. Journalism and advertising are two prominent examples of platforms that are commonly used and analyzed.

2.7. Vertical communication: When information is conveyed from one person to another in a linear manner based on their respective positions or hierarchy, this is known as vertical communication. This type of communication is commonly used in organizations that have a hierarchical structure or when there is important and crucial information that needs to be shared vertically.

2.8. Horizontal communication: Horizontal communication, also known as lateral communication, involves communication between individuals, departments, or organizations at the same level within an organization. For example, a conversation between two marketing coworkers who share the same job title and work on the same projects is an example of horizontal communication. As they discuss the status of their work or make decisions about how to complete a task, they are engaging in communication.

2.9. Downward Communication: When a message or piece of information is transmitted from a higher level of hierarchy to a lower level, this is known as downward communication, also referred to as top-down communication. Communicating policies and procedures within the company is an example of downward communication, which ensures that everyone is aware of the regulations they must follow by maintaining compliance with the information provided. Instructions, circulars, and announcements are typical forms of downward communication. On the other hand, upward communication refers to the transmission of information from a lower level to a higher level in the organizational hierarchy. Reports, direct letters, and proposals are common examples of upward communication.

2.10. Communication-based on parties involved Sender: The person who initiates communication and is responsible for transmitting a message to another individual or party is known as the sender. Recipient/Receiver: The recipient or receiver is the individual or party to whom the message is delivered. Communication Channel: The method used to transmit the information is referred to as the communication channel. In communication paradigms, participants in a speech event can be classified as either message senders or message recipients. Message: A message refers to the verbal or nonverbal content that is transmitted from one person to another.

2.11. Communication-based on formality: The communication process refers to the exchange of official information between two or more people within the same organization, typically through authorized channels and established procedures. This can be done through various means, including writing, but the focus is on adhering to organizational protocols. Communication can be classified into two categories based on their formality: formal and informal communication. Formal communication occurs according to the established policies and processes within the business, and often follows a specific structure and tone.

2.13. **Other types of communication:** There are actually five commonly recognized communication techniques: verbal, nonverbal, written, visual, and listening. Each technique has its own unique features and can be used effectively in different situations. Verbal communication involves speaking and listening. It can be formal, such as delivering a speech, or informal, like having a casual conversation with a friend. Nonverbal communication includes body language, facial expressions, and tone of voice. This type of communication can convey emotions and attitudes that may not be expressed verbally. Written communication includes emails, letters, memos, and reports. It allows for precise communication and can be referenced later for clarification or evidence. Visual communication involves using graphics, diagrams, and images to convey information. Listening involves actively paying attention to someone speaking and processing the information they are conveying. In any form of communication, it is important to consider your audience and what you want to convey. Using clear and concise language, maintaining eye contact, and keeping a positive body posture can all help ensure effective communication. And always remember to actively listen to the other person and respond appropriately.

2.14. *Method:* It seems like the text you provided is discussing the TOPSIS (Technique for Order of Preference by Similarity to Ideal Solution) method and its application in decision-making and evaluation processes. The TOPSIS method is a multi-criteria decision-making (MCDM) technique that aims to rank alternatives based on their similarity to an ideal solution and their distance from a negative ideal solution. The text mentions that TOPSIS is an advanced and simple ranking engine that uses multiple response values to reduce uncertainty and determine the weight of each response. It also utilizes attribute records to make decisions. The technique calculates five distance measurements to rank alternatives, and it is often used to identify opportunities that are closest to the grand perfect solution. However, the text also mentions some criticisms of the TOPSIS method, such as the relative significance of the two separations not being considered and the amplification of the problem. Some researchers have proposed modifications to TOPSIS, such as adding a "satisfiability condition" for each criterion and using a max-min operator to eliminate conflicts between uses. Based on the information provided, it seems that TOPSIS is a multi-criteria decision-making method that ranks alternatives based on their distance to the ideal solution. The method uses five distance measurements and considers various factors such as consistency ratio, odds ratio of best alternatives, and mean Pearson coefficients of relationship. While TOPSIS can be useful in decision-making and evaluation processes, it may not always consider all relevant factors and may require modifications for specific applications. One complaint is that the relative significance of the two separations is not considered, and TOPSIS has been amplified to solve the multi-goal selection-making (MODM) problem by introducing a "satisfiability condition" for each criterion, followed by a max-min operator to eliminate conflicts between uses. Thank you for your additional information about TOPSIS. It seems that the method has been applied in various contexts and modified for specific applications. The use of TOPSIS for group decision-making seems promising, and the integration of external weights (EW) in the TOPSIS process can enhance its effectiveness. However, it is important to carefully analyze the impact of EW and consider its potential limitations. Overall, TOPSIS is a versatile tool for decision-making and evaluation, but its effectiveness depends on the specific context and the quality of the input data.

3. RESULTS AND DISCUSSION

TABLE 1. Types of business communication

	Communication-based on parties involved	Communication-based on formality	Other types of communication
Internal communication	0.1090	0.0960	0.1400
External communication	0.0840	0.1100	0.0390
Formal communication	0.0690	0.0836	0.1530
Informal communication	0.1170	0.0954	0.1210
Personal communication	0.0790	0.1040	0.0250
Mass communication	**0.1930**	**0.1320**	**0.1760**
Vertical communication	0.0987	0.0940	0.1200
Horizontal communication	0.0680	0.1430	0.0590
Downward Communication	0.1830	0.1420	0.1670

Table 1 shows the Types of business communication for Analysis using the TOPSIS Method. Communication-based on parties involved, Communication-based on formality and other types of communication Evaluation parameters. Internal communication, External communication, Formal communication, Informal communication, Personal communication, Mass communication, Vertical communication, Horizontal communication and Downward Communication Alternative value.

Figure 1. Shows Types of business communication Internal communication, External communication, Formal communication, Informal communication, Personal communication, Mass communication, Vertical communication, Horizontal communication and Downward Communication from the figure 1 and table 1 it is seen that Mass

communication is showing the Highest Value for Communication-based on parties involved and Horizontal communication is showing the lowest value. Horizontal communication is showing the Highest Value for Communication-based on formality and technologies and Formal communication is showing the Lower value. Mass communication is showing the Highest Value for Other types of communication and Personal communication is showing the lowest value.
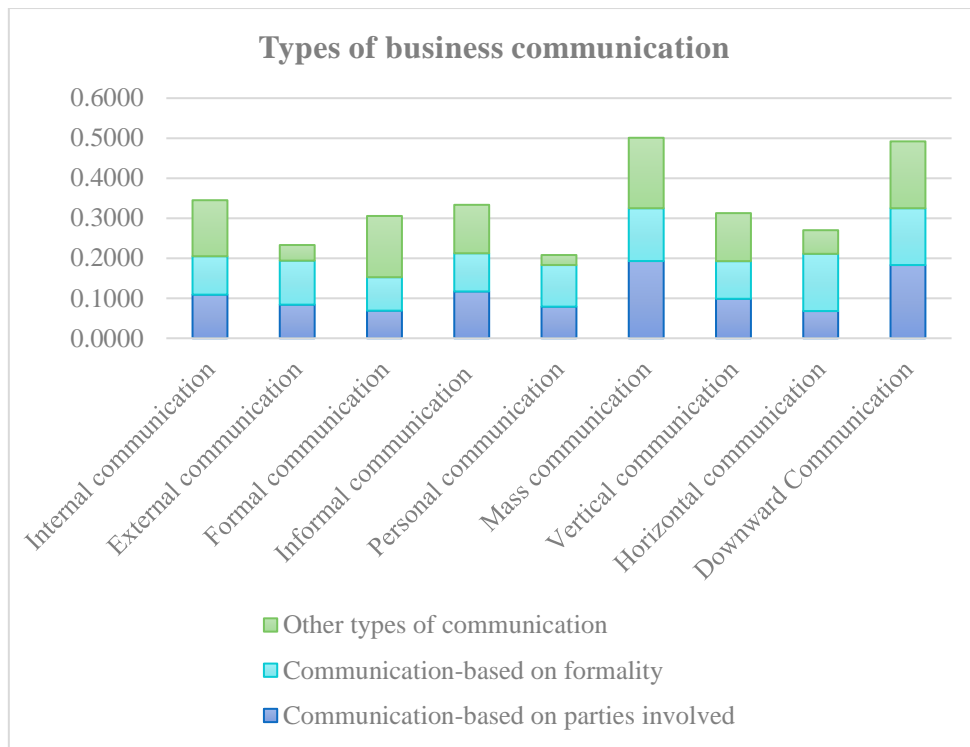

FIGURE 1. Types of business communication

$$X_{n1} = \frac{X1}{\sqrt{((X1)^2 + (X2)^2 + (X3)^2 \dots)}} \quad (1).$$

TABLE 2. Normalized Data

	Communication-based on parties involved	Communication-based on formality	Other types of communication
Internal communication	0.3038	0.2830	0.3789
External communication	0.2341	0.3242	0.1595
Formal communication	0.1923	0.2464	0.6257
Informal communication	0.3261	0.2812	0.4948
Personal communication	0.2202	0.3066	0.1022
Mass communication	0.5379	0.3891	0.7197
Vertical communication	0.2751	0.2771	0.4907
Horizontal communication	0.1895	0.4215	0.2413
Downward Communication	0.5100	0.4186	0.6829

Table 2 shows the various Normalized Data for Communication-based on parties involved, Communication-based on formality and other types of communication Normalized value is obtained by using the formula (1). Table 3 shows Weightages used for the analysis. We take same weights for all the parameters for the analysis.

Figure 2 Normalized Data Communication-based on parties involved, Communication-based on formality and other types of communication Evaluation parameters. Internal communication, External communication, Formal communication, Informal communication, Personal communication, Mass communication, Vertical communication, Horizontal communication and Downward Communication it is also Normalized Data Value.
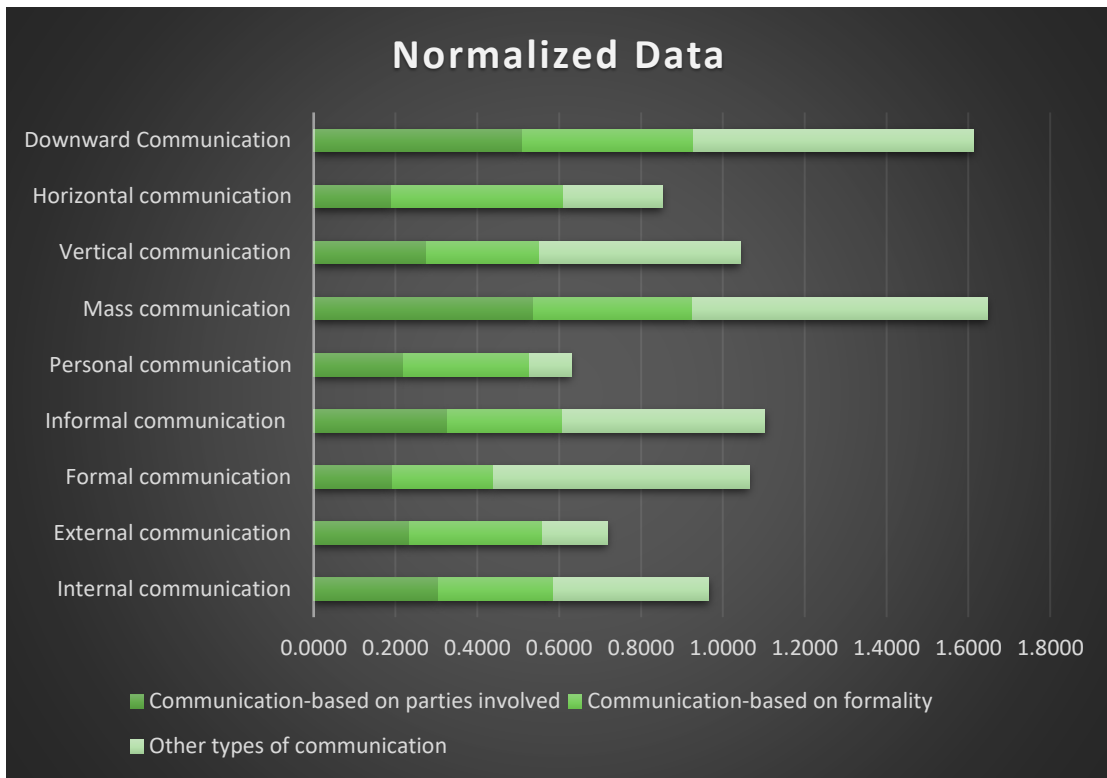
FIGURE 2. Normalized Data

TABLE 3. Weightages

Weightages		
0.25	0.25	0.25
0.25	0.25	0.25
0.25	0.25	0.25
0.25	0.25	0.25
0.25	0.25	0.25
0.25	0.25	0.25
0.25	0.25	0.25
0.25	0.25	0.25
0.25	0.25	0.25

$$X_{wnormal1} = X_{n1} \times w_1 \tag{2}$$

TABLE 4. Weighted normalized decision matrix

Weighted Normalized Decision Matrix		
0.0759	0.0707	0.0947
0.0585	0.0811	0.0399
0.0481	0.0616	0.1564
0.0815	0.0703	0.1237
0.055	0.0766	0.0256
0.1345	0.0973	0.1799
0.0688	0.0693	0.1227
0.0474	0.1054	0.0603
0.1275	0.1046	0.1707

Table 4 shows weighted normalized decision matrix for Communication-based on parties involved, Communication-based on formality and other types of communication to figure out the weighted normalized decision matrix, we used the formula (2).
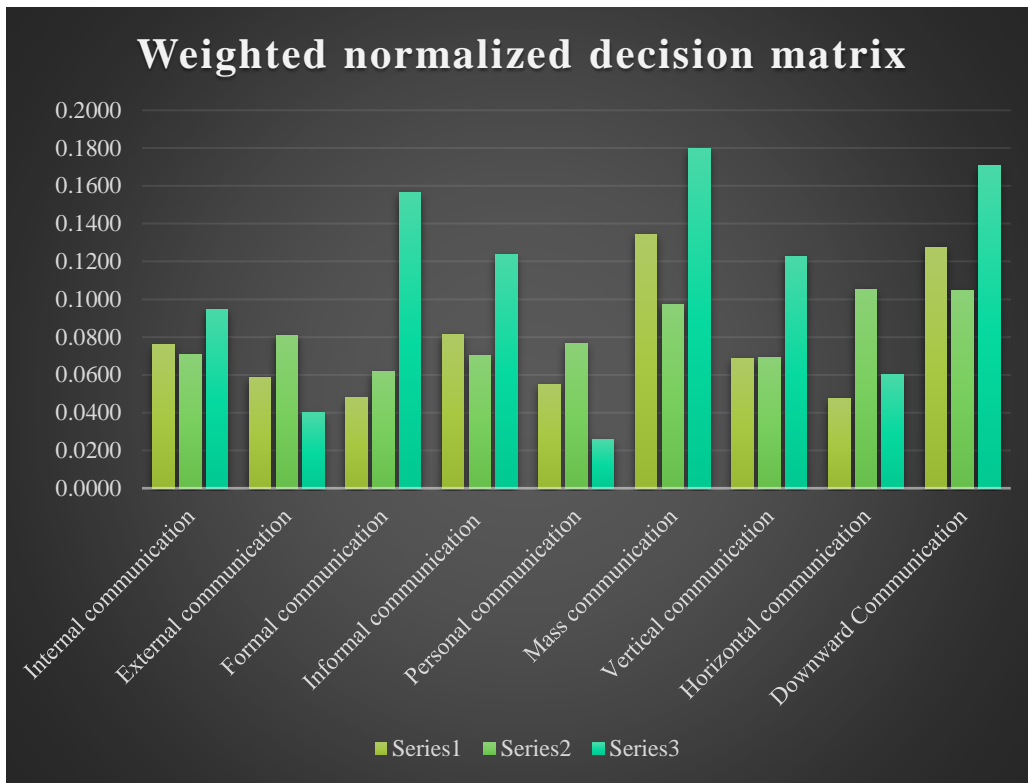

FIGURE 3. weighted normalized decision matrix

Figure 3 shows weighted normalized decision matrix for Communication-based on parties involved, Communication-based on formality and other types of communication to figure out the weighted normalized decision matrix, we used the formula (2).

TABLE 5. Positive and Negative Matrix

Positive Matrix			Negative Matrix		
0.1345	0.1054	0.0256	0.0474	0.0616	0.1799
0.1345	0.1054	0.0256	0.0474	0.0616	0.1799
0.1345	0.1054	0.0256	0.0474	0.0616	0.1799
0.1345	0.1054	0.0256	0.0474	0.0616	0.1799
0.1345	0.1054	0.0256	0.0474	0.0616	0.1799
0.1345	0.1054	0.0256	0.0474	0.0616	0.1799
0.1345	0.1054	0.0256	0.0474	0.0616	0.1799
0.1345	0.1054	0.0256	0.0474	0.0616	0.1799
0.1345	0.1054	0.0256	0.0474	0.0616	0.1799

Table 5 shows Positive and Negative Matrix for Internal communication, External communication, Formal communication, Informal communication, Personal communication, Mass communication, Vertical communication, Horizontal communication and Downward Communication. In various Positive Matrix in Maximum value 0.1345, 0.1054, Minimum value 0.0256 is taken and for Negative matrix the Minimum value 0.0474, 0.0616 and Maximum value 0.1799 is taken.

TABLE 6. Final Result of Types of business communication

	SI Plus	Si Negative	Ci	Rank
Internal communication	0.0970	0.0903	0.4822	**4**
External communication	0.0810	0.1418	0.6365	**2**
Formal communication	0.1628	0.0235	0.1263	**9**
Informal communication	0.1169	0.0664	0.3621	**7**
Personal communication	0.0845	0.1553	0.6477	**1**
Mass communication	0.1546	0.0941	0.3784	**6**
Vertical communication	0.1227	0.0616	0.3342	**8**
Horizontal communication	0.0938	0.1274	0.5760	**3**
Downward Communication	0.1453	0.0914	0.3861	**5**

Table 6 shows the final result of TOPSIS for Types of business communication. Figure 4 shows the TOPSIS Analysis Result of Types of business communication. In Table 6, Si positive is calculated using the formula (3). From figure 5, In Si positive, Formal communication is having is Higher Value and External communication is having Lower value. Si Negative is calculated using the formula (4). In Si Negative, External communication is having is Higher Value Formal communication is having Lower value. Ci is calculated using the formula (5). In Ci, Personal communication is having is Higher Value and Formal communication is having Lower value.

$$X_{si+1} = \sqrt{\left(\left(X_{wn1} - X_{p1}\right)^2 + \left(Y_{wn1} - Y_{p1}\right)^2 + \left(Z_{wn1} - Z_{p1}\right)^2\right)} \qquad (3)$$

$$X_{si-1} = \sqrt{\left(\left(X_{wn1} - X_{n1}\right)^2 + \left(Y_{wn1} - Y_{n1}\right)^2 + \left(Z_{wn1} - Z_{n1}\right)^2\right)} \qquad (4)$$

$$X_{ci1} = \frac{X_{si-1}}{\left(X_{si+1}\right) + \left(X_{s(i-1)}\right)} (5)$$
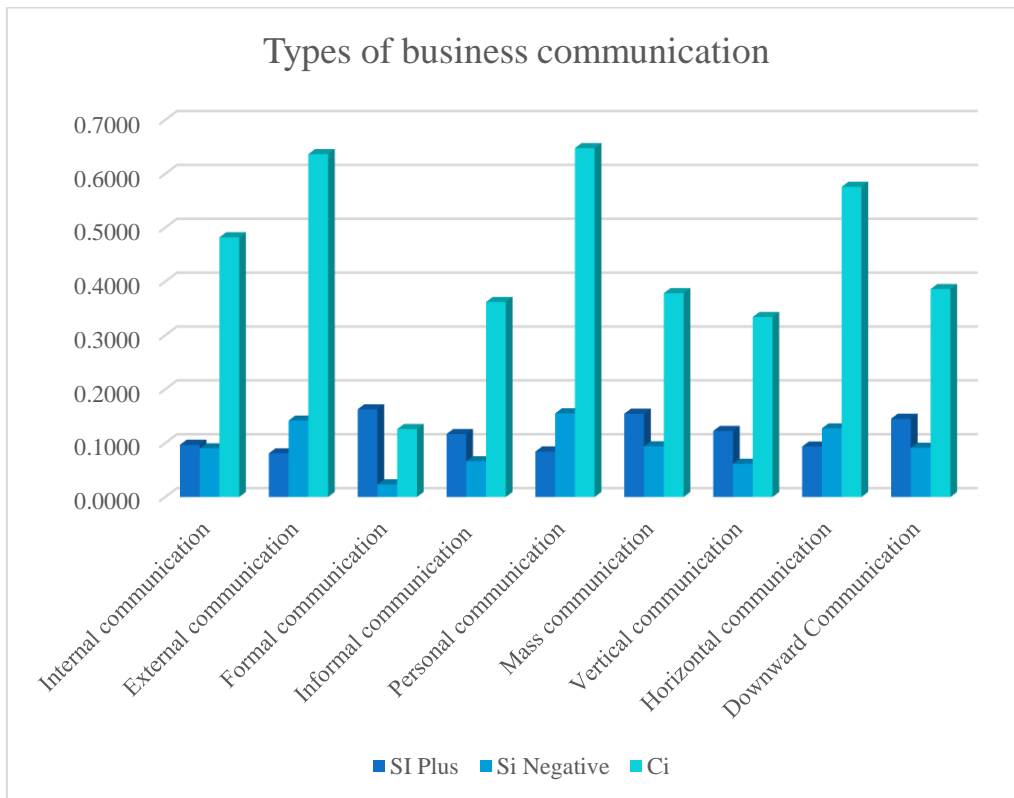

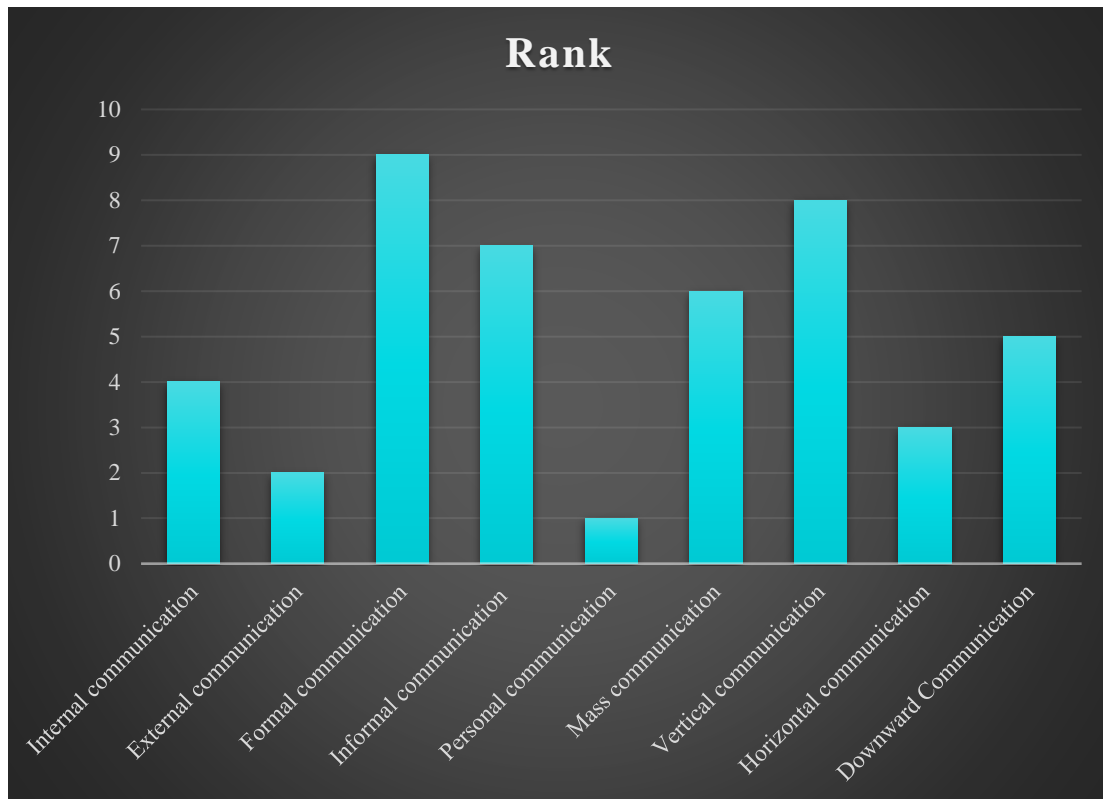**FIGURE 4.** Result of Types of business communication

FIGURE 5. Shown The Rank

Figure 5 Shows the Ranking of Types of business communication. Personal communication is got the first rank whereas is the Formal communication is having the Lowest rank.

4. CONCLUSION

Information interchange between employees and others outside the corporation is referred to as business communication. To accomplish organizational objectives, managers and staff interact with one another through effective communication. It seeks to lessen mistakes and enhance administrative procedures. Verbal, non-verbal, visual, and written communication are the four basic types of communication. The four primary business communication styles are typically upstream, downward, sideways, and external. Within a company, there is no "correct" method of communication. Therefore, communication is a way to make communication between people easier, understandable and above all, clear. In everyday language, means of communication are often equated with media. Workplace interaction is crucial for raising employee productivity. Through communication, different programmers and policies, crucial issues, organizational goals, and other topics are communicated to the employees, improving their knowledge and enhancing their ability to carry out their duties more effectively. The cutting edge of theory and research is where communication research takes you. areas in the communication field. It serves as a global forum for academics and professionals interested in recent findings in the domains of communication and related ones the awareness of one's own historic past and sense of belonging acquired through formal or informal association with communities that have similar knowledge, values, beliefs, attitudes, practices, and ways of life should be emphasized more in business communication. This new emphasis adds to the field's longstanding interest in how other people see collective group culture without taking away from it. Within an organization, effective company is a comprehensive process. Information sharing across pipework and messaging services is also covered achieve company goals. Communication is shared across teams and the organization in various forms Messages are the mechanisms that facilitate interaction with people and organizations outside your organization. This includes customers, corporations, suppliers, shareholders, investors, government agencies and law enforcement. Formal communication is the dissemination of actual news through authorized, predetermined methods and outlets. Informal communication is described as communication that takes place in a natural, unstructured way. Grapevine is another term for a system of unofficial communication Personal communications might take the form of private correspondence, notes, emails, telephone chats, or even personal interviews. TOPSIS method of ranking evaluated based on enhanced ambiguity comparison with weighted average. One of the typical approaches Multiple responses in the process used in TOPSIS to improve problems, reduce uncertainty determining the weight of each response and manageable at the same time A global approach continuously. Internal communication, External communication,

Formal communication, Informal communication, Personal communication, Mass communication, Vertical communication, Horizontal communication and Downward Communication. Communication-based on parties involved, Communication-based on formality and other types of communication. Types of business communication. Personal communication is got the first rank whereas is the Formal communication is having the Lowest rank

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