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## CAUSES AND IMPACTS OF POOR COMMUNICATION IN THE CONSTRUCTION INDUSTRY

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### ABSTRACT

The construction industry is a risky and complex business. Due to its nature, it consists of a various types of stakeholders characterized with different objectives, skills, cultures, values and professions. This requires effective communication management between the different stakeholders to facilitate their interaction and ensure the delivery of successful projects. Communication is a process that involves the transfer of information between parties and it is directly affects the project's success. Poor communication can result in project failure especially in severe cases where the problem is left unsolved. Managers and organizations operating in the construction industry are required to understand the causes and impacts of poor communication and take the necessary actions to improve the communication process in their projects. This research aims to identify and analyse the causes and impacts of poor communication in the construction industry. This aim was achieved through a research methodology based on literature review and case study. The research identified 30 causes and 20 impacts of poor communication in construction projects. A case study of the Kuwait University, College of Business is presented to show the poor communication problem that can occur in construction projects and some solutions that were undertaken by stakeholders.

**Keywords:** Construction Industry, Communication, Poor Communication, Causes, Impacts, Stakeholders.

### INTRODUCTION

The construction industry plays an important role towards the social and economic development of countries worldwide [1]. However, it is riddled with complexities and challenges. People from different cultures and professions collaborate in different manners to reach the main goal of project success [2-3]. One of the main challenges of a construction project is the poor communication [4]. Communication is a vital process that entails the transfer of information between a sender and



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receiver through a medium. This process is considered successful when the receiver understands the message and supplies the sender with a timely and appropriate feedback [5]. The process is dynamic, complex and comprised of multiple organizations and shareholders involvement. Effective communication is sought throughout the project life cycle as its role in project success cannot be understated. Communication skills are vital in order to achieve effective communication as technical skills and experience alone are not sufficient process [6]. Poor communication which is described as an unsuccessful interaction between the project participants is common problem in the construction industry [4]. Project failure is directly linked to poor communication as it is considered as one the main challenges in the construction industry. This paper aims to investigate the causes and impacts of poor communication in the construction industry. To achieve this aim, a research methodology consists of literature review and case study. Literature review will focus on investigating the nature of the construction industry, communication, causes and impacts of poor communication in the construction industry. A case study is presented to highlight the poor communication problem that faced the stakeholders involved in the Kuwait University, College of Business mega construction project in Kuwait. The case study also mentions some solutions that were undertaken by the stakeholders throughout the project.

## LITERATURE REVIEW

### The Construction Industry

The construction industry is a dynamic and complex business with several shareholders that have different objectives, interests, professions collaborating in order to defeat these challenges and achieve project success [2-3]. Shareholders are persons or organizations that are directly or indirectly related to the project. High quantities of information must travel to several parties and requires accurate analysis throughout projects in this complex sector [1]. Diversity is a main characteristic to describe the shareholders involved in the construction industry. Shareholders in a project work towards a main goal and they can be in the form of an owner, consultant, contractor, and subcontractor. These organizations are comprised of different people from different professions with different responsibilities. Respectively it is clear that different cultures, values, social standards, educational levels and languages are present within this complicated industry, and this creates a challenging environment for communication to occur successfully. The construction industry continues to grow as the demand for projects that fulfill the community needs increases [7-8]. The construction industry includes both private and public sectors [7-8] as they often collaborate in projects of social and economic reasons. The construction industry plays a social and economic role towards social and economic development of countries. Socially it provided communities with buildings and infrastructure facilities that meet their requirements. Economically, the construction industry helps increasing national gross domestic product (GDP), provide job opportunities and support other industries to excel [1, 9, 10].

### Communication

#### Background and Overview



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The word 'communication' is derived from the Latin word 'communicare' which translates 'to make common' [11]. Communication as a process involves the transmittance of a message from a sender to a receiver through a communication channel that should be agreed by both parties. In order for this process to be completed successfully, the information exchanged between both parties must be understood otherwise the process is not effective or complete [5]. In order for a response and result to take place after communication is undertaken, the information transmitted between organizations or individuals must first be understood [12]. Communication is not an easily definable word due to its multi-levels which comprise of many meanings, structures, contexts, types and purposes [13].

### Characteristics of Communication

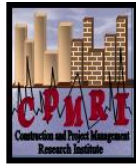
Dainty at al. [13] summarized the characteristics of communication into six points:

- Transfer of information that can be diverse and targeted at more than one person or organization at the same time [13-14].
- Bridging the distance, which could require communication to occur between more than two parties that are situated at different locations and this increases the complexity of the process [13].
- Successful communication requires social skills within an industry that is labor intensified which requires pupils regularly interacting [13-15].
- Interpersonal communication which often involves sharing of data, views, thoughts and ideals [16].
- Organizational communication often occurs in the construction industry and involves several parties and specialists interacting [17].
- Process of transaction where various exchanges are performed between different parties [13].

### Importance of Effective Communication

Communication is a dynamic and continuous process that runs throughout the project lifecycle and involves many stakeholders. Effective communication must be sought and attained due to its vital role which affects the project's outcome directly [1]. Effective communication is a main pillar that leads a project to produce a successful outcome [13-18]. Its effectiveness during the project's lifecycle aids in achieving multiple objectives and targets successfully. Communication skills play fundamental role in the effectiveness of this process, because if a project participant lacks this skill he/she is likely to conduct an ineffective communication process [6]. Scientific knowledge and technical skills are important to formulate a professional character in the construction industry but communication skills are equally important to complete that formula [19]. Inaccurate information is a negative result due to the weakness of communication skills amongst the project team [20-21]. As the construction industry consists of several stakeholders from different professional and cultural backgrounds. So, effective communication is vital to develop the relationship amongst the project's shareholders [22]. Parties involved in the construction project must coordinate their skills and efforts in order to successfully achieve their targets [23]. Effective communication entails that the process is well coordinated through using accurate information during all project phases [20-24-26].

### Poor Communication



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Poor communication can be explained within a context of lack or absence of success and effectiveness of the communication process [1]. Poor communication is a very common problem in construction projects [4] and its impacts can't be understated as it affects the project success. Most problems that occur within the construction industry are linked to be caused by poor communication [7]. Poor communication is one of the main causes of disputes amongst the project shareholders [22]. Poor communication has been linked to negatively affect vital aspects of a project's success such as timeframe, budget [26] and agreement amongst shareholders [27]. Due to poor communication reworks are often executed throughout the project lifecycle which cause time and cost overruns [28]. The results of poor communication could ultimately lead to the project's failure [1-28]. The effects of poor communication differ especially when comparing projects by their scales. The negative results that may occur in a large project are more likely to lead to project failure whereas in small projects the risk of failure is more minimal in comparison [29].

#### **Causes of poor communication in construction projects**

A rigorous literature review was carried out to identify the causes of poor communication in the construction industry, see table (1).

**Table 1.0 Causes of Poor Communication in Construction Projects**

<b>NUMBER</b>	<b>CAUSES</b>	<b>REFERENCES</b>
1	Physical barriers	[5] [30]
2	Linguistic barriers	[5] [18] [26] [30]
3	Cultural barriers	[5] [26] [30]
4	Lack of Honesty	[6]
5	Unconscious message distortion	[8] [26]
6	Conscious message distortion	[8]
7	Poor Feedback	[5] [6] [13] [18]
8	Work Pressure	[6]
9	Poor role clarity	[1] [2] [4]
10	Poor coordination	[1] [2] [28]
11	Poor communication management	[2] [3] [13] [15]
12	Poor project management skills	[1] [4] [13] [28]
13	Ineffective communication	[2] [3] [26]
14	Poor shareholders identification	[3] [19] [30]
15	Unclear communication channels	[2] [6] [13]
16	Unclear Responsibilities	[1] [2]
17	Unclear objectives	[3] [4] [19]
18	Dissatisfied and unmotivated employees	[4-6]
19	Difference in experience	[3] [19]
20	Inexperienced stakeholders	[6] [7]
21	Interaction between different professions	[2] [7] [28]
22	Different levels of education	[7] [26]
23	Greed over project control	[28]
24	Lack of training	[6] [7]
25	Lack of knowledge	[6] [7]



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26	Multi organizational interactions	[4] [28]
27	Poor communication platform	[8] [28]
28	Deficient support to use communication technologies	[30]
29	Technology malfunctions	[30]
30	Complexity of the construction project	[2] [4] [28]

### Explanation of the Causes of poor communication in construction projects

1. Physical barrier are physical distractions that can affect communication such as noise or long distance between sender and receiver. This barrier appears often specially on site where the environment itself can act as a challenge to communication.
2. Linguistic barriers range from use of jargon to actual language. Jargons are phrases which could make sense to the sender and some receivers but it's not guaranteed that it will be understood by all receivers in the communication process. Different languages could create difficulties for both the sender that cannot express himself, to the receiver that may not understand.
3. Cultural barriers could create an uneasy environment for communication due customs that each person is used to. Tension could arise consciously or unconsciously between people of different cultures if they are not used to dealing with an internationally diverse community.
4. Honesty is very important because trust is built upon this virtue. The deficiency of trust in an industry that requires multi-interpersonal communications can surely affect the outcome of any project.
5. Unconscious message distortion is an unintended act of delivering information in an unclear manner. This can arise from a person's accent when communicating or simply poor grammar is conveyed within a message.
6. Conscious message distortion is connected to a person's ethical status. This means that unethical behavior is conducted in order to transfer information in a faulty manner or transfer information that is incorrect.
7. Feedback is a reaction to a message being received and then followed by the required information. The timing and quality of feedback is important to complete that communication transaction successfully especially when the requirement is urgent.
8. Pressure can cause personnel to make mistakes. Personnel mistakes can be in a form of incorrect and inaccurate outcomes. Pressure can also affect people psychologically and physically which will ultimately affect their output.
9. Poor role clarity is an organizational problem that involves a person not being fully aware of their responsibilities and authorities. All shareholders must know their roles in order to perform efficiently and perform their communication duties when required.
10. Poor coordination is another organizationally rooted problem where a chaotic environment usually results. Coordination leads shareholders to undertake their responsibilities in the required manner at the right time through the correct channels indicated. Coordination is a continuous managerial responsibility to keep the team functional and organized.
11. Poor communication management is imperative to successful communication throughout the project's life cycle. Failing to manage this multidimensional process means that information sharing is inefficient and this will lead to major problems in the project.





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- Communication management must be performed in a professional manner with constant revision in all phases of a project.
12. Poor project management skills points to the lack of professional skills attained by a person in a managerial role. Project managers have responsibilities and authorities of importance thus lacking in these fundamental skills can deteriorate the required outcomes. A project manager must have excellent skills in order to be able to perform his duties that demand him to communicate effectively with the shareholders.
  13. Ineffective communication entails that communication was performed but the outcome or process were inadequate. Time and quality are two main factors that may contribute to ineffective communication transpiring.
  14. Poor shareholder identification can cause information to travel to the wrong person due to the lack of knowledge concerning their identity within the project. In severe cases shareholders might not receive any information due to the lack of their identification in the project. Shareholders must be identified from the beginning of the project and throughout the lifecycle if they are newly joining.
  15. Unclear communication channels can strike many dilemmas to both the sender and receiver, thus communication is negatively affected. An agreed upon route must be initiated between shareholders because the lack of this medium can result in failure of message transmittance and arrival.
  16. Unclear responsibilities are failure of a shareholder to recognize what and whom they are responsible for. This entails that the shareholder is not aware of the people he is in charge of and which tasks fall under his responsibility that would require action. In terms of communication awareness of who and what to communicate is absent.
  17. Unclear Objectives involve the lack of knowledge concerning specific goals that are required to be achieved. A simple objective can be the requirement to communicate new changes in the project that would affect the onsite activities.
  18. Dissatisfied and unmotivated employees appear during a project due to factors such as inadequate pay and unfriendly work environment. The lack of satisfaction can affect their initiative to communicate successfully. Unmotivated employees usually are a result of poor project management. Project managers are in charge of raising moral and appraising their employees when required to keep them motivated. Lack of motivation can affect a employee's keenness to maintain successful communication throughout the project.
  19. Difference in experience can act as a setback when it's misused due to the theoretical distance that can be created between shareholders. This distance increases the difficulty of communicating throughout the project. The manner that a more experienced shareholder communicates with the less experienced must not imply dictatorship or belittlement of their role.
  20. Inexperienced stakeholders can pose a clear threat if they are not managed appropriately. Hesitation and fear of making mistakes can directly affect the quality and timeliness of their actions and reactions to information.
  21. Interaction between different professions indicates that shareholders interacting are from different professional backgrounds. Shareholders talk with a different technical language that may not be understood if not made common. Expectancy of understanding has to decrease and assurance of communication success must be revised by both parties when information is exchanged.
  22. Different levels of education are clear on the project site. Engineers, supervisors, project managers and workers interact with each other continuously during the execution of the project. Communicating with the workers can be quite difficult, as education plays a huge role



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- in the capability of understanding technical tasks. The manners and site language communicated from the worker to his superiors might also not be fully understood at times.
23. Greed over project control may involve the use of tough mannerisms to communicate and assert power. This can also involve intentional lack of information sharing with other shareholders in the project.
  24. Lack of training does not provide shareholders with the professional knowledge required to carry out a successful communication process.
  25. Lack of knowledge within the project team can often halt their readiness to communicate due to the inadequate information that they possess.
  26. Multi organizational interaction is one of the most complicated difficulties that require planning and management throughout all phases of the project. Multiple organization involvement in the communication process means that there numerous senders and receivers requiring vast amounts of information often at simultaneous timings.
  27. Poor communication platforms entail that the specified locations where information is exchanged are inefficiently performing their connective central role.
  28. Deficient support to use of communication technology can add complexity to the communication process instead of providing it with ease. Communication technology is a tool that should allow shareholders to transmit detailed information quickly. Technical support must be available to teach shareholders how to use this modern tool efficiently.
  29. Technology malfunctions directly affect communication in a modern world that is dependent on this tool. Information is constantly shared by using technology especially when distance is a constraint amongst the shareholders.
  30. Complexity of the construction project requires the involvement of multi organizations thus complicated communication processes will occur in order to complete the project successfully. Relationships between the shareholders can be quite complicated and the information transmitted throughout the project is vast and intricate.

### Impacts of poor communication on construction projects

Table (2) identifies the impacts of poor communication on construction projects. It is important to understand them in order to avoid their effect on the successful delivery of construction projects.

**Table 2.0 Impacts of poor communication in construction projects**

NUMBER	IMPACTS	REFERENCES
1	Project Failure	[22-28]
2	Dispute	[22-[30]
3	Over Budget	[23-[28]
4	Time overrun	[8-22-28]
5	Accidents	[23]
6	Poor Quality	[17-30]
7	Reworks	[8-22]
8	Poor collaboration	[23]
9	Unmotivated Shareholders	[30]
10	Untimely reactions	[23]
11	Low productivity rate	[8-22]
12	Poor understanding	[30]



13	Poor interpretation	[30]
14	Mistakes	[8-22]
15	Unsatisfied Client	[30]
16	Constant schedule changes	[28]
17	Poor output quality	[17-30]
18	Waste generation	[8]
19	Vulnerability to risks increase	[22]
20	Unsatisfactory documentation	[17]

### Explanation of Impacts of poor communication on construction projects

1. Project Failure is the severest impact that poor communication can produce. This is usually the outcome of many causes that were not solved throughout a long period of time to cause a project to be described as failed. This entails that communication management was severely poor and that project managers neglected all the previously identified causes.
2. Dispute is a common impact and can be seen in all phases of the project. Disputes could arise due to issues such as inaccurate information or poor quality of communication between organizations and persons. This could also stem from poor or dishonest feedback which would cause the receiver to apply aggressively leading to a dispute.
3. Over Budget is one the highest risks to any construction project in the industry. Poor project management skills, poor coordination and inefficient communication can all be seen as causes to this dangerous impact. Cost control throughout the project is vital because exceeding its budget is seen as a failure.
4. Time overrun is a highly frequent impact and might lead to penalties and loss of profits for the shareholders involved. Project schedule must be constantly updated and communicated with the shareholders to ensure that the project will be delivered on time.
5. Accidents on site are hazardous health and safety issues that could be rooted to poor communication of instructions to avoid these disasters.
6. Poor quality of work in the construction industry can ultimately lead to an unsatisfactory result because information flows through several shareholders. Information is created and developed by each shareholder to reach a goal so poor quality can be infectious which means that it can affect the quality in multiple departments and organizations if it's not solved.
7. Reworks are costly in terms of money and time. The slightest inaccurate or misinterpreted piece of information can cause days of rework in the office or on site.
8. Poor collaboration is a result of many defects in communication within an organization or between organizations. Collaboration is essential especially in the construction industry where goals are achieved from the efforts of many professions united together.
9. Unmotivated shareholders can be the failed end to a project if they reach a detrimental stage where the continuation or success of a project is irrelevant to their interest.
10. Untimely reactions in important situations within the construction industry can lead to disasters. The timeliness of feedback and reaction of a shareholder with responsibilities can either solve a problem or cause a problem. Accidents within the construction industry are common and require quick actions and feedback when they occur.
11. Low productivity rate can be the result of many factors but the fact remains that poor work is produced in terms of quality and quantity which directly affects the outcome of the project.





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12. Poor understanding of information means that the communication process that carried this data from the sender to the receiver was not completed successfully.
13. Poor interpretation means that information was misunderstood which can lead to incorrect actions being undertaken that could waste money and time.
14. Mistakes vary in their effects depending on the magnitude of the negative impact caused. Mistakes require time, money and effort in order to be resolved in the construction industry. Good communication can minimize the quantity and effects of mistakes within a project.
15. Unsatisfied client is an impact of many negative processes that continued throughout the project lifecycle without being resolved. Communication with the client is vital and their satisfaction must be a target for all the organizations involved in the project. Progress, results and problems must be communicated to the client throughout the project in order to be able to evaluate the project status in terms of the client's goal.
16. Constant schedule changes requires accurate and clear communication as the construction industry demands collaboration between shareholders that rely on each other's schedules to complete certain goals.
17. Poor output quality relies on the quality of input that shareholders invest in a project. Successful communication can decrease the risk of poor quality in a project as information transferred is often correct, clear and timely.
18. Waste generation can be physical or non physical. Physical waste generation can be in terms of materials or resources due to miscommunication or incorrect information. Non physical can include wasted time but a common waste between both cases is money as result of these types of wastes.
19. Vulnerability to risks increases as the vital communication process is poor within a project causing the probability of risks to increase. Risks tend to increase in quantities and severity of effects when communication causes are left unresolved.
20. Unsatisfactory documentation arises in a project due to poor information transfer and storage.

## CASE STUDY

Kuwait University has assigned Gulf Consult (GC) as their local consultants in their College of Business package in association with Cambridge Seven Associates, Inc (C7A). The College of Business is part of Kuwait University's University City Campus which is a mega construction project at an estimated cost of KD 72 million (243,713,399 USD). During the design of this project poor communication was clear and evident but Gulf Consult management was quick to identify and solve this problem. Through unstructured interviews with members of GC the following were some of the identified causes of poor communication in the project:

- Lack of knowledge could be detected with some stakeholders concerning the project.
- Inexperienced staff struggled during the project which affected their communication.
- Vague language circulated which led to cases of miscommunication.
- Problems concerning stakeholder identification became evident when communication was needed.

Poor communication was met by a list of actions and solutions to resolve the problem to prevent future communication issues in the project. The following are some of the solutions that were suggested in this case:



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- Regular in house meetings to keep staff updated.
  - Assign objectives to capable staff members.
  - Establish clear communication protocols.
  - Revise communication networks and update it accordingly to solve any problems that were identified within it.
  - Clearly identify roles and responsibilities of team members.
  - Monitor and control the communication process.

## CONCLUSION

The construction industry is a dynamic and complex business. Accordingly, it is characterized with many challenges arising throughout the project lifecycle. The construction industry consists of many types of shareholders with different objectives, cultures and skills. They work together on multiple levels in order to achieve project objectives. Communication is a vital tool that is used to transfer information from one stakeholder to another. Effective communication only occurs when the process is completed successfully. The importance of effective communication is clear due to its impacts within the project as it can result in a negative or positive outcome.

Poor communication is a common problem amongst construction projects and is considered to be the main detrimental problem to project failure. During this research, a detailed literature review was carried out to identify 30 causes and 20 impacts of poor communication in the construction industry. A case study in Kuwait was presented to highlight the poor communication problem that appeared in the construction project. Through unstructured interviews solutions to the problem such as revision of communication networks and in house meetings were found effective when the problem appeared. This research will help organizations and managers to detect and solve the problem from its roots if it appears throughout the construction project. Further research is required to find solutions for the causes and impacts listed previously in order to have a framework for eliminating the causes and impacts of poor communication in the construction industry.

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