IN-DEPTH EXAMINATION OF ORGANIZATIONAL CULTURE, COMMUNICATION DYNAMICS, AND OPERATIONAL PRACTICES AT AN ENGINEERING AND CONSTRUCTION COMPANY: A COMPREHENSIVE STUDY

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ABSTRACT

Effective communication is pivotal for success in today's interconnected and complex business environments. This research delves into the communication culture of an engineering and construction company, aiming to comprehend its organizational culture and communication practices. Using a qualitative research design, key informant interviews were conducted with three engineers holding managerial positions within the company. Thematic analysis revealed insights into the organization's values, communication patterns, and dynamics. Results indicate a culture emphasizing honesty, integrity, collaboration, and transparency. Communication channels such as team meetings, open-door policies, and suggestion boxes were identified, highlighting the importance of both formal and informal communication models. Instances impacting communication, such as deadlines and seminars, were also examined. Recommendations include promoting open communication, utilizing various communication channels, implementing training programs, fostering diversity, balancing formal and informal communication, setting clear deadlines, and continuously evaluating communication practices. Despite limitations such as sample size and potential biases, this study offers valuable insights into enhancing communication effectiveness within engineering and construction companies, contributing to organizational success.

Keywords: Organizational Culture, Communication Patterns, Communication Models, Engineering.

1. INTRODUCTION

In modern times' interconnectedness and complex construction and business environment, meaningful and effective communication serves as a driving force of an organization's or an institution's success (Antonio, 2023). As such, as we analyze the communication culture of an engineering and construction company, our study aims to provide a comprehensive understanding of its organizational culture, focusing on values, norms, and other shared beliefs that are relevant to their communication. Organizational culture is about the basic assumptions and beliefs that were created and shared by the members involved in an organization that operates unconsciously (Schein, 2010, as cited in Isensee et al., 2020). By comprehensively understanding these elements, we seek to determine the principles that guide communication within an engineering and construction company and how they contribute to overall organizational effectiveness.

One of the objectives of this study is to comprehensively analyze and understand the communication processes within an engineering and construction company, including the patterns, traditions, and dynamics of communication channels, hierarchies, and feedback mechanisms. As

highlighted in the study of Bucata and Rizescu (2017), understanding communication flow is important as it directly affects decision-making processes and organizational or institutional overall performance. By interviewing key informant people and documenting these patterns, we aim to identify areas for improvement and develop strategies to enhance communication effectiveness within an engineering and construction company.

In addition to understanding the communication flow of the organization, the study also aims to examine the formal and informal communication models adopted by an engineering and construction company. Organizations often use multiple communication models, such as the transmission model, the interaction model, and the transactional model, to facilitate communication (Guerrero and Floyd, 2006, as cited in Alwamleh et al., 2020). By understanding these models, the study seeks to gain insights into how they influence everyday interactions among employees and their impact on organizational culture.

The study also includes documenting specific instances or events that have occurred within an engineering and construction company and analyzing their impact on communication practices. Similarly, Rabanni et al. (2012) suggest that documenting communication practices can help identify, diversify, and expand the areas for improvement and enhance organizational communication practices. Through developing connections between theoretical concepts and practical applications, we aim to provide insights that can be utilized to develop or improve communication effectiveness.

2. OBJECTIVES OF THE STUDY

The primary objective of this research was to determine the organizational culture and communication practices of an engineering and construction company. Specifically, it answers the following concerns: (1) the unique values, norms, and shared beliefs that shape the institution's culture; (2) the various communication patterns within the organization; (3) the formal and informal communication models utilized within the institution; (4) instances or events within the organization that impact communication.

3.METHODOLOGY
3.1. Research Design

This study will employ a qualitative research design, utilizing key informant interviews (KII) to gather in- depth insights from the respondents at various levels within engineering and construction companies.

3.2. Respondents of the Study

The study comprised three engineers as participants. One Chief Executive Officer (CEO) is a mechanical engineer, one project lead is also a mechanical engineer, and one civil engineer who specializes in structural engineering. The researchers employed the technique of purposive sampling to determine which participants to include. The sample is chosen in accordance with the study's objective and the characteristics of the population (Crossman, 2020). Furthermore, the researchers considered the following criteria:(1) holds a managerial position and

(2) is employed in the engineering and construction sector.

3.3. Instrument of the Study

The researchers acquired the requisite data by conducting a Key Informant Interview (KII). Kibuacha (2024) asserts that KII is a crucial qualitative methodology that offers unique perspectives from persons possessing substantial expertise or experience in a certain field. In addition, the prepared questions encompass the study's objectives, guaranteeing the attainment of the study's goal.

3.4. Data Gathering Procedure

Each participant in the study was individually interviewed in a virtual environment for a duration of one and a half hours. The KII audio recording was obtained and transcribed to provide crucial data for assessing the organizational culture and communication methods of an engineering and construction firm.

Furthermore, by employing thematic analysis, the transcribed data were systematically categorized and evaluated. When conducting thematic analysis, researchers utilize codes, which are labels allocated to certain sections of text. The purpose of employing codes is to identify and summarize significant topics within a dataset, such as an interview transcript (Crosley, 2021). By encoding a pattern from the transcribed text, the researchers uncover a singular theme in the merged codes.

3.5. Research Ethics

The study was conducted only after securing consent from all participants. Researchers made sure that participants were fully informed about the research's purpose, their role in it, and the rights and advantages they would receive as participants. Additionally, to uphold the study's credibility and integrity, researchers adhered to ethical guidelines that safeguarded participants' rights, well-being, and respect.

4. RESULTS AND DISCUSSION

This section provides the results and discussion of the organizational culture, communications, and dynamics of an engineering and construction company.

4.1. The unique values, norms, and shared beliefs that shape the institution's culture.

Honesty and Integrity. These qualities form the foundations of a trustworthy and honorable character who acts ethically and morally in their personal and professional lives. According to Smith et al. (2019), in both personal interactions and professional endeavors, these qualities are crucial for fostering trust, maintaining credibility, and promoting a sense of integrity. As mentioned by Participant 1, "The values I believe are most important in our organization are integrity. These values influence every decision and action we take, ensuring that we operate with honesty, respect, and accountability." This was supported by Participant 2, "The core values that drive communication within our organization include respect. We believe in fostering an environment where everyone feels valued and respected and where open communication is encouraged." The findings indicate that in the engineering and construction company, honesty and integrity are important and vital in their institution's culture.

Collaboration and Transparency. Collaboration and transparency in communication within an organization or an institution are important for fostering trust, building strong interpersonal relationships, and enhancing overall organizational performance. According to a study by

McKenna et al. (2016), when employees are encouraged to work with one another openly, freely, and transparently, it leads to better decision-making and increased innovation. As stated by Participant 1, "The overall culture of our organization is one of teamwork, mutual respect, and continuous improvement. We strive to create an environment where employees feel empowered to voice their opinions and ideas, knowing that they will be heard and valued." It was supported by the statement of Participant 2, "Employees are encouraged to voice their opinions and ideas, fostering a culture of collaboration and innovation." The results show that within an organization, it really helps to have a very open and collaborative communication culture. As stated by Sadik (2023), fostering collaboration is essential for building trust and creating a positive workplace culture.

Respect for diversity. Not every employee or person belonging to an organization, or an institution came from the same background of culture, and that is why an organization's communication's culture should foster respect and empathy for one another's diversity and differences. As highlighted by Sadik (2023), it is important to practice empathy in the workplace by considering the colleague's perspective, and through that, it can build and foster a more effective workplace. Respondent 3 stated that "the core values that drive communication within our organization are efficiency and respect for diversity. These values are reflected in daily communication practices through clear and concise instructions, regular team meetings to discuss progress and issues, and a respectful attitude towards colleagues' ideas and perspectives."

4.2. The various communication patterns within the organization.

Team Communication. In any organization or institution, interconnectedness among the employees is important to a business's success. As supported by the study of Zawawi et al. (2023), team communication affects overall team performance. It was stated by Participant 1 that "information is typically shared within our organization through team meetings, email updates, and company-wide announcements," and by Participant 2 that "the main channels of communication used within the organization include face-to-face meetings, email, instant messaging platforms, and regular company newsletters."

Open-Door Policy. A workplace practice that enables employees to discuss work-related matters with senior executives or immediate supervisors, depending on the situation. An open-door policy promotes more transparency and openness between workmates and can maintain business morale and reduce employee turnover (Human Resources, 2021). In the engineering and construction company, open-door policy is highly encouraged, as stated by Participant 2: "While there is a formal hierarchy within the organization, we strive to maintain an open-door policy, allowing for direct communication between employees at all levels." and Participant 3: "We have an open-door policy that allows employees to communicate directly with their supervisors or department heads."

Suggestion Boxes. For businesses that want to improve employee engagement, a suggestion box can be invaluable, especially if employees can retain anonymity. It was stated by Participant 3 that "anonymous suggestions and feedback from employees are seamlessly integrated into the communication process through the use of suggestion boxes, catering to those who prefer to remain anonymous. We value input from our employees and actively seek ways to incorporate their ideas into our decision-making processes." This is supported by the claim of Soysanli (2024) that a suggestion box facilitates improved communication between management and employees

by offering a structured means for idea-sharing. It encourages employees not only to highlight problems but also to offer potential solutions.

Hierarchy. Today's workplaces typically have hierarchical structures that define the relationships between employers and employees, and this can also be seen in engineering and construction companies, as stated by Participant 3: "Formal hierarchies affect the flow of communication, as decisions are typically made by upper management and communicated downwards. However, major decisions are communicated through official channels by department heads or the executive team." In the study by Berkey (2023), it was highlighted that even though open communication between employees and management are efficient, the idea of hierarchical communication is still needed in preserving balance in an organization or an institution.

4.3. The formal and informal communication models utilized within the institution.

Formal. Formal communication is the transfer of information within or between organizations using established methods like memos, reports, official letters, and presentations, and its use is very important in the success of a company, as stated by Participant 2: "The organization follows a formal communication model that emphasizes clarity, consistency, and timeliness. We have established protocols for internal communication, including guidelines for email etiquette and meeting agendas." It was highlighted in the study of Locker (2019) and Robbins and Judge (2024) that Formal communication ensures professionalism and accountability in conveying official information, thus enhancing organizational efficiency.

Informal. Informal communication in organizations involves the unofficial sharing of information, ideas, and emotions among individuals through casual conversations or social interactions. As claimed by Participant 3, "Informal communication networks, such as lunchtime conversations and social gatherings, also play a significant role in communication." This claim is supported by the study of Baker and Warren (2015) that casual forms of communication in the workplace, such as chats or social gatherings, play a role in creating social connections among colleagues.

4.4. Instances or events within the organization that impact communication.

Deadlines. Deadlines are crucial in business and organizational communication, as they drive productivity, manage expectations, and ensure project success. As described by Participant 1, "One time these values influenced a decision within the organization was when we were faced with a challenging project deadline. Instead of sacrificing quality for speed, we chose to prioritize collaboration and transparency by communicating openly with our clients about potential delays and working together to find a solution that met their needs." As with the findings of Raqah (2022), deadlines play a crucial role in fostering collaboration and ensuring the successful completion of complex projects by setting clear expectations and allowing individuals to take control of their work.

Seminars and Workshops. Seminar and workshop programs are vital for improving business and organizational communication as they offer chances for learning, developing skills, and building networks. The engineering and construction companies believe in and foster seminars, as stated by Participant 2: "By implementing training programs and workshops focused on these concepts, we can help employees develop stronger communication skills and reduce the likelihood of misunderstandings." Attending a seminar offers various advantages, such as

enhancing communication abilities, acquiring specialized insights, connecting with peers, and rejuvenating motivation and self-assurance (Morgan, 2016).

5. CONCLUSION

Organizational culture and communication have crucial roles in the success of any institution, including those in the engineering and construction fields. This study emphasizes the need to understand and manage these aspects to improve organizational effectiveness and employee satisfaction.

The results and discussion provided insights into the organizational culture, communication patterns, and dynamics of an engineering and construction company. The findings highlighted the values of honesty, integrity, collaboration, and transparency within the organization. Various communication patterns, such as team communication, open-door policies, and suggestion boxes, were identified as important aspects of the organization's communication practices. Additionally, the utilization of formal and informal communication models was highlighted, showing the importance of clear and consistent communication in achieving organizational goals.

6. RECOMMENDATIONS

Promote a Culture of Open Communication. Encourage employees to voice their opinions and ideas, fostering a culture of collaboration and innovation. Implementing an open-door policy can also help facilitate direct communication between employees at all levels.

Utilize Various Communication Channels. Use a mix of communication channels, such as team meetings, email updates, and company-wide announcements, to ensure that information is effectively shared throughout the organization.

Implement Training Programs. Offer seminars and workshops focused on improving communication skills. These programs can help employees develop stronger communication skills and reduce the likelihood of misunderstandings.

Encourage Diversity and Inclusivity. Foster respect and empathy for diversity and differences among employees. Promoting a culture of inclusivity can help create a positive workplace environment and improve overall communication.

Balance Formal and Informal Communication. Recognize the importance of both formal and informal communication models. While formal communication ensures professionalism and accountability, informal communication can help build social connections among colleagues.

Set Clear Deadlines. Establish clear deadlines for projects and communicate them effectively to all team members. This can help drive productivity and ensure the successful completion of projects.

Continuously Evaluate and Improve Communication Practices. Regularly assess the effectiveness of communication practices within the organization and make necessary adjustments to improve communication flow.

7. LIMITATIONS

The study's sample size was limited to three engineers, with the potential to restrict the representation of diverse perspectives within the organization. The use of purposive sampling might introduce bias, as participation was chosen based on specific criteria. The findings may be specific to the studied company and may not be applicable to other organizations due to its unique

characteristics. Key Informant Interviews (KII) were the primary method of data collection, offering rich qualitative data but possibly influenced by interviewer bias. Time constraints might have limited the depth of the analysis, and extending external factors like leadership changes were not considered. Self- reporting bias, language, and cultural barriers were also potential limitations.

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