

Project Name: The Construction of Kindergarten in Mutrafiah - Jubail

Group No.

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Abstract

The objective of this project is to study the project management of construction projects in educational facilities for the Early Childhood (ECH) Program. Project management finds a wide application area in construction educational facilities. In this project, a case study of the construction of a kindergarten was carried out to determine the importance of project management success using The Project Excellence Baseline (IPMA PEB®), and to find out how to manage design and construction throughout the life cycle of the project. As construction projects involve a number of participants and stakeholders, their participation and commitment can have a major influence on the goals of construction development. The project research provides a basis for the construction of a kindergarten based on project management best practices that emphasize the necessity and significance of tailoring the project management approach to the unique characteristics of the project and its context. Also, it implicates (25) competencies following the IPMA (International Project Management Association) individuals' competencies standard.

Keywords: Project management, construction, communication, and teams.

Introduction

Education has played an essential role for individuals in societies. It enables communities to succeed and thrive economically and socially as it helps in developing common culture and values. Therefore, countries governments' pay great attention to education to step ahead in the ranks of nations. The Saudi Arabia leadership has realized that education is one of the significant pillars that lead societies in achieving leadership and excellence. The government has observed that the kingdom is behind the international benchmarks where there is a lag in the enrolment in early childhood education compared to the rapid and massive enrolment in primary and secondary school.

Practical implementation of the project management processes is essential to ensure the achievement of a clear understanding of project management's central concepts, tools, and approaches. This project provides in detail a practical implementation of the project management processes in a construction project; all project management process groups are covered and considered. By completing this project, the reader will be capable of applying a structured project management approach to real-life projects.

The Project Excellence Baseline (IPMA PEB®) outlines the concept of excellence in managing projects and programs. It also serves as a guide to organizations and practitioners in assessing the ability of their projects and programs to achieve project excellence. IPMA defined a project as, "A project is a unique, temporary, multidisciplinary, and organized endeavor to realize agreed deliverables within predefined requirements and constraints". Project management is the best use of organizational resources to ensure project success by ensuring the needs of the project are met in an organized way. This report consists of the project management plan, including scope, resource, time, risk, and quality management plans.

1. Strategy

The programming of capital projects is shaped by the strategic plan of an organization, which is influenced by market demands and resource constraints. The ECH Program is one of the main governmental programs of the NTPs related to the 2030 Saudi Arabia Vision. The program aims to achieve and align the NTPs' mission with the governmental operational excellence of the educational sector. In addition, it aims to improve the economic enablers of the private and public education sectors and enhance living standards for all related stakeholders. One of the sub-programs is the construction of educational facilities with high standards and quality that will serve Saudi Arabia's younger generation.

Pearce & Robinson (as cited in Walt, Kroon, & Fourie, 2004) contended that various factors such as political priorities, competitive demands, economic conditions, social needs, and technological developments play a critical role in running enterprises in line with the rapidly changing environment. Such varying factors require enterprises to monitor their strategy and continuously adjust their strategies by implementing the necessary course of actions among various opportunities and threats

1.1.Mission & Vision

Mission and vision statements offer a leading directional potential for integrating and managing activities and decisions to ensure best resources utilization (Walt, Kroon, & Fourie, 2004). Both statements are typically communicated statements that relate to an organization's goal in some written form. They deliver answers to questions about who the organization is, what does the organization value, and where the organization is going. Figure1 shows the interdependency of the vision, mission, value, and strategy. An enterprise's vision and mission statements play an essential role in drawing an organization's strategic directions (Walt, Kroon, & Fourie, 2004). Both statements are two mutual elements as the vision statement defines the best guiding philosophy and the future

positions whereas the mission statement is the vehicle that maintains an organization orientation to the desired destination.



Figure 1: Mission, vision, values, and strategy interdependency.

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Due to the significance of the vision, mission statements, organizations' top management spends a much time drafting and word designing those statements in addition to value statements, goals, and objectives so on and forth to align them in one horizon (Hattangadi, 2015). Thus, developing well-defined objectives and strategies constitute the strategic planning process to achieve an organizational mission. Below are the vision and vision statements for the construction of the kindergarten project:

1.1.1. Vision

To be universally recognized by industry and government as one of the s leaders in constructing high-quality educational facilities to serve qualified educational cadets to build proud citizens and global competitors.

1.1.2. Mission

Building educational facilities that meet the best international standards to create a safe environment and help develop innovative generations that can compete

internationally and communicate positively with this era's challenges, which lead to sustainable development in the nation.

1.2.Project Objective

To provide an educational facility for young children in a growing community in Mutrafiah district, Jubail City. In this research project, the main benefits are to be realized through the construction project for the development and nationwide expansion of kindergartens aiming to achieve the strategic objectives of ensuring quality, equitable and inclusive education for all, and increasing opportunities for lifelong learning for all.

1.3.SMART Goals

There is common agreement and a strong belief that plans in the absence of well-formulated goals lack rationale, strategies lack relevance, actions lack direction, projects lack accountability, and organizations lack purpose (Mullins, 1999 & Bratton, et al, 2007). Furthermore, goals have to be properly formulated to serve as credible, reasonable, and applicable benchmarks by which the outcome can be monitored and assessed through immediate outputs, intermediate outcomes either in the short term or terminal impacts in the long term (Bipp and Kleingeld, 2011). Hence, the objective statements must be well-formulated using a clear and logical structure or framework as a fundamental requirement of effective goal setting.

The Smart Goal setting framework is a great dignified way to bring structure and trackability for managing progress against objectives. The acronym SMART stands for Specific, Measurable, Attainable, Realistic, and Time-Based. Therefore, the goal needs to meet all five of these criteria to be a SMART goal.

1.4.Performance Measurement Indicators

Business communities are increasingly interested in developing and implementing sound, proactive sustainability strategies, including increased stakeholder engagement (Epstein et al., 2014). The strategic objectives of constructing a kindergarten include

various objectives such as social-emotional, physical, language, cognitive, literacy, and social studies (Teaching Strategies, n.d.).

In general, the ultimate goals of constructing a kindergarten may include:

1. Developing education and learning methods and materials
2. Preparing students in an integrated way to compete locally and overseas.
3. Improving quality competence for teachers and administrators.
4. Fostering community partnership.
5. Accomplishing quality in education.

1.5.Strategic Objectives

Kindergarten education establishes the groundwork for the lifelong learning process. It strengthens the learning fundamentals of the childhood stage, which helps in developing well-educated future generations. In order to establish a successful educational system, a set of measures known as Key Performance Indicators (KPIs) has to be taken into consideration to assess performance and ensure achieving high-quality education.

KPI tool is a quantifiable measure of performance over time for a specific objective. It helps organizations to have self-assessment and external evaluation to move ahead toward achieving high-quality standards. KPIs can come into many types: Strategic, Operational, Functional, and Leading vs Lagging. Leading KPIs help in predicting future outcomes, whereas, lagging KPIs track what has already happened.

The below set of tables demonstrates the strategic objectives and measures of constructing a kindergarten in Mutrafiah district, Sector F4, Jubail city:

Strategic Objective (1)	Developing education and learning methods and materials.
How to achieve it?	- Assessing learning materials. - Aligning Textbooks with curriculums. - Benchmarking with other educational institutions.
How to measure it? (Lead / Lag)	- Licensed from the Ministry of Education (Lead). - Consistency between course objectives and deliverables (Lag). - Number of sessions, workshops, and interactions with educational institutions (Lead).

Strategic Objective (2)	Preparing students to compete locally and overseas.
How to achieve it?	- Easing access for various resources. - Participating in local events and competitions. - Engaging students in well-known global programs.
How to measure it? (Lead / Lag)	- Availability of resources and adequacy to students' age (Lead). - Number of awards and recognitions obtained by students (Lag). - Number of participants & Quality of programs attended (Lead).

Strategic Objective (3)	Improving quality competence for teachers and administrators.
How to achieve it?	- Setting relevant goals. - Establishing a clear career path. - Maintaining high performance. - Providing training and development.
How to measure it? (Lead / Lag)	- Accomplishing Tasks efficiently and effectively (Lag). - Identification of responsibilities and future job ladder (Lead). - Level of productivity (Lag). - Availability of training matrix (Lead).

Strategic Objective (4)	Accomplishing quality in education.
How to achieve it?	- Assigning qualified teachers. - Adding more resources in the library. - Subjecting the educational programs to review by global accreditation entities.
How to measure it? (Lead / Lag)	- Student's feedback (Lag). - The percentage of students' satisfaction (Lag). - Licenses, Certifications and Recognitions (Lead).

Strategic Objective (5)	Fostering community partnership.
How to achieve it?	- Volunteering in participating in community activities. - Proposing innovative ideas to solve community problems.
How to measure it? (Lead / Lag)	- Number of volunteers (Lead). - Possibility of an application according to teaching objectives (Lag).

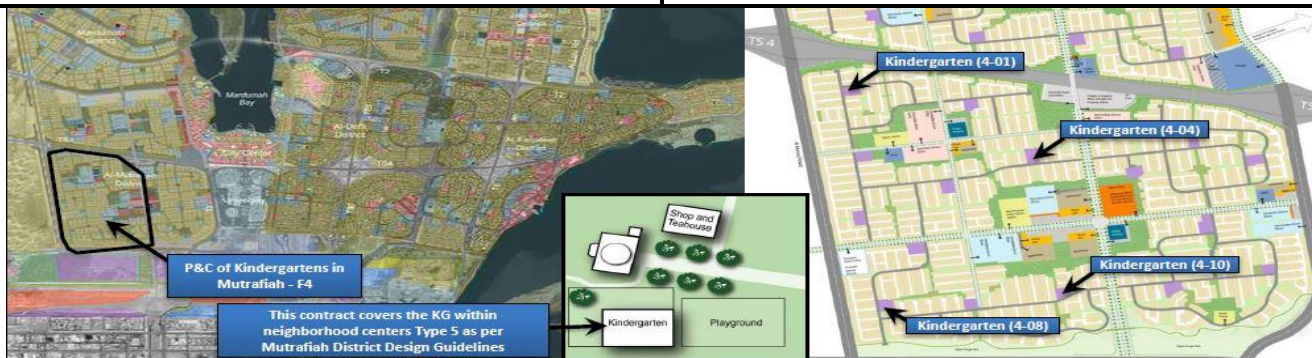
Table 1: Strategic Objectives

1.6. Project Charter

Project Title	Construction of	Project Number	XXX-CXX
	Kindergarten in	Revision Date	
	Mutrafiah		

Project Objective	Project Scope
To provide education facilities for children in a growing community in Mutrafiah district in Jubail	<u>Work to include the following:</u> • Construction of Kindergarten in Mutrafiah district in Jubail - Sector F4: - Approximate Site Area (each) = 4,260 m² - Approximate Building Area (each) = 1,500 m² • All sites are to be developed by filling, compaction, and grading to the required elevation. • All buildings are to be provided with services such as potable water supply, sewage, storm water drainage system, power and lighting, telecommunication, CATV, CCTV, LAN, public address, HVAC, fire detection, fire protection system and building management system.
Project Justification	
It is part of the city development master plan with reference to the Integrated Schedule for Housing Development. To align school facilities with the complete schedule of a residential unit in Mutrafiah district in Jubail.	
Stakeholders (External and Internal)	
Engineering Department. Construction Department. Education Department. O&M Department. Procurements Department. Project Department. Jubail Community Parents	<u>Studies:</u> <u>Surveys:</u>

Utility Companies (SEC, Marafiq, .. STC)		Existing condition as-built survey will be carried out during design task
Schedule/ Cost Estimate		<u>Studies:</u>
Organization Breakdown Structure (OBS)	Projectized	Lesson learned need to be taken into account.
Starting Design:	01 – Jan - 2022	
Complete Design:	28 – Feb - 2022	<u>Standards:</u>
Award:	01 – May - 2022	SBC
Construction Complete:	15 – Dec – 2023	Project Constraints:
Preliminary Cost Estimate (±25%) in SAR:	16,000,000	Availability of infrastructure IFC Designs Sector F4
Project Interfaces:		Project Risk Assessment:
Private Sector Projects in Sector F4.		Timely Construction commencement of Infrastructure by Private Sector in Sector F4
Project Sponsor :		Third-Party Approvals
Royal Commission in Mutrafiah district in Jubail		As-built information of existing utilities; waterline, power lines in the area not available (delays the design)



2. Governance, Structure, and Process

A uniform hierarchy of operations refers to an organizational structure. It specifies how groups should be divided, coordinated, and directed. It also identifies the roles and responsibilities necessary to realize an organization's goals and vision. Organizational structures are not fixed in stone; they change depending on the size, demands, and philosophy of the company.

2.1. Organizational Structure

In the Field of Construction, the functional type of organizational structure is the most effective in the fulfillment of the project. We need key personnel to execute the task and below are the proposed organizational structure necessary in the performance of the Work, including lines of authority, responsibility and communication, and division of responsibilities.

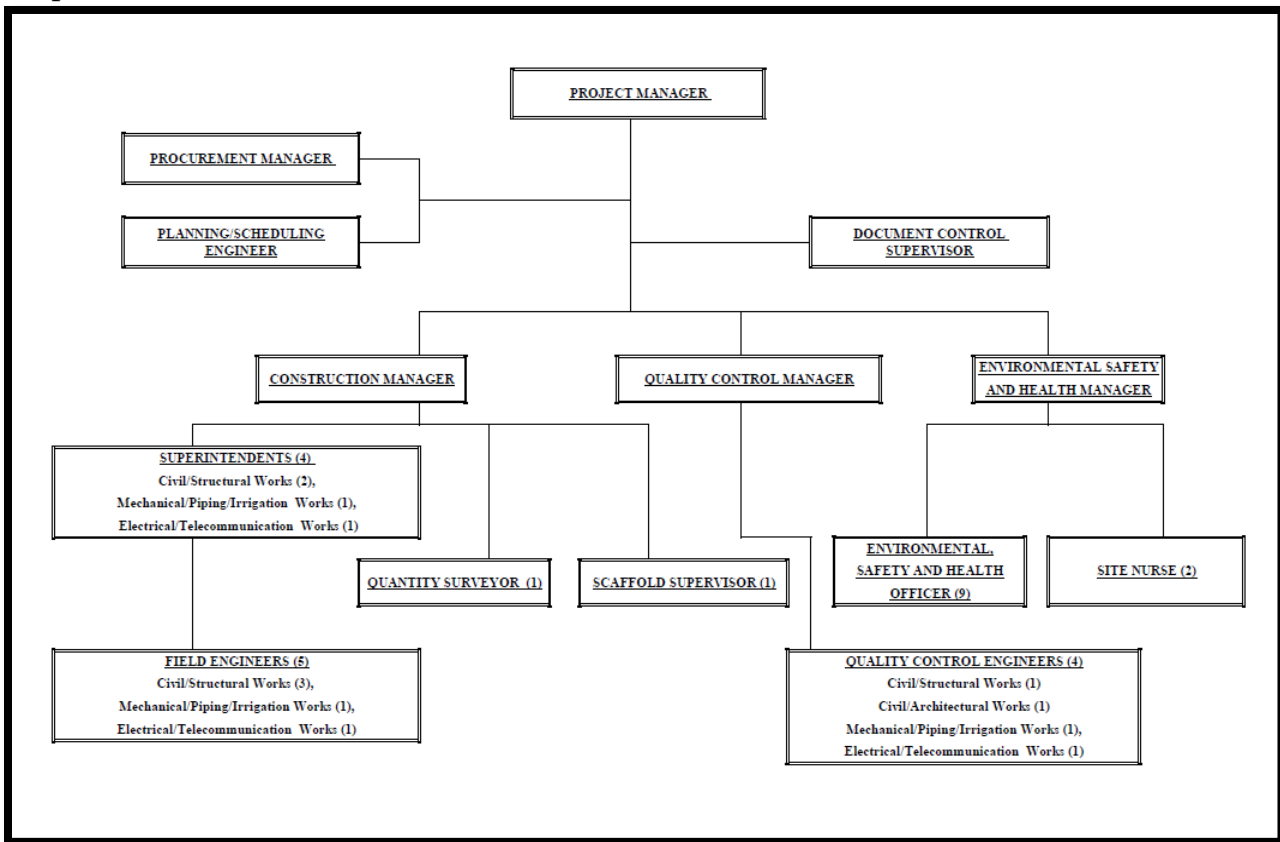


Figure 2: Organizational Structure

2.2.Practical and Scientific Bases

When choosing an organizational structure, certain features should not be overlooked. The key elements that contribute to a proper organizational structure are as follows:

- Degree of alignment with organizational objectives
- Accountability assignment
- Delegation of Capabilities
- Simplicity of Design
- Physical locations

In the design of an organizational structure, it is important to know the specifics of the organization before formulating the structure. Organizational structure may be centralized or decentralized. Traditionally, structures of the organization have been designed with a centralized leadership thereby having a defined chain of command. In the development of an organizational structure, the practical basis to be considered is a common purpose, coordinated effort, division of labor, and the hierarchy of authority. Its common purpose unifies members of the organization thru a common understanding of what is the vision and mission of the organization, its values, and strategies.

The coordinated efforts were brought about by the collaborative contribution of each of the members of the organization. The fair and equal distribution of labor among members of the organization in order to have a sound judgment and result from the members. This will also help in making different members of the organization with different tasks and functionalities perform and deliver results effectively and efficiently.

The hierarchy of authority is the area in which members and leaders of the organization will have a control mechanism making sure that the right people do the right things at the right time thereby enabling organization members to make a decision quickly when needed. Identified nature or line of business an organization will engage will be the

basis in which the type or kind of structure will be adopted and implemented in an organization.

2.3. Project Management Office

As we are seeking more reliable monitoring or increasing the efficiency of construction across projects, we would consider opening a project management office (PMO). A PMO is a group, either an internal department or an external company that sets, maintains, and ensures project management methodology, best practices, and standards throughout an organization. It supports managing shared resources across all projects administered by the PMO and provides coaching, mentoring, training, and oversight. It keeps best practices, project direction, and project direction all from a central location. It ensures that company procedures, practices, and activities are carried out correctly on schedule, on budget, and in the same manner. A PMO exists to assure project and program success, which is crucial because projects and programs are how enterprises provide value.

In the execution of the Kindergarten Project as a Project Manager, the best model to be used is Supportive Project Management. I believed this type is very effective to carry out the project in a human and professional manner as the project manager oversees the team members in the project management office and takes responsibility for the quality and value of each project under its care. This involves collaboration with project managers and reporting to the executive staff of the organization. It collects all projects in an organization, supplies best practices, templates, training, but with a low degree of control. As a Project Manager, it is necessary to provide support even to the lowest member of the organization.

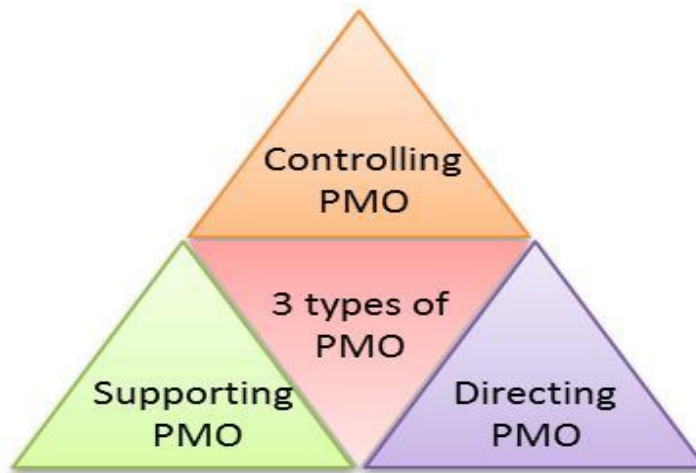


Figure 3: Controlling PMO

3. Compliance, standards, and Regulation

The purpose of this section is to describe the contractual obligation against the project requirements and objectives for delivering the kindergarten to meet the minimum standards.

The contractor responsibilities to make sure meeting not only limited to the following:

- Conduct QC/QA for all requirements as described
- Administering the construction works
- Provide submittals of the standards, requirements and specifications, and got written approval to proceed.
- Being available for a site inspection by the third party inspection agent
- Completing the standard construction forms and providing submittal as part of project handover.

3.1. Check Compliance Model

Project Name: Construction of Kindergarten	Owner	XXX	Main Contr actor	XXX
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Date		Ref.	
Requirements		Compliance	
Goals	Details	Compliant (Y,N,NA)	Remarks
Developing Smart educational facilities	Provide smart board in all classrooms and carpets		
	The areas of the class should comply with international standards for smart classroom		
	The chairs should be comfortable for a long seating period		
	The lighting should comply with the Saudi Building code and with three lighting controls in each classroom		
	The air condition should comply with the SBC standards and regulation		
	Each table should have four students for collaboration interaction and with the educator		
	The education resources should be accessed by the students		
	The cabinets should be available for each student for storing educational materials		
	The kindergarten should have activity areas like an art center		
Developing supporting facilities	The kindergarten should be equipped with an auditorium as per design requirements and the Saudi Building code.		

	The kindergarten should have resource rooms like sports equipment and customs to support the learning outcome		
	The kindergarten should have a library that contains different levels to support a variety of intelligence.		
	The library should have access to the internet		
Developing general utilities	There should be enough rooms for the staff for class preparation that comply with the Saudi Building code and company requirements and regulation		
	The meeting rooms should have IT equipment and furnished items to support the long hours meeting. This should be designed and approved by the expert designers and vendor		
	The building should be south facing so that sunlight can enter the room in the winter and cannot directly in the summer		
	The building should be planted with hygienic laws and the O&M manuals should be part of the handover		
	Educate space should have been provided with the staff room, office room and comply with standard regulation		
Fostering community partnership.	Suitable place for parent's meetings according to international project standards.		

	Donating center, chairs and area should be provided with suitable hospitality equipment.		
	Kindergarten should have an auditorium to spread the causes and to host exhibitions.		

Table 2: Check compliance table

3.2.Check List Model

3.2.1. Start Phase

The following checklist serves as of the start of the project and must be completed as the phase closed by the Project Manager. This document emphasizes that the output of the section will allow the project to start smoothly.

Start Phase			
Description	Yes	No	Comments
Have project objectives been defined and are they clear?			
Has a project sponsor been identified?			
Has a project customer been identified who will sign off the requirement and accept the delivery?			
Has an issues escalation mechanism been identified?			
Has an ultimate authority been identified who can make the final say on project continuation?			
Has the Project Manager been identified?			
Has a Business Analyst been identified?			
Has Core Team been identified?			
Has a Business Case been developed and approved by the authority?			
Has the project been prioritized?			
Have Business Requirements been completed and sign-off?			

Have Deliverables been defined clearly?			
Has Acceptance Criteria been established for each Deliverable?			
Has Project Management Methodology been identified?			
Has Risk been assessed?			
Have Risk Mitigation Strategies been defined?			
Has a Contingency Reserve been established?			
Have business functions been identified?			
Has the Project interface been identified/documentated?			
Have business processes impacted by the project been identified?			
Has the Project Budget been approved?			
Has a Project Deadline (Completion Date) been established?			
Have interdependencies between other projects been identified?			

Table 3: Starting Phase

3.2.2 Plan Phase

The planning phase shows the road map to construct the kindergarten. This includes the development of the scope, schedule, and time of the entire project. The planning team must complete this phase and make sure that all the below checklists are completed on time to allow the project to start construction.

Planning Phase			
Description	Yes	No	Comments
Have you organized a project kick-off meeting			
Does the project team need any training?			

Are you comfortable with the skill level of the project team?			
Do you need a project management plan?			
Do you have enough contingency or buffer in the budget and schedule?			
Is there a vendor contract involved in the project?			
Have all the project components been estimated?			
Do you have a detailed project schedule drafted?			
Do you need a work breakdown structure?			
Have you created a baseline for the project plan?			
Is the project team comfortable with the project schedule?			
Do you have clearly defined the milestones for the project?			
How do you plan to track project progress?			
Have the team left plans and public holidays been factored into the project plan?			
Do you have a resource plan for the duration of the project?			
Do you need to hire additional resources for the project? If yes, has the hiring process been kicked off?			
Have you factored in the resourcing costs in the plan?			
Are you aware of the SMEs required for the project?			
Is your project schedule detailed enough for the project team to understand the tasks?			
Is there a quality assurance plan for the project?			

Table 4: Planning Phase

3.2.3 Achieve phase

This phase is where the deliverables of the project are realized by the project constructing team. The project manager will need to communicate the deliverable in a proper way to get support from the stakeholders.

Achieve Phase			
Description	Yes	No	Comments
Has the project scope been finalized by the stakeholders?			
Have the business requirements been finalized and signed off?			
Is the team aware of the project deliverables?			
Have all the hardware and infrastructure requirements been finalized and addressed?			
Does the project team need to be co-located?			
Is everyone in the team aware of roles and responsibilities for everyone, including themselves?			
Is the team aware of the benefits and business value of the project?			
Is everyone in the team fully allocated to the project?			
Is the project team comfortable with the requirements and their details?			
Have you planned the resources required for the implementation?			
Is everyone in the project team aware of the project deadlines?			
Does the project team need to be co-located?			
Is everyone aware of the defect management process?			

Are you aware of the impact of systems shut down for implementation?			
Do you have a commitment from a business for testing resources?			
Do you have a list of housekeeping tasks for the project?			
Will the system need a User Manual?			
Do you have a list of critical tasks?			
Do you have a plan to update the system documentation after the project is complete?			
Does everyone in the project team have the required hardware and software?			
Is there a mechanism to track scope creeps and change requests?			
Have you created a project change management plan?			
Do you have a change request log and change request template?			
Do you have a communication plan?			
Is there a set of standard templates for project artifacts available?			
How often do you review your project budget?			
Do you have a detailed project schedule where the largest task is less than 5 days?			
Do you have a defect management process in place?			
What is the frequency of status reporting?			
Do you have a project status report for weekly and/or monthly reporting?			
Do you plan to conduct a monthly project team meeting?			
How will you track resource utilization in the project?			

How do you plan to manage ongoing leave management for the team?			
Was a risk assessment conducted for the project?			
Have you created a project risk and issue register?			
What is your stakeholder management plan?			
Do you have the required tools to capture timesheets?			

Table 5: Achieve Phase

3.2.4 Close Phase

This phase serves as a sign of the deliverables by the stakeholders. This needs to close by the project manager and do the proper handover to the occupants' team.

Planning Phase			
Description	Yes	No	Comments
Was an implementation review conducted?			
Are all the project benefits still on track?			
Will there be a closure document?			
Have all the stakeholders authorized the project closure?			
Are there any pending or open issues because of the project?			
Do you have a list of lessons learned?			
Have adequate arrangements been made for the handover of the new or updated systems/processes?			
Has the project budget been finalized?			
Are all the project resources released?			
Have all the post-project activities been complete?			
Handover is complete for all deliverables?			

All deliverables are accepted and signed off by the client?			
Final project status reports are complete?			
All financial processes and reports are complete?			
Staff performance evaluations and reports completed?			
All supply contracts and processes are terminated?			
Site operations and facilities used for the project closed down?			
Disposal of all equipment and materials is done?			
Completion of storage for all the project files?			
Communication: Announcement of completion of a project (internal, external, and public relations contacts)?			

Table 6: Planning Phase 2

3.3. Stakeholder Register

Project Name	_____	Date	_____
Project Number	_____	Document	_____
		Number	_____
Project Manager	_____	Project	_____
		Owner/Client	_____

Project Role	Category	Contact Information	Group
Sponsor	Internal	Ceo@rcjubail.gov.sa	Owner
Project Manager	Internal	pm@rcjubail.gov.sa	Direct Management

Project Management Team	Internal	team@rcjubail.gov.sa	Direct Management
Project Department	Internal	project@rcjubail.gov.sa	Direct Management
Engineering Department	Internal	Eng@rcjubail.gov.sa	Functional Management
Procurements Department	Internal	Pro@rcjubail.gov.sa	Functional Management
O&M Departments	Internal	OM@rcjubail.gov.sa	Functional Management
Education Department	Internal	Edu@rcjubail.gov.sa	Functional Management
Jubail Community	External	comm@rcjubail.gov.sa	Community
Transportation Department	Internal	Trans@rcjubail.gov.sa	Functional Management
Jubail Governor	External	govenor@rcjubail.gov.sa	Governments
Construction Contractors	External	Cont@rcjubail.gov.sa	Special Interest Group
Saudi Electrical Company	External	sec@rcjubail.gov.sa	Utilities
Marafiq	External	marafiq@rcjubail.gov.sa	Utilities
Saudi Telecom Company	External	stc@rcjubail.gov.sa	Utilities
Childcare Facilities	External	facilities@rcjubail.gov.sa	Competitors
Material Suppliers	External	supplier@rcjubail.gov.sa	Suppliers
Local residents	External	citizins@rcjubail.gov.sa	Citizens

Table 7: Project Phase

4. Strength/Interest and Influence/ Strength Networks

4.1 Stakeholder Analysis:

Stakeholder management is a critical skill that successful people use to gain the support of others. It assists them in ensuring that their projects succeed where others have failed. Stakeholder analysis is a technique for identifying the key people who must be persuaded. Then you use Stakeholder Planning to build the support you need to succeed.

The following are the advantages of using a stakeholder-based approach:

- You can use the opinions of the most powerful stakeholders to shape your projects early on, and their feedback can also improve the quality of your project.
- Gaining the support of powerful stakeholders can help you win more resources, increasing the likelihood that your projects will be successful.

4.1.1 Stakeholders Strength/Interest Network

Once stakeholders have been listed in the stakeholder register. Some of them may be able to either block or advance. others may be interested in what you're doing, while the rest may not be. This is where the Strength-Interest network comes in handy for categorizing/prioritizing stakeholders.

This aids in the identification of stakeholders based on their strengths and interest in the project. When you plot your stakeholders on a strength/interest network, you can see who has a lot of power and who has a lot of interest in your project. People in positions of power must be kept satisfied, while those with vested interests must be kept informed. When a stakeholder has both, make sure you manage her expectations very closely

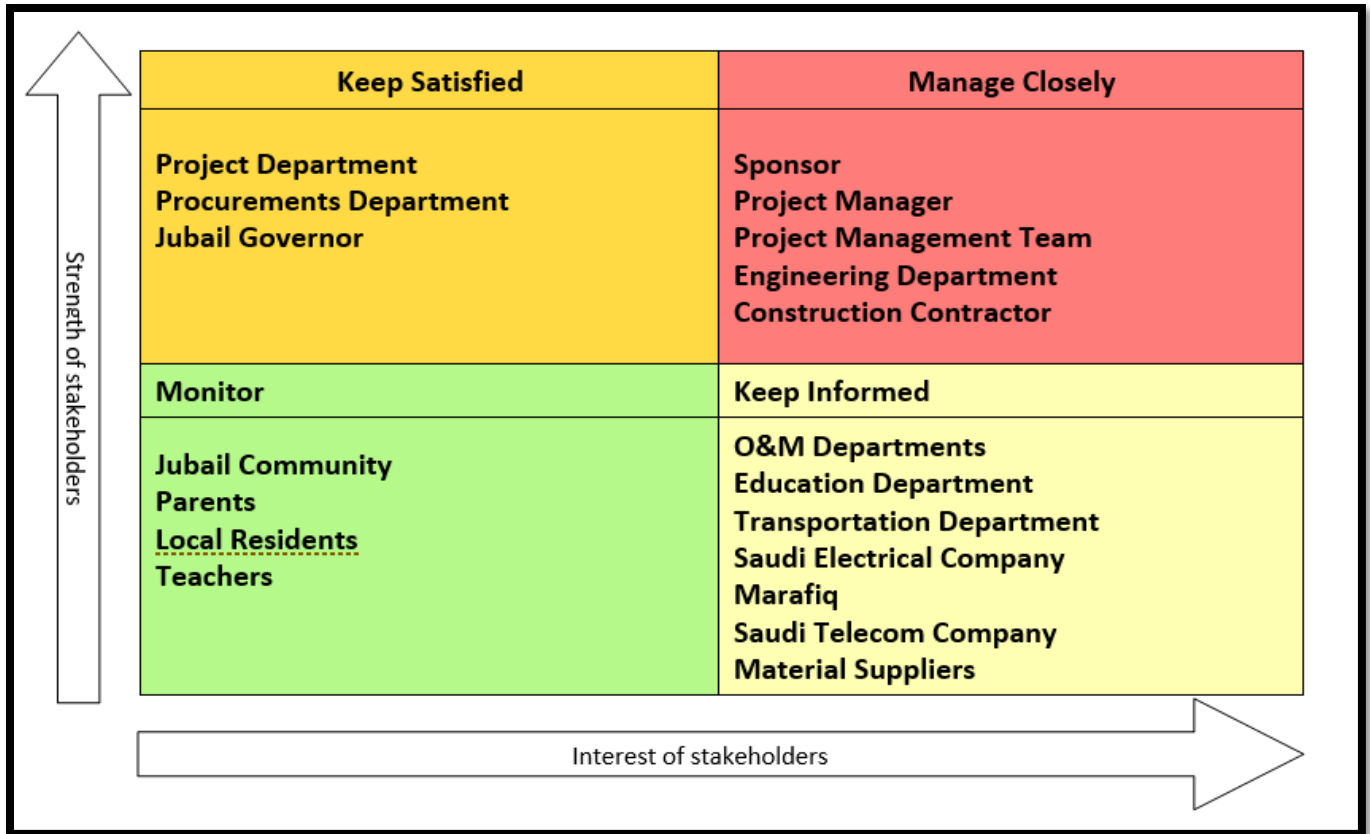


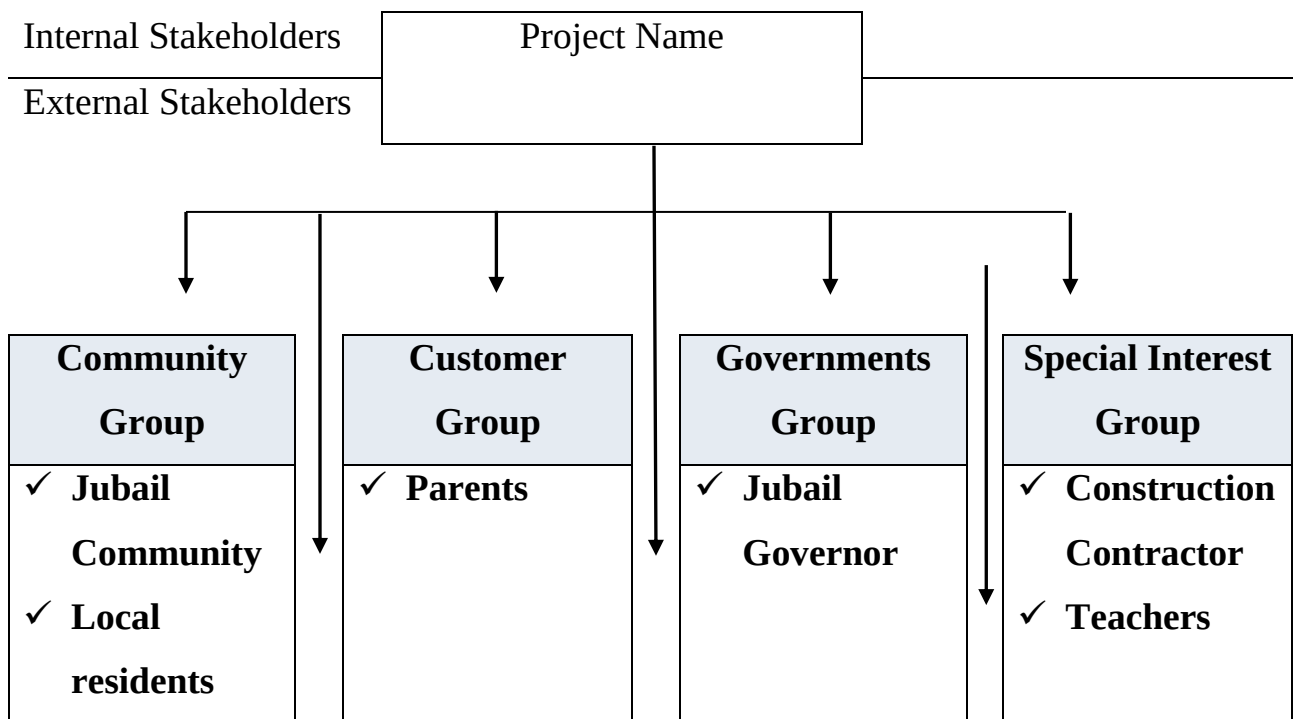
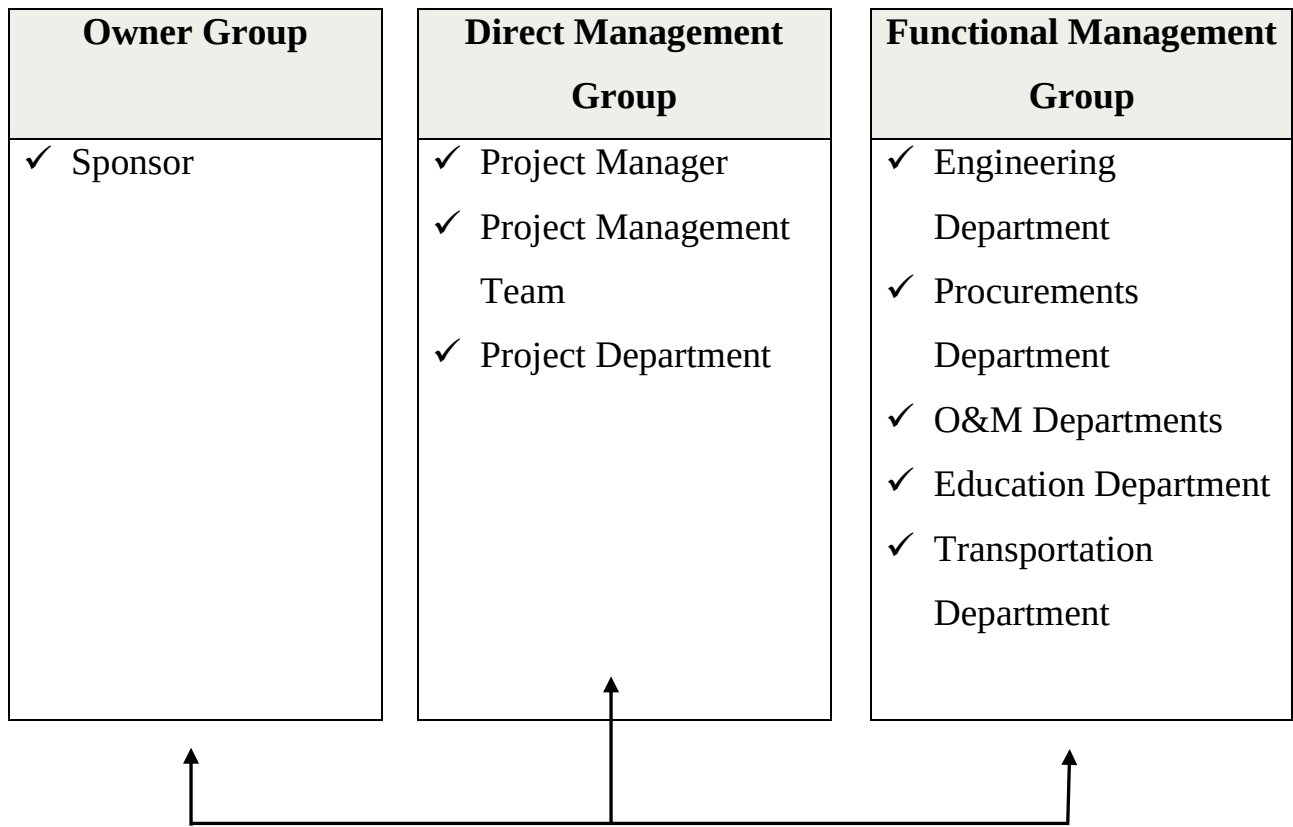
Figure 4: Analysis of strength and interest of stakeholders

4.2 Logical Diagrams for the Register of the Stakeholder

To be considered a stakeholder, a person or group must have an interest in or influence over the project. We would benefit from understanding not only their interests but also the potential project impact if a need were not met.

The first effort should be a brainstorming session with appropriately selected members and, if possible, a facilitator. All stakeholders should be considered at the outset and possibly dropped later in the analysis. It is frequently difficult to force classifications into groups and determine who is truly inside and outside of the stakeholder's register logical diagram. Despite it is usually preferable to identify these stakeholders by name rather than generic terms such as customer, owner, sponsor, and so on, in order to gain a

more powerful understanding of their needs and expectations. This concept will not apply in the below logical diagram to avoid getting into the intricacies of details (Cleland, 1998). Logical Diagram showing the register of Stakeholders in a figure is presented on the next page.



Suppliers Group	Utilities Group	Competitor Group
✓ Material Suppliers	✓ Saudi Electrical Company ✓ Marafiq ✓ Saudi Telecom Company	✓ Childcare Facilities

Table 8: Project of tree analysis

5. Culture & Values:

An organization with a strong culture is one where its employees know how to respond to any situation, know how they will be rewarded when demonstrating the organization's values, and understand and know how they will be held accountable.

A highly effective organization is based on a strong culture that is rooted in deeply held and widely shared beliefs which are then strengthened by a well-developed strategy and structure (SHRM, 2021). Epstein et al. (2014) argued that it is critical to implement sustainability in an organization that has a shared culture that is based on sustainability. According to empirical studies, sustainability-integrated firms are more likely to integrate sustainability messaging into mainstream marketing and advertising.

5.1 Culture

Kindergarten Culture is defined as “those achievements of an organized community that can be recognized in the typical and commonly-held views and

beliefs of the educators, principals, professional associates, administrative and other staff and parents involved with an educational institution” (Vujičić, 2013).

5.2 Values

During the past few decades, studies have shown the growing paybacks of early childhood education. Early childhood education goes through kindergarten programs that help children transition into primary school (Ameri Schools, n.d.). In other words, kindergartens are designed to foster academic, social and individual growth. The curriculum Development council (n.d.) addresses that in the context of the development and characteristics of children, kindergarten can emphasize the positive values and attitudes that align with their kindergarten mission and context, such as persistence, care for others, responsibility, when planning their school-based moral education. kindergarten can let children examine and apply positive values and attitudes in the daily learning environment, which has various opportunities for interpersonal interactions. The construction of kindergartens carries the following values:

Citizenship: to accomplish loyalty as well as belonging to our homeland via driving all future goals and visions that result in achieving citizenship’s values.

Creativity: to shed the light on visions coming from outstanding thoughts and creative ideas along with supporting creators’ initiatives that enable to get the best result in the matter of building a knowledge society.

Accuracy: to guarantee accuracy and uniqueness in our business and strive for progressive improvement which allows us to hold the best result.

Fairness: to apply equity and equality between our staff as they are our essential and precious resources.

Transparency: to promise transparency in our attitudes, deals, and behaviors. To share both information and knowledge within us and ensure better communication with current partners.

Responsibility: to support and advance our society passionately through a fruitful partnership with relevant authorities.

Teamwork: to create a teamwork spirit that allows us to work calmly as there is applying of constructive collaboration and mutual trust among team's members and leaders that aim to educational growth, investing in building up creativity and abilities for future generations.

6. Self-reflection and self-management

We all know that a project is considered successful if it is completed within the scope, time, cost, and quality constraints. Poor project management is expensive and difficult to deal with, especially when large projects with large sums of money are involved. Only small fractions of the many projects that are attempted around the world are truly successful. Projects are completed and closed, but they are not always regarded as successful due to cost or schedule overruns, with the most prevalent cause of project failure being cost overrun. As a result, firms must apply improved concepts, creative approaches, and frameworks in project management.

6.1 Personal Behaviors Impacting the Project

One of the most important factors influencing project success is people's behavior. In the remote work environment of today, managers must understand the emotions and culture of their work team to give employees a chance at succeeding in the long run and completing projects in the manner that they should be handled. Project management revolves around people, and their actions have a direct impact on the project's success. All processes revolve around people, which is why projects cannot thrive without their input and ideas.

In this research, we will discuss three project manager personal behaviors that might have an impact on the project, as well as how project managers can manage people without jeopardizing the project's success. The following is a list of three personal behaviors of project manager that can influence the project:

- Understanding Culture
- Engaging Team Members
- Good Communication

Understanding Culture

For humans, culture is one of the most significant and sensitive variables. To different people, the term culture can signify different things. From the standpoint of a project manager, culture could simply mean "how projects are managed here." People bring their culture along with them as luggage. Project managers must interpret and comprehend the significance of workplace culture.

At a global level, managers may find it challenging to comprehend cultural variations. While project management teams' global reach has resulted in an infusion of bright individuals, it has also resulted in a situation where project managers aren't always in control of how their team's culture is seen and what they can do about it.

Employees are frequently required to work in environments that aren't supportive of their efforts or the job they produce. Employee morale can be harmed by a lack of acknowledgment and praise where it is due, as well as a lack of confidence to attempt new things at work. In the kindergarten construction project, PM should encourage everyone to communicate in short clear sentences and discourage, as much as possible, the use of idiom, slang, or words with multiple meanings.

Engaging Team Members

After you've figured out what culture is, the next step is to engage team members and make sure they're paying attention. Successful project management necessitates

involving team members and harvesting communication between them. The level of engagement should be the same for both team members and stakeholders so that everyone is on board with the development and ready to pitch in where it's needed.

Throughout the course of a typical project's lifecycle, engagement levels should be assessed, and employees' feelings should be closely tracked. The way the project team interacts and performs as a whole can have a big impact on productivity. In the kindergarten construction project, PM should start with setting a clear vision and specific project goals before you provide challenging but exciting assignments. Empower your team to make independent decisions and share the project's progress on an ongoing basis. Provide social and structural resources for the team and work to remove any obstacles that are hindering team success.

Good Communication

People management issues aren't about the technical aspects of day-to-day interactions with people; rather, they're about a lack of communication among stakeholders. Employees will be able to communicate with one another through a variety of channels at any given time. Make sure that the communication is consistent and that it aids in the achievement of beneficial outcomes.

If project managers want to get the best results on their new initiatives, they'll have to go beyond what's written in the books. People's emotional bonds as individuals and as members of teams must be recognized to effectively manage them and reduce difficulties. In the kindergarten construction project, PM should make good communication by focusing on the way communication is delivered and received, project management teams will see their projects run smoothly and more efficiently.

6.2 Personal Behaviors Analysis

Team members should be acceptable communicators who advance clear, explicit data trade. It is PM work as an undertaking chief to keep many individuals educated. PM task groups must get what's generally anticipated of them, including what they should do,

when they should do it, and what spending plan, time, and quality objectives they're focusing on. On the off chance that undertaking colleagues don't have the foggiest idea what their obligations are or how to finish them, the project will stop.

PM will not have the option to follow project progress in the event that PM doesn't have the foggiest idea of what the venture group is doing (or isn't doing). At last, on the off chance that PM doesn't have a clue what the client anticipates from PM, the task will not make headway. Subsequently, project correspondence can be summed up as deciding "who needs what data and when" and guaranteeing that they have it. All activities require viable communication plans, yet not all undertakings will utilize similar sorts of correspondence or spread data similarly.

The correspondence the board plan diagrams how the partners' correspondence needs will be met, including the kinds of data that will be conveyed, who will impart it, and who will get it; specialized techniques; correspondence timing and recurrence; the strategy for refreshing the arrangement as the venture advances, including the increasing system; and a glossary. The objective of the project manager is to finish things. Each association has its own arrangement of strategies, functional methodology, and hidden culture. Political traps, unique inspirations, contending interests, and force battles flourish.

A venture director should know about every one of the concealed powers at work in the association. The initiative is characterized as the capacity to spur and rouse others to accomplish explicit objectives. Pioneers impart a feeling of direction in their supporters and join them behind a shared objective. A decent venture administrator can propel and move the undertaking group to comprehend the task's vision and worth. As a pioneer, the undertaking administrator can spur the task group to discover an answer for the apparent issue.

6.3 A self-professional assessment using SWOT Model

SWOT stands for Strengths, Weaknesses, Opportunities, and Threats. A personal SWOT analysis is a self-introspection exercise that can help you better understand yourself

and plan for future growth. It's a reliable technique for distinguishing inside and outer qualities and shortcomings, just as promising circumstances and dangers. The evaluation is remembered for any great business or promoting plan since it gives pivotal data to fostering a development system. People can profit from this significant exercise too.

An individual SWOT investigation can assist you with accomplishing your objectives, regardless of whether you're searching for a new position or attempting to progress up the professional bureaucracy. A novel technique for self-assessment can assist you with sorting out where your profession is currently and where it may go later on.

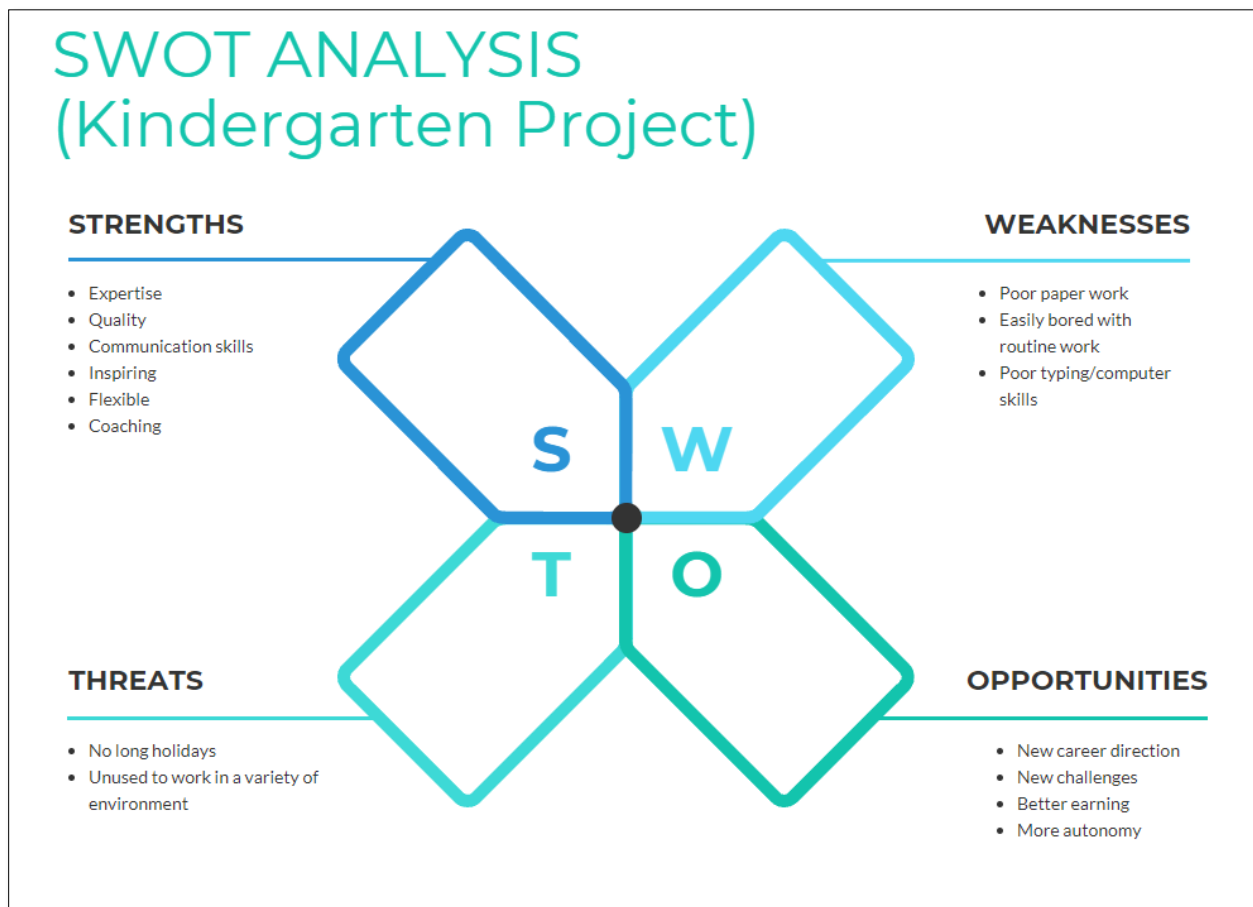


Figure 5: SWOT Analysis

The SWOT analysis process captures information about PM's internal strengths and weaknesses as well as external opportunities and threats. The key to completing your SWOT analysis is to treat your career as a business and yourself as a competitive product.

Strengths

To help you understand your strengths, picture yourself as a competitive product in the marketplace. Personal strength is an asset to you as a product and can be used as a way to differentiate PM from others when interviewing or trying to obtain your next promotion. Strengths such as strong expertise, inspiring, quality, coaching, project management skills, and ability to improve processes.

Weaknesses

Personal weakness is a liability or an area of opportunity for growth. These are characteristics PM could improve upon to increase future job opportunities. Weaknesses such as easily bored with routine work, poor typing skills, poor paperwork, and being a poor listener.

Opportunities & Threats

When thinking about opportunities and threats, PM always finds it easier, to begin with, the “threats.” Try comparing yourself to PMs, whom you will likely compete against for that next job or promotion. Then, as objectively as possible, judge your threats and determine possible ways to overcome them.

7. Personal Integrity and Reliability

The construction industry is a challenging and demanding business sector. Alqasmi (2019) discussed that construction projects include many stakeholders, often with varying views, and require various procedures and processes according to the context of each project. Between those procedures, gaps occur, and individuals are required to make decisions. Some of these decisions and practices may be considered unethical.

The Cambridge Business English Dictionary (2013) defines ethics as “a system of accepted rules about behavior, based on what is considered right and wrong”. On the other hand, unethical practices include “acts that have harmful effects on others and are either illegal or morally unacceptable to the larger community (Jones, 1991).

Ethical practice in the building and construction industry is the vital importance in the same way to other disciplines. Scholars that the unethical practice ranks top among the most severe ills affecting the construction industry. The construction industry faces some ethical issues that are comprised of but are not restricted to: conflict of interest, inflation of bills, professional incompetence, poor work delivery, fraud, bribery, professional misconduct, intimidation and kickbacks among several other evils. The consequences of such unethical behaviors in such industry lead to confidence reduction in the profession, continuous insecure practices that risk lives and property, loss of income by clients and governments, needless and baseless expenditures.

Below are examples of behaviors that Contradict the Moral Integrity in the Construction Industry:

7.1 Overbilling

Cash flow is critical to the construction industry. Project work packages cannot be completed without acquiring materials and manpower payments. Therefore, contractors use billings in excess to manage their expenses and reduce their reliance on credit to pay for upfront costs (Sandage, 2021). Overbilling arises when a contractor bills for contracted labor and materials before that work is being finished. For instance, during a billing cycle, a contractor completes 40% of a project but bills their customer for 50%. That extra 10% is the overbilled amount.

Overbilling leads to situations where the estimated cash required to complete the project exceeds the amount that can still be billed before completion. Such practices lead to a negative cash flow for the remaining activities. Also, it results in an inaccurate monthly

income (or profit-and-loss) statement. In other words, over-billing will reflect too much profit in the profit and loss financial statement for the contractor.

7.2 Late Payments or Unpaid Work

Nowadays, finances are a major issue facing the construction industry in 2020. It is significant to have a positive cash flow for the company with a responsibility to ensure the livelihood of the employees and their families. Latham (1994) stated that “the cascade system of payment starts from the financial institution to the main contractor to subcontractor and so on down the chain”. The insolvency of one party in the payment chain could cause severe impacts to parties down the contractual chain.

It is found in the construction of Al-Matrafiyah District kindergarten that the subcontractor is not receiving payment for its completed work in several instances. Consequently, subcontractor typically files claims against the general contractor and owners in several major projects. Also, subcontractors are front-loading costs on many projects and paying their suppliers and employees. However, they are patiently awaiting payment from the general contractor or owner who may be disputing the payments, although the work is completed. The impact of late payments or non-payment leads to:

1. Delay in project's progress
2. Extension of time for project
3. Low quality works due to contractor's uncertain financial condition
4. Abandonment of the project
5. Creates negative relationship among parties
6. Creates financial hardship for the company
7. Subcontractors refuse to continue works on the project

7.3 Corruption

The construction industry has an international reputation for corruption and bribery. Corrupt practices can be found at every phase in construction projects, such as the planning stage and the awarding of construction contracts (Rodriguez, Waite & Wolfe, 2005).

Examples of corruption include bribes, fraud, and kickbacks. Examples of corruption in the design stage of the project cycle include but are not limited to the following:

- Corrupt selection of consultants for feasibility studies, preparation of specifications/bid documents.
- Over-designed and overpriced projects.

The global infrastructure Anti-corruption Center (n.d) states that such corrupt practices cause loss and damage including financial loss and property damage. For instance, financial loss may arise from inflation of project price, increased maintenance and repair costs, damage to reputation, and legal fees. Project funds may be wasted where there is corruption in project selection or project design resulting in non-viable projects or projects which are unsuitable for the intended purpose

8. Personal Communication

8.1 Register of Stakeholders

STAKEHOLDER REGISTER					
Project Name: Construction of Kindergarten in Mutrafiah					
Stakeholder Name	Role	Type	Influence	Group	Address
Sponsor		Internal	H	Owner	Ceo@rcjubail.gov.sa
Project Manager		Internal	H	Direct Management	pm@rcjubail.gov.sa
Project Management Team		Internal	H	Direct Management	team@rcjubail.gov.sa
Project Department		Internal	H	Direct Management	project@rcjubail.gov.sa
Engineering Department		Internal	H	Functional Management	Eng@rcjubail.gov.sa

Procurements Department		Internal	H	Functional Management	Pro@rcjubail.gov.sa
O&M Departments		Internal	M	Functional Management	OM@rcjubail.gov.sa
Education Department		Internal	M	Functional Management	Edu@rcjubail.gov.sa
Jubail Community		External	M	Community	comm@rcjubail.gov.sa
Transportation Department		Internal	L	Functional Management	Trans@rcjubail.gov.sa
Jubail Governor		External	H	Governments	govenor@rcjubail.gov.sa
Construction Contractors		External	H	Special Interest Group	Cont@rcjubail.gov.sa
Saudi Electrical Company		External	M	Utilities	sec@rcjubail.gov.sa
Marafiq		External	M	Utilities	marafiq@rcjubail.gov.sa
Saudi Telecom Company		External	M	Utilities	stc@rcjubail.gov.sa
Childcare Facilities		External	M	Competitors	facilities@rcjubail.gov.sa
Material Suppliers		External	H	Suppliers	supplier@rcjubail.gov.sa
Local residents		External	L	Citizens	citizins@rcjubail.gov.sa

Table 9: Stockholder Register

8.2 Personal communication and effective communications

For the better and smooth functioning of an organization, communication must be effective and efficient. Effective communication is defined as communication between two or more people in which the intended message:

- is correctly coded

- is transmitted through an appropriate channel
- is received
- is properly decoded and understood by the receiver(s).

In other words, communication is effective when all parties involved in the communication (sender and receiver) attach similar importance to the message and make the sender feel heard and understood. In a business, communication is considered effective when the information or data exchanged between employees effectively contributes to the business success of the company. In the words of R.W. Griffin, "Effective communication is the process of sending a message in such a way that the message received is as close as possible in meaning to the intended message".

The American Management Association (AMA) has defined effective communication in terms of the following ten points

- A clear idea of topics and recipients of the communication.
- Determination of the purpose.
- Understanding the environment of the communication.
- Planning the communication with advice from others.
- Considering the content of the message.
- Making the recipient aware of the value of the communication.
- There must be feedback from the receiver.
- Properly defining whether communication messages are of short-term or long-term importance.
- All actions must be aligned with the communication.
- Good listening skills.

Effective communication is defined as the ability to effectively and efficiently convey information to another. Managers with good verbal, nonverbal, and written

communication skills help facilitate the exchange of information between people within an organization for its economic benefit.

Establish and maintain a sustainable and productive relationship

Effective communication should be at the heart of businesses as, without it, it is very difficult to build and maintain productive relationships.

Give room for innovation

Effective communication facilitates innovation in a business by allowing employees and management to come up with innovative ideas that can contribute to the overall development of the business.

Help build an effective team

A work environment that is enriched by effective or open communication helps in building a cohesive and effective team. Effective communication always boosts the morale of the employees. It arouses the zeal of the employees to work towards the common goals of the company. Regular internal communication can also lead to better morale when employees are reminded of their achievements and feel that they are working towards a common goal.

Effective management

Smooth and open communication between management and employees leads to a steady pace of progress in the organization. Effective communication thus leads to effective management. The managers get to know the attitude and grievances of the employees and the employees get to know the attitude of the managers towards them and the policies of the company.

Effective corporate communication

The success of a company largely depends on effective corporate communication. Effective communication skills are critical to building active and effective interactions among colleagues, customers, supervisors, and the media. It is of utmost importance to all employees at all stages of business in any organization. Although everyone employed in a

business boasts of having acquired the skills of effective business communication, there is always a need to improve these skills.

Methods of effective business communication

The various methods of effective business communication in a nutshell.

- Web-based communication - For better and improved communication, anytime and anywhere.
- Video conferencing - This allows people in different locations to hold interactive meetings.
- Reports - This is important for documenting the activities of a department.
- Presentations - This is a popular method of communication in all types of organizations, usually involving audio-visual material such as copies of reports or material prepared in Microsoft PowerPoint or Adobe Flash.
- Conference calls - This method allows for long-distance conversations.
- Forums - This allows participants to post information instantly in a central location.
- Face-to-face meetings - The nature of such meetings is personal and should be supplemented by written follow-up.

Effective business communication primarily involves listening and speaking. Both the speaker and the listener share responsibility for ensuring that the message is clear and understandable. In addition, body language, tone of voice, word choice and phrasing, clarity of message, and communication style also play a role and influence the effectiveness of interpersonal transactions and interactions.

Techniques of effective oral business communication

We will discuss the various techniques of effective oral business communication. The techniques are described below:

- The speaker should know how to articulate his message in such a way that the listener can understand it well and deliver it in a manner that is consistent with the actual message.
- The speech or the words spoken should be properly worded and concise.
- The speech should be contextual because serious topics are best delivered in a serious tone.
- Knowing the listener(s) and their reaction is critical to conceptualizing the topic of the speech.
- A quiet place is very important for effective business communication. If one party is distracted by external and internal distractions such as noise, the communication will not produce the desired result.
- The involvement of all parties is crucial for effective communication. Involvement means full attention and dedication to the discussion or analysis.
- Effective or active listening is essential for participants in communication. It is practiced by both the speaker and the listener in effective communication.
- To become a better listener, it is necessary to eliminate all distractions during the conversation.
- Active listening involves eye contact, nodding, gestures, and brief comments to show that you have understood. Based on these gestures and comments, you can gauge the listener's understanding and response. If the listener seems confused, the speaker needs to rethink the wording or delivery of the message.
- The listener can ask questions, confirm what is being said, and contribute if needed.
- When speaking or interacting with someone, do not just listen, pay attention and take notes.

8.3 Shapes, models, and channels of personal communications.

Communication is an essential process in our daily lives, and the whole world revolves around it. Lasswell's Maxim defines communication as "who says what to whom in what channel with what effect". Communication is the exchange of information from one point of the project to another point in an efficient manner.

So, there are various definitions and concepts of communication in today's world. But how important is this communication in project management? We can say that it is "Project-Life Blood" as everything in a project depends on how efficiently we carry them out. Communication is an essential tool in the field of project management. It is gaining importance every day and will soon be at the heart of all management processes.

The success of a project largely depends on the efficiency of its communication network. It starts from the first day of the project and remains throughout the life of the project. It provides regular updates to communicate the status of the project and its performance. Surprisingly, however, it has been found that most projects are affected by a breakdown in communication.

It is said that 90% of a project manager's time is spent communicating what needs to be done. This paper will explain what communication means in a project, what steps are required for effective communication, what are the obstacles in communication, how to overcome these obstacles by communicating together, the importance of communication in different work groups, and how to get to effective communication in four steps.

One can never assume that the receiver will interpret the message as the sender meant it. Communication is not an absolute, finite thing. To do so effectively, the project manager must consider all factors, such as the different realities, the space in which the communication takes place, verbal and nonverbal messages, intended meaning versus perceived meaning, etc.

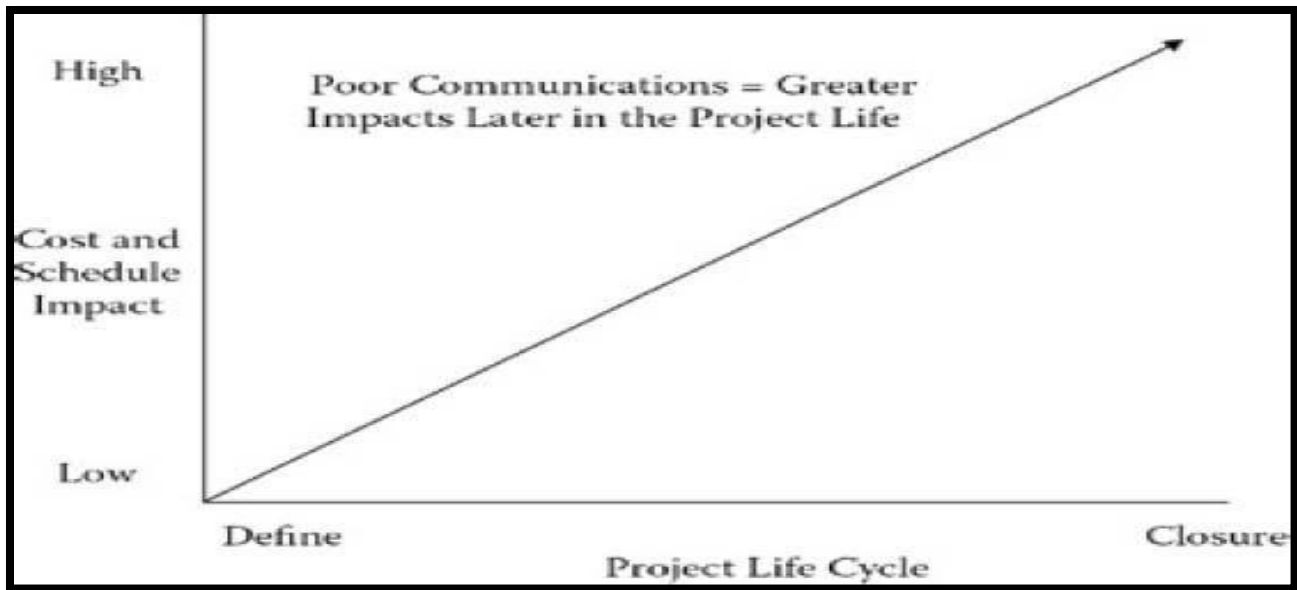


Figure 6: Analysis By Chart

The basic communication model is explained here using fax machine as an example,

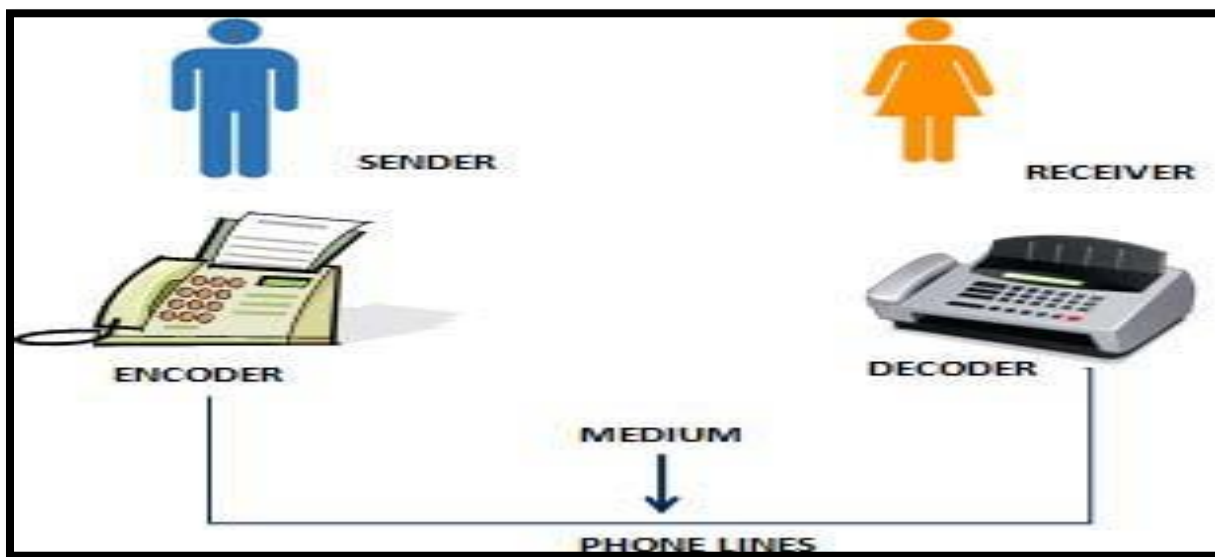


Figure 7: Basic process

Understanding the Communications Process

To communicate effectively, project managers must have a good understanding of the communications process.

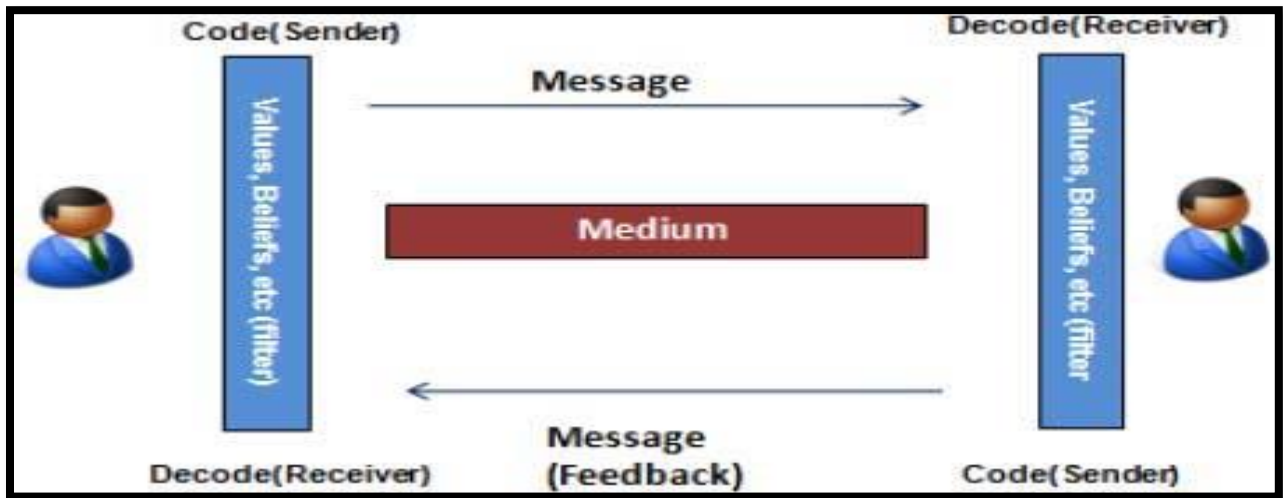


Figure 8: By digital coding

8.4 Communication matrix

The following table identifies the communication requirement for constructing this project.

Type	Objective	Medium	Frequency	Audience	Owner	Deliverables	Format
Kick-off meeting	Introduce the project team and the project. Review project objective	Face to Face	Once	Project Sponsor Project Team Stakeholders	PM	Agenda Meeting minutes	Soft copy in the archive Hard copy distribution

	and management approach						
Project Team meeting	Review the status of the project with the team	Face to Face Confere nce call	Weekly	Project Team	PM	Agenda Meeting Minutes Project schedule	Soft copy in the archive Hard copy distribution
Technical Design meeting	Discuss and develop the technical design for the project	Face to Face	As needed	Project design team	Desig n lead	Agenda Meeting minutes	Soft copy in the archive Hard copy distribution
Monthly Project status meeting	Report the status of the project to management	Confere nce call	Monthly	PMO	PM	Slide templates Project schedule	Soft copy in the archive Hard copy distribution
Project Status report	Report the status of the project including activities progress and cost	Email	Monthly	Sponsor Project Team PMO	PM	Project Status report Project schedule	Soft copy in the archive Hard copy distribution

Table 10: Communication Matrix

8.5 Three (3) wrong scenarios of communications.

1. Passive-aggressive communication

Passive-aggressive communication is a bad practice that has a direct negative impact on how people view themselves and others in the workplace. Passive-aggressive behavior or passive-aggressive communication is a difficult issue because the negative things that are said or done are often subtle and may not be perceived as overtly aggressive, offensive, or confrontational. However, the person receiving the communication invariably feels neglected or mistreated, to the point of damaging the relationship.

Employees or managers who refuse to address a co-worker directly, for example, engage in passive-aggressive behavior. Intentionally using emails and memos to communicate exclusively without ever talking face-to-face with anyone in the office is one form of the problem. Intentionally avoiding a project or collaborating with someone on a particular task without giving a reason is also a form of passive-aggressive behavior in the workplace.

2. The blame game

Another example of poor communication is closely tied to ethics and responsibility. Failure to admit a mistake or take responsibility for a missed deadline demonstrates a lack of responsibility. However, blaming others is counterproductive and does not lead to a solution for the common good. Learning to take responsibility and move forward is a positive solution. However, those who continue to blame others for their mistakes damage working relationships and may be ostracized.

3. Not being able to listen

There are times when you need to forge a path forward, but managers and employees who act as uninvolved individuals and fail to listen to their peers are engaging in poor communication. There are many examples of poor listening, including failing to listen to your customers. If a product or service consistently receives negative feedback and you do not listen and solve the problem, your customers will quickly become dissatisfied and buy

elsewhere. A competitor who listens to you and satisfies your customers' needs may win their business as well.

In an office environment, not listening to your employees is also problematic. It creates an ecosystem of disregard for individual feelings and devalues personal relationships in the workplace. For example, if employees express concern about a problem they see in the workplace, but the supervisor does not ask them to elaborate or address the issue, the problem may go unaddressed and employees may feel like their input does not matter. Employees want to feel that their ideas are valuable and that they are recognized as making valuable contributions to the company's mission.

8.6 Stakeholder's assessment matrix

When creating the stakeholder engagement assessment matrix, e.g. in the process 'plan stakeholder engagement', a project manager should refer to the stakeholder engagement plan for the desired level of engagement. The desired level ("D") of engagement is then incorporated into the stakeholder engagement matrix. When monitoring the actual stakeholder engagement, the project manager adds the observed current level ("C") of engagement for each stakeholder

Stakeholder	Unaware	Resistant	Neutral	Supportive	Leading
Sponsor				D C	
Project Manager					D
Project Management Team					D C
Project Department				D	
Engineering Department				D	
Procurements Department				D	
O&M Departments				D C	
Education Department			D		

Jubail Community			D C		
Parents			D		
Transportation Department				D	
Jubail Governor				D	
Children	D				
Construction Contractors					D
Saudi Electrical Company				D	
Marafiq				D	
Saudi Telecom Company				D	
Childcare Facilities				D	
Material Suppliers				D	
Local residents				D	
Teachers			D		

Table 11: Stockholder assessment matrix

9. Leadership

9.1 Project Leadership Overview

Leadership plays a significant role in attaining organizational goals and promoting individual professional achievement. Accordingly, leadership has been widely covered by management scholars, yet, little attention has been given to managerial and leadership behavior or styles of leaders in the construction industry (Liphadzi et al, 2014).

It is an essential factor in project and construction management as it can be seen as the art of influencing others to achieve anticipated results. Walker (2015) defined leadership as “the manner in which the project managers and construction managers conduct themselves in their role, in order to obtain the best performance from the people they are managing”.

Leadership has a large influence on the whole project process, including other people's actions. Managing construction projects successfully requires project managers to possess the four basic management functions of planning, organizing, leading, and controlling. Furthermore, Duy Nguyen, Ogunlana, & Thi Xuan Lan (2004) claimed that a construction project's success is also determined by many factors, including the competencies of the project leaders, their personalities, characteristics, skills, and leadership styles, among others also the impact on the construction project outcome.

Researchers have emphasized the importance of leadership styles and provided many suggestions about the characteristics, attributes, and skills that are helpful in the construction industry. Goodwin (1993) insisted on the importance of effective leadership and the skills that project and construction managers need. Accordingly, the project discusses leadership styles in the construction industry, focusing in particular on the project and construction management professions. Moreover, it examines project leaders' leadership styles in the construction industry.

9.2 Leadership and Construction

Several factors support the notion that the construction industry requires more leadership than any other. This is evident by the nature of the construction projects. The construction industry involves many large, technical, and multifaceted projects that require specialized skills and experience. In this industry, leadership is important because the teams and members of the team come from many different disciplines and are therefore large and multi-disciplinary (Hillebrandt, 2000).

Throughout the construction and engineering field, project and construction management were developed so that cost and planning could be improved (Arendse, 2013). The history of the construction industry shows that management was mainly involved in management instead of leading, and there has been debate about the differences between management and leadership.

9.3 Leadership Styles in the Construction Industry

Munns & Bjeirmi (1996) explained that the success of a project relies heavily on the leadership style of the project manager. And how people interact with people they want to lead is extremely crucial to success. Price (2009) stated that leadership styles include autocratic leadership, democratic leadership, Transformational leadership, Transactional leadership, Charismatic Leadership, Laissez-faire leadership, and Democratic leadership.

Bartol, Matthews, & Martin (2003) debated autocratic and democratic leadership and discussed that leadership by autocrats involves telling others exactly what to do and expecting their subordinates to comply obediently. Even though it may be successful in some circumstances and the short term, yet, this approach is not effective in the long term.

Conversely, Democrat leaders are those who come to a final decision only after consulting the people they lead, depending on the consensus they reach. Some critics claim that popular decisions are not always the best ones to make, and therefore may not achieve the desired outcome. Transactional leaders focus solely on the goals that they are supposed to accomplish with their team. Subordinates are also rewarded by these leaders. Opponents of this leadership style argue that it is too narrowly focused and often focused on the wrong issues.

In contrast, transformational leaders empower members of their teams to make decisions based on the information provided to them and exercise little control over decision-making. It is a time-consuming process, but it is effective when the team members are dedicated to the organization's success. Price (2009) argues that building professionals should embrace and promote transformational leadership as a means of increasing employee performance and satisfaction.

In sum, Price (2009) stated that all transformational factors, such as charisma, inspiration, cognitive stimulation, and individual consideration are essential; however, Price (2009) also stated that transactional factors, including contingent rewards,

management by exception, and active and passive behavior, are important for leadership effectiveness.

9.4 Influence of Transformational Leadership

The literature examines also how well-perceived elements of construction professionals' leadership styles are inspiration, idealized attributes, intellectual stimulation, idealized behavior, contingent rewards, and individual consideration. Price (2009) recommended that building professionals adopt and promote transformational leadership based on the idea that it will enable them to increase employee performance and satisfaction.

Basically, the goal of transformational leadership is to engage followers so that they are motivated to create a relationship that raises their effort and morale. Followers are inspired to become leaders when transformational leaders look out for their needs and motivations (Price, 2009). Transformational leaders produce trust and satisfaction and working for them can be an extraordinary experience.

Transformational leaders are human-oriented and care for their employees (Bass and Bass, 2008). The more caring and considerate managers are, the more likely they are to provide healthy and safe working conditions for their employees. As a result, transformational leaders may also create intrinsic motivation for their employees when they communicate care and consideration, which may prompt them to take better care of themselves as well as their colleagues.

To achieve a high organizational safety climate, consideration and care for others are essential (Kines et al., 2011). Moreover, transformational leaders may encourage their employees to practice safe, efficient, and productive work behaviors by modeling them.

Grill, Nielsen, Grytnes, Pousette, & Törner (2019) argued that in construction site management, transformational leadership behaviors were observed primarily in production-oriented problem-solving, in which the site managers ensured that different viewpoints were taken into consideration through stimulating inter-individual and

collective problem-solving processes. Other observed transformational leadership behaviors included applying personal goals and abilities to the project, demonstrating role modeling and verbally expounding on higher-order ideals, and explaining the importance of current work tasks and achieving the project's goals by emphasizing the importance of the specific task at hand.

9.5 Motivating Workers in Construction

Malachowsky (2018) defines motivation as “the process by which a person’s efforts are energized, directed, and sustained toward attaining a goal.” As individuals and situations vary from one to another, different motivational drives are needed. Mumford, et al. (2000) propose three motivation aspects that are necessary for developing leadership skills. First, leaders have to be prepared to make determined efforts to deal with complicated problems within an organization. Second, leaders need to show their willingness to express authority and dominance to apply their power.

Third, leaders must show a level of commitment towards an organization's social good. Malachowsky (2018) discuss that motivation is one of the critical key performance indicators that must exist on each leader dashboard. Leaders play a significant role in increasing the quality of a product or service with minimal cost. Furthermore, employees’ motivation leads to healthy work, places, happy people, happy society. Therefore, the success of a leader depends on proficiency in motivating team members.

Bredillet & Dwivedula (2010) suggested a model for motivating workers in a project environment. The model considers five major categories with subcriteria under the five main categories. These criteria are compatible with the nature of the project and important in improving motivation in the project environment.

1. Employee development: (a) job advancement; (b) variety of knowledge; (c) participative decision making; (d) high level of knowledge; (e) developing competencies; (f) sense of achievement.

2. Work climate: (a) variety of tasks; (b) social interaction; (c) feedback from work; (d) significant job; (e) communication flow.
3. Perceived equity: (a) adequate pay; (b) adequate recognition; (c) freedom at work; (d) feedback from colleagues.
4. Work objectivity: (a) complete piece of work; (b) clarity of goal.
5. Job security

10. Teamwork

Scarnati (2001) defined teamwork “as a cooperative process that allows ordinary people to achieve extraordinary results”. Also, Harris & Harris (1996) clarified that a team has a shared goal or determination where team members can develop effective and mutual relationships through knowledge sharing and skills to achieve team goals.

The literature consistently highlights that focusing on a common goal and a clear purpose is one of the significant elements of a team (Fisher, Hunter, & Macrosson, 1997). Therefore, Luca & Tarricone (2001) contended that there must be a high level of flexibility within team members to adapt to cope with that working environment where goals are attained by collaboration and mutual social dependencies instead of individualized, competitive goals.

RACI Model

One of the essential parts of project manager roles is delegation, therefore, early identification of roles and responsibilities early in a project is extremely essential. As a project manager, it is necessary to set the expectations of people involved in a project from outset. Projects are recognized by the involvement of many people, yet, how a situation where people are struggling against one another to do a task is avoided.

The same goes for dealing with a situation in which no one is taking responsibility and making a decision. How can people differentiate between their level of responsibility,

when they should consult their project manager, or when they should exercise their own judgment? Applying the RACI matrix can help. The RACI matrix is a straightforward tool utilized for identifying and assigning roles and responsibilities and avoiding confusion over those roles and responsibilities during a project.

Construction of Kindergarten in Matrafiah District in Jubail City															
		ROLES													
		Executive Sponsor	Project Sponsor	Steering Committee	Advisory Committee	Project Manager	Technical Lead	Functional Lead	Subject Matter Expert	Project Team Member	Developer	Administrative Support	Business Analyst	Consultant	PMO
Deliverable or Task	Status	Sponsor / Leadership				Project Team					Project Sub-Teams			Other Resources	
Phase 1: Initiation Phase Activities															
Request Review by PMO		A	R			R	R		C						
Submit Project Request						R									A
Research Solution		I				R	A	R	C				C	C	
Create Project Charter		C	C			A	C	C	C				C	C	
Develop Business Case		I	A	I	I	A	C	C	C				C	C	C
Phase 2: Plan Phase Activities															
Create Schedule		I	I	I	I	R	C	C	C	C	C	C	C	C	I
Create Additional Plans as required		I	I	I		A				I			I	C	I
Phase 3: Execute Phase Activities															
Build Deliverables		C	C	C	C		R	R	R	R	R			A	
Create Status Report		I	I	I	I	A	R	R	R					C	I
Phase 4: Control Phase Activities															
Perform Change Management			C	C	C	A	R	R	C					C	I
Phase 5: Close Phase Activities															
Create Lessons Learned		C	C	C	C	A	C	C	C	C	C	C	C	C	C
Create Project Closure Report		I	I	I	I	A	I	I	I	I	I	I	I		I

Figure 9: RACI Model for the construction of kindergarten

11. Conflict and Crisis

Construction projects nowadays have become more complex in nature. McManamy (1994) stated that the complex, relational and lengthy process of designing and executing makes construction a process wherein arguments and conflicts are virtually ensured.

Moreover, Whitfield (1994) argued that the participation of multidisciplinary in construction projects may lead to conflicts among different parties. In other words, conflict and disputes are inevitable to the construction industry particularly when most of the construction projects are surrounded by many uncertainties.

Kumaraswamy & Yogeswaran (1998) agreed that contractual matters, including variation, time extension, payment, quality of the technical specification, availability of information, administration and management, unrealistic client expectations and determination are common causes of construction conflicts.

Conflict in the kindergarten project may hinder the achievement of one of the parties nevertheless, it has many advantages that may improve the performance of the project as cited by Rauzana (2016). First, it provides information and generates ideas that improve the quality of decision-making. Second, it influences different parties to consider others' views. Third, it helps the project manager/leader to in finding the best solutions for matters that had been buried and become open. Finally, it provides mutual understanding and respect for others' opinions.

In today's globalized world, negative events are the cause of the crisis, which affects construction companies gradually. In most cases, these events may occur suddenly or over a period of time. When a crisis arises in an organization, a disruption to the organization's normal routine procedure makes this impossible. Environmental causes of the crisis are beyond the control of companies. In general, these are related to economic, political, legal, natural, and rivalry conditions, clients' expectations, and technological developments.

Crisis occurs across different industries such as the construction industry, much of the information on crises and their responses tend to be general. Nevertheless, certain things appear common to industrial crises conceptualization. Hällgren & Wilson (2007) claimed that progress in construction projects can be interrupted by many incidents. Nurul Islam & Hamidul Islam (2020) conducted a study and concluded that fourteen major variables influencing crisis management implementation in construction projects. Those

are poor initial estimation, financial issues, too many changes, lacking the contractor's experience, worker strikes issues, inadequate knowledge of workers, workers unavailability, conflicts between parties, target cost, technical issues, political issues, natural issues, schedule variance issues, compressing schedule. Also, Nurul Islam & Hamidul Islam (2020) found that the crisis in construction projects occurred due to inadequate funds, inflation rate, and political stability.

11.1 Project Life Cycle and Conflict

Conflict is defined, as cited by Meredith & Mantel (2012), as “the process which begins when one party perceives that the other has frustrated, or is about to frustrate, some concern of his”. To understand how conflict affects the performance in the construction industry, it is necessary to relate the project life cycle with the primary conflict groups and determine how certain patterns of conflict are associated with the various periods/phases in the project life. Therefore, the project manager can diagnose the nature of the conflict quickly and accurately.

Project life cycle stages such as kindergarten projects have been differently classified by scholars. For example, Adams et al. (1983) break the project life cycle into four stages: conceptualization, planning, execution, and termination. Meredith & Mantel (2012) cited that all project life cycle stages appear to be typified by conflict. Conflicts are rooted in matters such as schedules, priorities, staff and labor requirements, technical factors, administrative procedures, cost estimates, and, certainly, personality conflicts.

11.2 Areas of Conflicts between Project Owner and Construction Contractor

Conflict in the construction of kindergarten leads to dysfunction, which is detrimental to the project's outcome and stakeholders. Conflicts that are ignored can transform a simple issue into one that may become insuperable afterward. Addressing conflict once it arises is the most efficient way to avoid future discord. According to the International Risk Management Institute (IRMI)(n.d.), conflict arises for several reasons,

and the most common ones are conflicts of interest, poor communication, and limited resources.

Conflicts associated with the Construction of Kindergarten in Mutrafiah District are listed below:

Areas of Conflicts between Project Owner and Contractor in the Construction of Kindergarten in Mutrafiah District		
S/N	Area of Conflict	Reasons for Conflict
1	Communication	Different communication styles. Unclear roles and responsibilities of project parties.
2	Scope of Work	Poor preparation. Developing the scope by a non-specialized team.
3	Schedule	Unrealistic schedules (being overly optimistic). Unclear listing of project activities.
4	Resources Allocation	Running multiple projects at a time. Non-availability of required tools and materials. Insufficient budget.
5	Re-assignment of Project Team Members	Overlapping with other projects. Projects priority not set properly. Unqualified manpower.
6	Conflict of Interest	Fighting for Personal Goal Transferring Risk

Table 12:Representation of Area of Conflict

11.3 Scenarios of the conflict's events in the Kindergarten Construction Project and Resolution Strategies

11.3.1 Scenario 1: Communication Conflict

It is found that the contractor is submitting the status report to different people once requested without concerning the main concerned party. Therefore, such behavior leads to misunderstanding and discord among people working together on construction projects. Also, lack of information, partial information, untimely information, and inaccurate information all can lead to work being done that does not meet expectations and sets the stage for conflict and animosity.

Resolution Strategies:

- Standardize the channels of communication in the project to fasten and ease the communication process.
- to establish a clear chain of command on a construction site that standardizes communication, creates efficiency and accountability, and eliminates confusion. The hierarchy for a work site should be laid out in the initial contract documents and include:
 - Project owner
 - General contractors
 - Subcontractors
 - Members of individual crews like engineers, architects, plumbers, and electricians.
- Outline relationships in the contract documents and share them among concerned project parties.

11.3.2 Scenario 2: Schedule Overrun

Construction schedule overrun is common on construction projects over the world and the Saudi Arabia construction industry has not escaped the challenges of failing to deliver projects on time. According to Alkhathami (2004), schedule overrun is defined as “extra time required to finish a given construction project beyond its original planned duration, whether compensated for or not”.

Ali, Smith, Pitt, and Choon (2012) emphasized that four factors that cause schedule overruns: contractor-related factors, consultant-related factors, client-related factors, and external factors. Scenarios of schedule overrun caused by external factors involve unforeseen site conditions, bad weather, and updated governments regulation. For example, some products/ materials are behind scheduled delivery.

Resolution Strategies:

- Evaluate alternative products or vendors
- Determine product slack
- Seek alternative vendors
- Use a 10% budget cushion to expedite delivery
- Update budget

11.3.3 Scenario 3: Conflicts of Interest

Individuals fighting for personal goals may lose sight of the project or organizational goals meaning that a person or party has concerns that do not coincide with an overall goal. It is in the owner's best interest that a project is completed at the highest quality for the lowest cost. In contrast, a contractor would prefer to expend the least amount of resources necessary to complete a project to maximize their profits. Each side is attempting to transfer risk to the other party (IRMI, n.d.).

For instance, the owner may attempt to take project management into their own hands and fail to adequately manage duties. Alternatively, a general contractor may attempt to delegate most of the work to a subcontractor. Often an owner will insist on a lump sum contract that places an increased amount of risk on a contractor. In this scenario, a poorly estimated project scope can result in a contractor footing the bill (Contney Attorneys & Consultant, n.d.). another example is that the contractor is transferring manpower among other projects.

Resolution Strategies:

One tactic may be continually reminding owners, partners, employees, and the contractor how their personal goals and efforts "fit" into the project's strategic goals and outcome expectation. Being able to recognize and openly address conflicts of interest is crucial to a project's success. Nevertheless, the only way to be sure that everyone's interests are protected is to get it in writing.

Having a well-written contract and a well-defined scope of work is the only way to mitigate these kinds of disputes. Deciding where risks lie in advance will go a long way towards securing project completion regardless of the varying interests of biased parties involved.

Other Scenarios:

Another scenario for conflict may arise from the limited resources. Many situations on projects when resources are limited and have to be managed effectively. Conflict may arise over the use of equipment, space, material, time, manpower, etc. Such conflicts must be dealt with effectively to maintain harmony on-site. An optimal strategy is to include employees and partners in the resource allocation process. This will provide them with a better understanding of how allocation decisions are made in the best interest of the project.

11.4 Root Cause Analysis

Root cause analysis (RCA) is defined as “the process of discovering the root causes of problems to identify appropriate solutions” (Aventis Learning, n.d.). RCA assumes that it is much more effective to systematically avoid and resolve underlying issues. RCA can be performed with a collection of principles, techniques, and methodologies that can all be leveraged to identify the root causes of an event or trend. Approaches of RCA include:

1. Events and causal factor analysis
2. Change analysis
3. Barrier analysis
4. Management oversight and risk tree analysis
5. 5-why’s technique

The 5-why’s technique is used to analyze the root cause for the above-stated conflicts. It is a simple and effective tool for solving problems. Its main goal is to find the exact reason that causes a given problem by asking a sequence of “Why” questions. This technique helps the team to focus on finding the root cause of any problem. Also, it encourages each team member to share ideas for continuous improvement, rather than

blaming others. In addition, it gives the team the confidence that it can eliminate any problem and prevent the process from recurring failures.

Below is the root cause analysis for the above three conflicts:

Problem: Contractor is submitting the status report to different people once requested without informing the main concerned party.

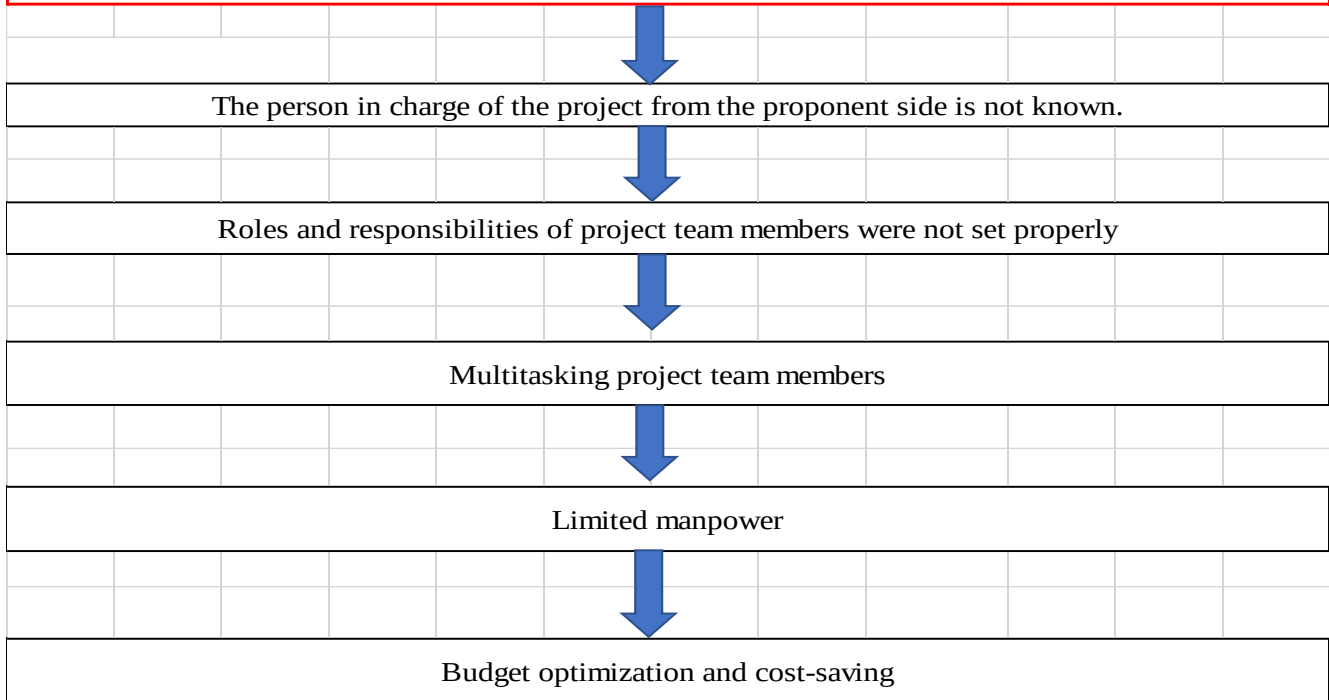


Figure 10: Communication conflict root cause analysis

Problem: Some Products/Materials are behind scheduled delivery

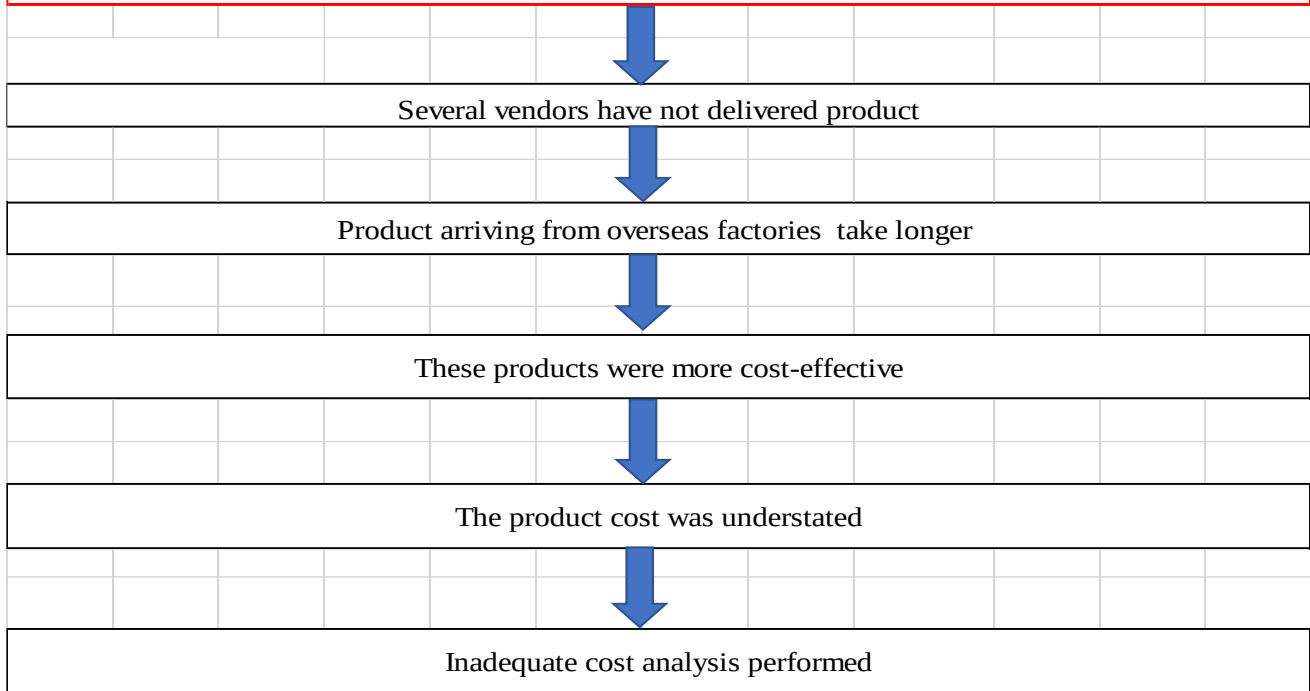


Figure 11: Product/Materials conflict root cause analysis

Problem: Transferring manpower among other projects.

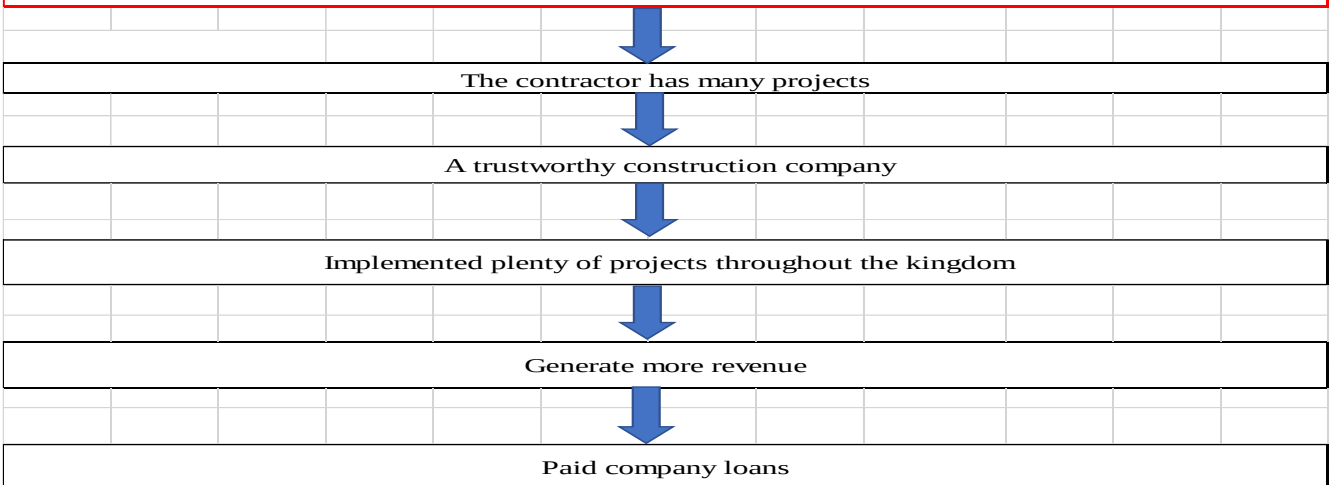


Figure 12: Transferring manpower among other projects

12. Project Scheduling:

Scheduling can be defined as the process of developing a set of planned dates to perform project activities and meet milestones and deliverables. It includes start/finish dates, duration, and resources assigned to each activity. Successful scheduling can bring lots of benefits like illustrating the interdependence of all project tasks, identifying required resources, facilitating communication, and determining the critical activities/critical path.

12.1 Distribution of Project Activities among Concerned Departments:

The Project Scheduling Process for the construction of the kindergarten in the Mutrafiah district comes across 4 main steps which help the project manager to determine the project schedule and project duration. The project steps are listed below:

- A. Developing the list of project activities.
- B. Establishing the duration for each activity.
- C. Sequencing project activities.
- D. Determining project duration.

Kindergarten Construction in Mutrafiah District

Timeframe	Stage	List of Project Activities	Concerned Department	Duration of each Activity (Days)
START 01/08/22 END 20/08/22 20 Days	PROJECT CONCEPT	A) Choose Design Team B) Select Project Site C) Discuss and Select Construction Service D) Identify Project Parameters / Feasibility	Office Services (Proponent)	4 3 3 10
START 01/09/22 END 31/10/22 61 Days	PLANNING AND DESIGN DEVELOPMENT	E) Identify Required Functionality & Aesthetics F) Complete Schematic Design G) Prepare Preliminary Estimate H) Establish Preliminary Schedule I) Complete Site Plan Approval Process J) Perform Value Engineering K) Secure financing L) Finalize Construction Documents M) Establish Final Project Budget	Office Planning Design	5 15 5 15 5 5 5 4 2
START 01/11/22 END 30/11/22 30 Days	BIDDING AND AWARD	N) Identify Subcontractor List for Bidding O) Solicit Subcontractor Bids P) Award Subcontracts	Contracts Advisory Division	11 14 5
START 01/12/22 END 23/12/22 23 Days	MOBILIZATION	Q) Obtain necessary Permits and Insurance R) Finalize Project Schedule S) Coordinate Project Start-up Items	Alascon Compnay Limited (Contractor)	4 12 7
START 01/02/23 END 01/08/23 182 Days	ACTIVE CONSTRUCTION AT JOB SITE	T) Construction Activity 1 U) Construction Activity 2 V) Construction Activity 3 W) Construction Activity 4 X) Construction Activity 5 Y) Construction Activity 6 Z) Construction Activity 7 AA) Field Supervision / Quality Control BB) Manage Subcontractors CC) Manage Change Orders DD) Coordinate Local/County/State Inspections EE) Track Costs (budget vs. actual)	Alascon Compnay Limited	29 25 20 21 20 15 14 6 7 5 12 8
START 10/08/23 END 08/09/23 30 Days	PROJECT CLOSEOUT	FF) Substantial Completion GG) Final Inspections HH) Certificate of Occupancy II) Punch List JJ) Closeout Documentation	Inspection Alascon Compnay Limited	5 12 3 8 2
START 10/09/23 END 15/09/23 6 Days	OCCUPANCY	KK) Final Billing LL) Final Walkthrough with Owner MM) Final Clean up	Inspection Office Service Loss Prevention Alascon Compnay Limited	2 2 2
Total Project Duration				352 Days

Figure 13: A List of Activities of Kindergarten Construction in Mutrafiah District.

12.2 Influence of Crashing and Fast-Tracking on Project Timetable

Crashing and Fast-tracking are two schedule compression techniques used to decrease the project's duration with no change in scope.

Crashing:

The PMBOK Guide, the 6th edition, defines crashing as a technique used to shorten the schedule duration for the lowest incremental cost by adding resources. In crashing, the activities on the critical path are reviewed, and the activities that can be completed early with extra resources are determined. Speeding up the process of crashing activities can be done by adding additional labor, resources, or incentives like overtime and monetary rewards.

Fast-Tracking:

The PMBOK Guide, the 6th edition, defines fast-tracking as a schedule compression technique in which activities or phases normally performed in a sequence are done in parallel for at least a portion of their duration. In fast-tracking, the activities on the critical path are reviewed, and the activities which can be implemented partially or in parallel with other activities are listed. Fast-tracking helps project managers to compress the project schedule up to a certain limit. Continuing beyond that limit will increase the risk, which may lead to rework and further delays.

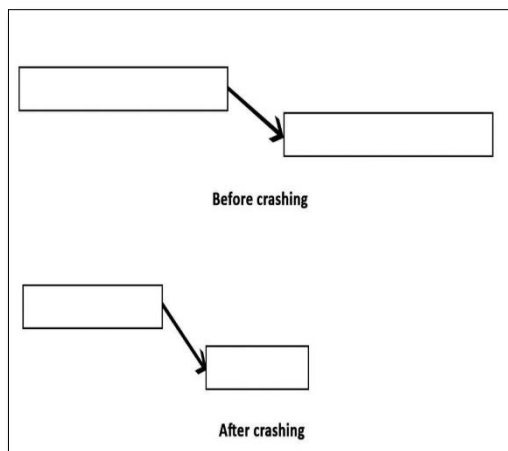


Figure 15: Representation of Crashing

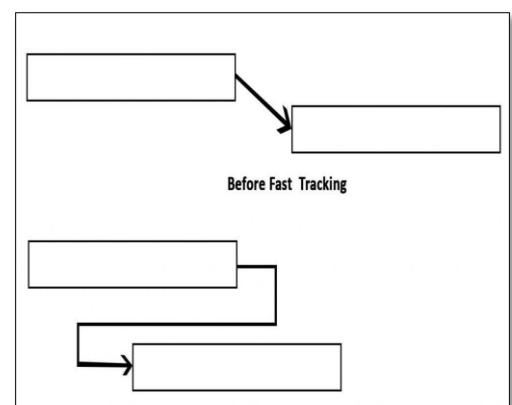


Figure 14: Representation of fast
Crashing

Kindergarten Construction in Mutrafiah District (Original Schedule):

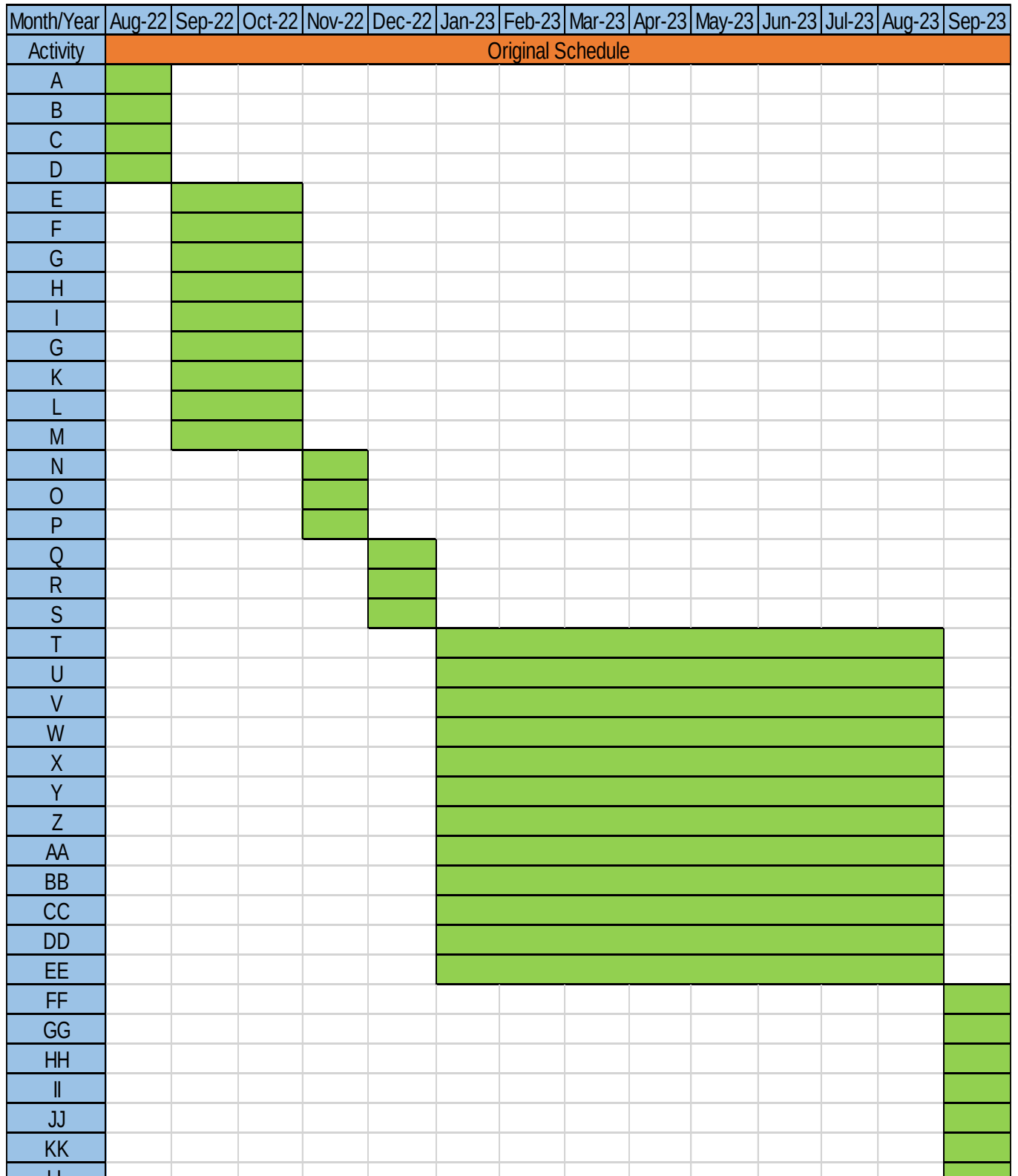


Figure 16: Original Schedule of Kindergarten Construction in Mutrafiah District.

Kindergarten Construction in Mutrafiah District (Schedule after Crashing):

Month/Year	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23
Activity	Schedule After Crashing													
A														
B														
C														
D														
E		Added Resources												
F		Added Resources												
G		Added Resources												
H		Added Resources												
I		Added Resources												
G		Added Resources												
K		Added Resources												
L		Added Resources												
M		Added Resources												
N														
O														
P														
Q														
R														
S														
T														
U														
V														
W														
X														
Y														
Z														
AA														
BB														
CC														
DD														
EE														
FF														
GG														
HH														
II														
JJ														
KK														
LL														
MM														

Figure 17: Schedule after Crashing of Kindergarten Construction in Mutrafiah District.

Kindergarten Construction in Mutrafiah District (Schedule after Fast-Tracking):

Month/Year	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23
Activity	Schedule After Time-Tracking													
A	Parallel Period													
B														
C														
D														
E														
F														
G														
H			Parallel Period											
I														
G														
K														
L														
M														
N														
O														
P														
Q														
R														
S														
T														
U														
V														
W														
X														
Y														
Z														
AA														
BB														
CC														
DD														
EE														
FF														
GG														
HH														
II														
JJ														
KK														
LL														
MM														

Figure 18: Schedule after Fast-Tracking of Kindergarten Construction in Mutrafiah District.

Outcomes of Applying Crashing and Fast-tracking on Kindergarten Construction in Mutrafiah District:

Crashing	Fast-Tracking
Adds more new resources	Uses the already planned resources
Always Increases the cost	Does not always increase the cost
Phases or activities are performed in sequence	Phases or activities are performed in parallel

Figure 19: Outcomes of Applying Crashing

13. Rules for Negotiation

Negotiation is one of the conflict resolution techniques. It is a method by which people settle their differences when they must make compromises or partial agreement in order to avoid arguments and disputes. Project managers need to apply their negotiation skills at every stage of the project life cycle. Early in the project, at the planning stage, the project manager negotiates with stakeholders on time, cost, quality, and scope of requirements.

At the phase of resource mobilization and procurement, the manager negotiates with the resource suppliers and other potential providers. During the project, conflicts arise, and it is the responsibility of the manager to proffer solutions to these conflicts, which usually is done via negotiation.

It involves using the art of ‘persuasion to get others to understand and agree with your viewpoint. It works best when an individual has a win-win attitude. The key skills that are involved in a successful negotiation are good communication skills, sales and marketing skills, good psychological analytical skills, sociology skills, assertiveness, and conflict resolution skills.

Therefore, negotiations may take place between various kinds of different people, such as between a customer and seller, a boss and employee, two business partners, a diplomat or civil servant and a foreign diplomat, between spouses, between friends, etc.

There are five steps to the negotiation process, which are:

- Preparation and planning
- Definition of ground rules
- Clarification and justification
- Bargaining and problem solving
- Closure and implementation

13.1 General Rules for Negotiation

In this project, we will be concentrating on the ground rules. Ground rules are statements of values and guidelines which a group establishes consciously to help individual members to decide how to act. To be effective, ground rules must be clear, consistent, agreed to, and followed. Where articulated ground rules are missing, natural behavior patterns often emerge spontaneously. These are referred to as norms (PMI, n.d.).

Team ground rules define a behavioral model, which addresses how individuals treat each other, communicate, participate, cooperate, support each other, and coordinate joint activity. They may be used to define and standardize team procedure, use of time, work assignments, meeting logistics, preparation, minutes, discussion, creativity, reporting, and respect. The following is a list of ten rules for guiding behavior during all negotiations:

Rule	Kindergarten Project Management Example
1. Be patient	Dealing with an underperforming team member—and perhaps defensive—may be uncomfortable for a project manager, so the tendency is to get the encounter over with as quickly as possible. A better approach is to develop rapport with the person, ask for permission to provide feedback or suggestions, carefully answer any questions that come up, and take the time to reach a satisfactory agreement.
2. Be positive	A principle of persuasive influence is to deal with people you like. A positive attitude with project sponsors helps build confidence and credibility in their minds. This means they engage more willingly with the PM in supporting the project and maintaining that support throughout the project lifecycle.
3. Gather information	Clients or customers have challenges that may be addressed by the outcome of the project. Ask probing questions about what they are doing and listen to the answers. Review the relationship history, especially if support issues have come up and whether or not they were adequately addressed. Find out their timetable or deadline, both to purchase and then to implement the solution.
4. Float trial balloons	Ask “What if we could provide key features in Phase 1 and address other wants in later phases?” These questions make no commitments but do explore reactions from the other party about possible approaches they may be willing to consider.

5. Know your status	Project managers are closest to the action on most projects and have significant status attributable to the information they possess. Other stakeholders have status via the authority they have to allocate resources or dispense funds. The real opportunity to achieve better outcomes is when one side is anxious to reach an agreement; the other side may then nibble to gain additional concessions, such as extending a resource's time on the project or reducing features in order to meet cost or time pressures.
6. Know your opening offer	You estimate the project will take between 4 to 6 months. Ask the customer when they want it, and they may respond in 8 months, in which case you have a cushion. If the PM were aggressive and quoted first, saying 4 months (the bottom line), there is no room to negotiate. If the customer has no clue and may ask for 2 months, the PM can open first by quoting 6 months (the edge of the envelope) and have room to negotiate something in between.
7. Limit your authority	Try to negotiate with the decision-maker so you deal with them directly and get an agreement quickly. When you are the decision-maker, have someone else negotiate on your behalf so you cannot be pinned down by hard-core negotiating tactics. This provides an opportunity to practice patience, review the proposal more thoroughly (instead of in an emotional moment), and come back with counter-proposals.

8. Know your bottom line	Two vendors have similar products where one has a slight edge and costs more. The PM wants a better product but has a strict budget limit of 10K SR. Negotiations with the higher-priced vendor proceed in order to get a lower price or arrange terms that fall within the budget limit. Use the limit to stand firm, negotiate with due diligence, and fall back on the other vendor if not successful. Knowing these limits determines whether to continue or walk away.
9. Be prepared	Have a risk management plan that provides advance notice of technology that may not work or tasks that take longer than planned. Clear trigger points invoke contingency plans calling for negotiations on the pros and cons of various options, leading to a quick resolution. Preparation avoids being caught by surprise and having to invent options where none previously existed.
10. Never reward intimidation tactics	A PM who does not push back against unreasonable scope, schedules, or resources is training sponsors to continue a demanding behavior. Instead, set expectations by negotiating the triple constraints at project start-up and when changes occur. Make concessions when the other side makes them as well. Do not give in to intimidation tactics or “the beatings will continue until morale improves.”

Table 13: Activities Examples

13.2 Negotiation plans

Preparation is the most important prerequisite to effective negotiation. Neither experience, bargaining skill, nor persuasion on the part of the negotiator can compensate for the absence of preparation. The following are two examples of negotiation plans.

Negotiation Plan 1 for sellers:

This Plan aims to outline how the seller will manage the negotiation process with a Preferred Respondent prior to finalizing the award of contract. Areas that the negotiation team needs to concentrate on include:

1. Identify the other side's need
2. Identify the buyers
 - User
 - Technical
 - Strategic
 - Coach
3. Identify the other side's positions and interests
4. Identify our BATNA (Best Alternative to a Negotiated Agreement) and the other side's BATNA
5. Identify other positions of power and leverage for each side
 - Time power
 - Information power
 - Standards power
 - Expert power
 - Title power
6. Identify outcomes best, expected, and minimum acceptable
7. Our opening proposal
8. Identify our killer arguments » Done it before

9. Identify our key discriminators
 - Why chose us?
10. Identify our ghosting discriminators
 - Why not choose the competition?
11. Identify the ROI that we will be supplying the prospect
 - Why do this at all?
12. Identify team members
 - Leader
 - Spokesperson
 - Numbers person
 - Experts
 - Observer
13. Identify third-party roles
14. Develop opening statement for relationship building
15. Develop questioning strategies
16. Develop an opening proposal
17. Develop pricing strategies
18. Develop concession strategies
19. Develop bargaining strategies
20. Ready for unethical negotiating techniques

Negotiation Plan 2 for procurement:

Planning for negotiation is critical to achieving a successful result in the construction of the kindergarten procurement stage. Areas that the negotiation team needs to concentrate on include:

- Deciding on the nature of the contractor's relationship with the supplier and how to establish that.
- Identifying all the points to be negotiated.
- Prioritizing the contractor's needs and wants and the supplier's needs and wants.
- Identifying alternative positions and the point at which the contractor will exit negotiations.
- Deciding on the approach to achieving the contractor's most desired outcome.
- Anticipating the supplier's moves and how to counter them.
- Working with the supplier to establish a realistic contract delivery or implementation plan.
- Addressing transitional arrangements from the current supply arrangement.
- Establishing what sustainability will look like.
- Identifying what best public value will look like.
- A negotiation plan should be completed and approved before initiating negotiations with the recommended supplier. The following approvals are needed:
 1. procurement manager confirms that the plan meets the requirements.
 2. project sponsor gives authority to proceed to negotiations with a contract view.

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