

Optimizing the Construction Team Lifecycle: Exploring Influential Factors and Effective Strategies

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Abstract

Review Article

This research study delves into the intricate dynamics of construction teams, aiming to optimize their lifecycle by comprehensively exploring influential factors and effective techniques. Drawing from in-depth interviews conducted with nine experienced construction team members, the research employed a content analysis approach to dissect and analyze the valuable insights obtained from these practitioners. The study has yielded seven key factors that are pivotal in effectively managing the construction team's lifecycle. These factors are identified as follows: communication, conflict management and dispute resolution, team environment and structure, goal setting and expectations, planning and task distribution, performance management, and coaching and skills enhancement. Each of these factors is critical in ensuring construction teams' seamless progression and success throughout their lifecycles. Furthermore, the research uncovered a range of techniques and strategies associated with each factor, providing a comprehensive toolkit for construction project managers and team leaders to optimize their team's performance and cohesion. By addressing these factors and implementing suggested techniques, construction professionals can enhance their ability to navigate the complexities of the construction team lifecycle, resulting in more efficient project delivery, improved collaboration, and, ultimately, tremendous project success. This study is a valuable resource for practitioners, researchers, and stakeholders in the construction industry seeking to enhance their understanding of construction team dynamics and improve project outcomes.

Keywords: construction teams, team dynamics, lifecycle optimization, influential factors, effective strategies, content analysis, conflict management, performance management, skills enhancement, and project managers

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INTRODUCTION

In today's dynamic and interconnected work environments, teams are the lifeblood of organizations, propelling innovation, achieving shared goals, and driving success (Adham, 2023). Although the concept of teamwork in the construction industry has been introduced previously, the industry still faces several challenges in team management, such as competing relationships and a lack of collaboration are common in the construction industry. Consequently, many reasons, such as lack of trust, unfair risk sharing, and ineffective communication, are challenges in the construction sector (Faris et al., 2022). During their journey towards achieving greater efficiency and transforming into cohesive teams, groups inevitably encounter a multitude of uncertainties and occasional conflicts. However, it is crucial to view these challenges as an essential investment in the pursuit of harmony and cultivating desirable behaviors aligned with a shared and well-defined goal. Therefore, effective team management

from its inception to dismantling is not an easy task and requires several strategies and techniques to overcome the difficulties that could hinder the team's performance. As the team members climb the ladder, they morph from a random assembly of strangers into a high-performing team that can work toward a common goal (Smolska, 2021). Thus, understanding optimal lifecycle management is pivotal for achieving effectiveness in the realm of team dynamics and management. Therefore, the pressing concern for all project managers is how to support and skillfully navigate the team's maturity process effectively. Put differently, the primary focus shifts to effective management of the team's life cycle as an essential component to guarantee the achievement of construction project success. Therefore, Wang (2018) argued that it is undeniable that there are still some details about team interaction that need our attention. This necessitates in-depth research into the strategies and techniques employed by project managers to attain such effective team life cycle management.

Study Objectives and Aims

The study, "Optimizing the Construction Team Lifecycle: Exploring Influential Factors and Effective Strategies," is guided by three primary objectives aimed at enhancing our understanding of team life cycle management within the construction industry:

Investigation of Effective Construction Team Life Cycle Management

The primary aim of this research is to comprehensively investigate the realm of effective construction team life cycle management. This involves exploring previous studies and models of managing the team's life cycle, from inception to dissolution. We intend to identify and elucidate the key elements contributing to successful management from previous studies.

Identification of Essential Strategies and Techniques for Efficient Construction Team Life Cycle Management

Another core objective of this study is to discern and document the essential strategies and actions that underpin efficient management of a construction team's life cycle. This entails thoroughly examining the best practices from the perspectives of practitioners' construction team members and managers to pinpoint the methods and approaches that consistently yield favorable outcomes. By doing so, we aim to provide a comprehensive framework to guide construction project managers and stakeholders to manage their team's life cycle effectively.

Determination of Critical Skills and Knowledge for Construction Project Managers

In addition to the investigation of strategies and techniques, this research also seeks to ascertain the critical skills and knowledge project managers should possess to navigate the complexities of construction team life cycle management effectively. We will comprehensively analyze the competencies, expertise, and qualifications that empower project managers to lead teams successfully through the life cycle of the construction team. This aspect of research is pivotal for both project managers and educational institutions in tailoring their training programs. In sum, this research study explores the intricacies of construction team life cycle management, unravels the fundamental strategies and techniques for efficiency, and sheds light on the vital skills and knowledge that empower project managers to excel in this challenging domain. We aspire to contribute valuable insights to the construction industry by achieving these objectives, enabling better practices and enhanced project outcomes.

THEORETICAL BACKGROUND

Team Life Cycle

In the realm of project management and team dynamics, the concept of the team life cycle plays a central role in comprehending the progression of and

development of teams as they work together to achieve their goals. Shuffler et al. (2018) Put succinctly that as teams are formed to accomplish some goal or higher-order purpose, it is only logical that they will begin to change, grow, and develop over time as they interact to achieve the goal. The essence of a project team lies in its social construct, where members constantly influence one another and are shaped by the relationships that evolve during the project. Vaida and Dan (2021) aptly highlighted that a true team does not appear overnight but must complete several steps to overcome the initial stage of its existence as a group. Understanding the stages of team development, often referred to as the team life cycle, is instrumental in determining the team's success and how it should be managed. As Gren et al. (2016) emphasized, paying attention to group development could help the group to increase its performance and, therefore, in the end, provide a higher rate of what is considered project success. Moreover, comprehending the stages of team development empowers the team leader to adopt an effective leadership style that aligns with each stage of the team's growth. As Natvig and Stark (2016) asserted, a leader adept at guiding the team through the phases of group development is essential. Jones (2019) contributed to this discussion by implementing Tuckman's model on a small group of students, revealing that this model serves as a valuable tool for monitoring various aspects of team dynamics, including progress, skills, behavior, emotions, flexibility, adaptability, and adjustability to different circumstances and cultures. It also aids in assessing problem-solving skills, critical thinking skills, management skills, and leadership attributes on a micro level.

In their comprehensive study, Vaida and Dan (2021) delved into the importance of group development for newly forming teams. They analyzed this concept within the framework of nine different models, including those proposed by Bass & Ryterband (1979), Tubb (1978), Cog's Ladder (1972), Homan (1950), Woodcock (1979), Fisher, Jones, Tuckman (1965; 1977) and Wheelan (2003). Their findings, Table 1, asserted that no model is superior or better than others. Instead, depending on the needs of your team, the experience and expertise you have as a leader, and the resources at hand, one model can be preferred over the other (Vaida & Serban, 2021). However, it's essential to acknowledge the complexities of team development in practice. As Vaida and Dan (2021) pointed out, the boundaries between stages are diffuse. Determining when a team has transitioned from one stage to another can be challenging, as teams may revisit earlier stages due to various factors such as changes in team composition, work processes, or other dynamics. In sum, the effectiveness of a team is an ongoing process that develops over time as groups come to understand their roles, responsibilities, and how best to utilize their collective skills and resources. As Vaida and Dan (2021) concluded, Effectiveness is a result built over time, as the

groups understand what is required from them and how to use it.

Table 1: Team Development Models

| Model Name | Stages | | | | | Suitability of Model |
|---------------------------|-----------------------------|------------------------------------|-------------------------------|-------------------|---------------------------|--|
| | Stage 1 | Stage 2 | Stage 3 | Stage 4 | Stage 5 | |
| Bass and Ryterband (1979) | Acceptance | Communication and Decision Making. | Group Solidarity | Group Control | - | If the team has already established initial connections and the leadership style prioritizes fostering relationships and interpersonal connections among team members over task-oriented approaches, this approach is effective. |
| Tubb (1978) | Orientation | Conflicts | Consensus | Closure | | When the team requires continuous feedback and closure, it strongly emphasizes maintaining intragroup flexibility and closely monitoring the context of team development. |
| Cog's Ladder (1972) | The Polite Phase | Why are we here? Phase | The Power Phase | Cooperation Phase | The Esprit de Corps Phase | In a fast-paced industry where peak performance is imperative, an 'excellence stage' exists reserved for groups that successfully undergo comprehensive development and attain exceptional performance levels. |
| Homan (1950) | Needed states and behaviors | Emergent states and behaviors | Results of collective actions | - | - | It accentuates a dependence on contextual factors, internal systems, and external influences rather than providing a holistic view of the team's development. |
| Woodcock (1979) | Infant Team | Exploratory Team | Under Consolidation | Mature Team | - | Appropriate for a more traditional approach to group development, these four stages enable a comprehensive assessment of the current stage of each group and its progression. |
| Fisher | Orientation | Conflict | Emergence | Reinforcement | - | It introduces a social dimension throughout all stages, ensuring a clear differentiation between them. |
| Jones | Immature Group | Fragmented Group | Sharing Group | Effective Team | Team Synergy | |

| | | | | | | |
|----------------------|------------------------|-------------------------------|-------------------|---------------------|------------|---|
| Tuckman (1965; 1977) | Forming | Storming | Norming | Performing | Adjourning | Similar to the Woodcock Model, this approach aligns with a more conventional perspective on group development, offering a structured framework with four stages that facilitate a thorough evaluation of each group's current stage and its evolution. |
| Wheelan (2003) | Dependency / Inclusion | Counter dependency / Conflict | Trust / Structure | Work / Productivity | . | This model facilitates the shift of focus within your team and among team members, moving from individuality towards a collective group mindset and prioritization. It amalgamates elements of Tuckman's classical model with a diverse range of leadership styles. |

Source (Vaida and Serban, 2021).

Summary of Team Life Cycle Effectiveness Factors

Previous research has shed light on critical factors that significantly influence the success of teams as they progress through various developmental stages. These factors encompass a range of elements, including the comprehension of team development stages, the

evolving behaviors and attitudes of team members over time, the application of appropriate leadership capabilities, and the utilization of effective problem-solving and conflict-resolution styles. **Table 2** summarizes the effectiveness factors derived from the theoretical foundation of team life cycle management.

Table 2: Team Life Cycle Management - Effectiveness Factors

| Factors for Effective Management of Team Life Cycle | |
|---|---|
| Grasping Team Development Stages | Tailoring an Effective Leadership Style to Each Stage |
| Observing Changing Behavior and Attitudes | Assessing Problem-Solving Skills |
| Navigating Conflict Resolution | Enhancing Management Skills |

Grasping Team Development Stages

The first critical factor in team lifecycle management is recognizing and comprehending the distinct stages teams undergo during their lifespan. These stages, often called the team development or lifecycle stages, typically include forming, storming, norming, performing, and adjourning. Every stage presents distinct challenges and opportunities, and a thorough grasp of these stages can empower leaders and team members to navigate them successfully.

Changes in Behaviors and Attitudes

A second essential factor relates to the dynamic nature of team members' behaviors and attitudes throughout the team's existence. Teams are not static entities; they evolve as individuals within them gain experience and develop relationships. Recognizing and adapting to these changes is crucial for maintaining cohesion and productivity within the team.

Leadership Capabilities

Effective leadership is pivotal throughout the team's lifecycle. Leadership capabilities encompass a wide range of skills, such as communication, motivation, delegation, and the ability to provide guidance and direction. Different stages of team development may require varying leadership styles, ranging from directive leadership in the early stages to more participative or delegated leadership as the team matures.

Problem-Solving and Conflict Resolution

Another critical aspect of team lifecycle management involves the application of suitable problem-solving and conflict-resolution strategies. Teams will inevitably encounter challenges and conflicts during their journey. Therefore, understanding and employing effective methods to address these issues is essential for maintaining team cohesion and achieving objectives. In conclusion, successful team lifecycle management requires a multifaceted approach that incorporates a deep understanding of the team's developmental stages, responsiveness to changing team member behaviors and attitudes, proficient leadership capabilities, and effective problem-solving and conflict resolution techniques. The summarized research highlights that these factors serve as a roadmap for optimizing team performance and achieving long-term success.

Study Problem and Questions

The development of groups is crucial in our personal and professional lives, and grasping the theoretical frameworks that elucidate this concept holds equal significance to their practical application in real-world scenarios (Vaida & Dan, 2021). On the other hand, to effectively address engineering challenges, an engineer needs scientific expertise and non-scientific skills like recognizing limitations, acquiring new knowledge, and cultivating strong teamwork and communication abilities (Ismail et al., 2019). Hence, this study seeks to address the gap in comprehensive research

concerning the proficient management of the construction team life cycle, as perceived by both managers and members of construction project teams. Although the theory of team interaction process is gradually improved, it is undeniable that there are still some details about team interaction that need our attention (Wang, 2018). This study contributes to these intentions from the perspective of the construction industry. Therefore, the following questions are proposed:

What strategies and techniques are indispensable for the effective management of the life cycle of construction teams?

What skills and knowledge are essential for project managers to proficiently oversee the life cycle of construction teams, ensuring optimal effectiveness?

METHODOLOGY FOR DATA SOURCE AND ANALYSIS

In-depth interview

Expert project managers' insights were extensively explored through in-depth interviews. These interviews were conducted individually, in a face-to-face setting, and followed a semi-structured format. The selection of this method and data collection technique was deliberate, as the semi-structured interview format afforded the researcher a measure of control, facilitated a deep dive into the participant's experiences, and enabled the emergence of novel insights that enriched the research process. The researcher began with foundational questions derived from the reviewed literature to initiate interviews. These questions were deliberately designed to be simple, clear, and straightforward without ambiguity to prevent any potential misunderstanding by the interviewees. As a result, the leading and provocative questions were intentionally avoided. Instead, the questions were meticulously curated, drawing upon insights identified in the existing literature. The face-to-face semi-structured interviews were conducted with a targeted sample of nine highly skilled and extensively experienced construction team managers. This purposive sampling technique was chosen for its intrinsic value to research, allowing the researcher to gather data from specific individuals deeply entrenched in the construction field. These participants not only possessed a keen interest in managing projects but also held a particular focus on the management of

construction teams, making them particularly well-suited for this study.

Content Analysis

A content analysis approach was employed to scrutinize the data gleaned from the semi-structured interviews. Analysis followed a thematic methodology rooted in a standardized framework representing distinct data analysis phases. The initial phase of this data analysis process commenced with a meticulous review of the interview transcripts, allowing for a comprehensive comprehension and interpretation of the collected data. This preliminary step was followed by the initial coding process, wherein each data line was scrutinized to unearth and identify pertinent keywords and phrases. Subsequently, the second data analysis stage involved synthesizing broader themes derived from consolidating similar categories. Here, the objective was to identify overarching patterns and groupings within the data, enabling a deeper understanding of the underlying concepts. In the final analysis phases, additional layers of themes and types were constructed to elucidate the fundamental strategies and techniques for proficiently managing the life cycle of construction teams. Concurrently, this stage also aimed to delineate the critical skills and knowledge prerequisites for construction project managers to pursue effective team life cycle management. This meticulous and systematic content analysis process served as a robust framework for extracting meaningful insights and contributing to the body of knowledge in this domain.

RESULTS AND FINDINGS

Interviewees Overview

The research process involved a methodical approach to conducting interviews, wherein we engaged in in-depth conversations with nine highly experienced project members actively engaged in the construction sector. This diverse group was carefully selected to encompass individuals from different organizational backgrounds, including client firms, consultancy firms, and contractor organizations. Within these organizations each participant held unique and varied roles within these organizations and multifaceted experience within the construction industry. For a more comprehensive understanding of the participants' professional backgrounds, we have provided a detailed breakdown of their basic information in Table 3, which is presented below:

Table 3: Interviewees' Professional Information

| Interviewee | Organization Type | Position | Years of Experience |
|---------------|-------------------|------------------------------------|---------------------|
| Interviewee 1 | Consultant | Cost control and contract engineer | 28 |
| Interviewee 2 | Consultant | Project Manager | 25 |
| Interviewee 3 | Consultant | Contracts Manager | 27 |
| Interviewee 4 | Client | Project Manager | 9 |
| Interviewee 5 | Consultant | Senior Resident Engineer | 46 |
| Interviewee 6 | Consultant | Resident Engineer | 29 |
| Interviewee 7 | Contractor | Senior Civil Engineer | 15 |
| Interviewee 8 | Consultant | Resident Engineer | 30 |
| Interviewee 9 | Client | Team Leader | 25 |

Interview Results

The progression of a team, from its initial formation phase to achieving peak performance, frequently entails encountering a multitude of challenges and hurdles. Consequently, proficiently overseeing the entire life cycle of a team becomes a crucial determinant in securing peak team performance. Appendix 1 includes a comprehensive breakdown of themes and sub-themes meticulously discerned by experienced construction professionals through in-depth interviews. These valuable insights illuminate the essential components of effective team management, specifically guiding the team's journey from the post-selection phase through its various developmental stages to its eventual disbandment, all with the overarching goal of attaining peak and optimal performance.

Interview Analysis

The primary objective of conducting in-depth interviews was to elicit responses that would aptly tackle the research inquiries outlined below. What strategies and techniques are vital for the effective management of the construction team life cycle? What are the essential skills and knowledge that project managers should have to proficiently oversee a construction team life cycle for optimal effectiveness? These interviews served as a catalyst for unraveling the core strategies and techniques essential for managing the life cycle of construction teams and provided valuable insights into the critical skills and knowledge necessary for project managers to excel in this demanding domain. Nine seasoned construction team members were met for an in-depth interview. Their insights into managing the complex life cycle of construction teams shed light on the intricate web of strategies and practical techniques that underpin successful construction projects, Table 4. As the interviews commenced, it quickly became evident that

effective communication was the cornerstone of their approach. "We communicate with the team on a regular basis," one member said, setting the tone for the discussion. Others emphasized the importance of speaking openly, using various communication channels effectively, and ensuring that everyone was kept informed and aligned with project objectives. "Make sure everyone has a voice," chimed in another team member. The team members stressed the need to create an environment where every team member felt heard and valued. "Communicating a clear vision and expectations with the team is essential," added another, highlighting the importance of setting a unified direction for the project. The team members spoke passionately about the necessity of active listening, adapting communication styles, and the constant reception and implementation of feedback to fine-tune their communication skills. "Building trust through transparent and open communication is the bedrock of our teamwork," one member shared, underscoring the significance of honesty and transparency.

However, the experts acknowledged that conflicts were inevitable in the high-pressure construction environment. "Accepting conflict among team members is crucial," one participant stated. "But we don't let conflicts fester; we become calming agents," another member explained. They described a process that involved listening actively to all parties involved, analyzing the root causes, and separating the person from the problem. "Encouraging open discussions during disputes helps us recognize differences among members' perspectives," one team member revealed. The interviewees emphasized the importance of finding areas of agreement and disagreement, focusing on behavior and events rather than personalities, and building bridges through brainstorming solutions. Their insights extended

beyond conflict resolution. "We promote compromise and cooperation solutions," one team member stated. "Developing action plans is key," another added, highlighting the importance of translating resolutions into tangible actions. "To ensure the team understands the bigger picture of the project, we discuss obstacles in our weekly meetings," a team member shared, underlining their commitment to maintaining transparency. "Fixing a good working schedule and ensuring clear task understanding are pivotal," another mentioned, highlighting their emphasis on operational excellence. "Establishing a consensus and cooperation environment helps the team function well," one participant explained, elucidating their approach to fostering team cohesion. "We create a supportive context and encourage team collaboration," another added. Getting to know team members and being transparent with them was a recurring theme. "Punctuality and full cooperation with all participants are non-negotiable," one member stated firmly. They stressed the importance of unity, friendliness, and sympathy among team members, listening actively, and creating an environment for sharing ideas and questions. The conversation with one team member turned to the broader team culture. "We foster a positive team culture that encourages collaboration, innovation, and learning," one member shared, emphasizing the need to build trust, responsibility, respect, and mental and physical health.

"To start things off right, we hold an early introduction meeting where we explain the project requirements, and share the clear purpose, goals, objectives, and expectations," another team member explained. They stressed the importance of ensuring that each person fully understood their role and responsibilities. The discussion shifted towards strategies for task management. "We prioritize tasks and provide guidance on task management," one member stated. "Balancing workloads for optimal performance is essential," another added, highlighting the team's focus on efficiency. "Setting SMART goals and objectives and aligning team efforts toward common goals are part of our daily routine," one participant shared. They spoke of the need to avoid misunderstandings and misinterpretations in task distribution and the importance of defining and documenting team processes and procedures for task execution. "Clear accountability and providing feedback are vital for performance management," one team member explained. They mentioned the significance of monitoring team development, resolving issues, and continually improving against targets and expectations. The team members offered insights into their strength-based approach. "We align tasks and responsibilities with individual strengths," one participant said, emphasizing the practice of leveraging competency mapping for effective team performance. "Delegating tasks based on strengths is key," added another. The discussion then

delved into the importance of using project management software for efficient work organization and ensuring a clear action plan and regular updates. "Keeping the team informed is essential," a team member stated, advocating for transparency.

"We promote efficiency and avoid micromanagement," another added, emphasizing their commitment to empowering team members. "Regular tracking and recording of the team's performance are part of our routine," one participant mentioned. They highlighted the need to take action continually to improve against targets and expectations and the importance of conducting annual performance evaluations. Maintaining internal and external auditing was deemed essential for accountability. "Providing feedback and monitoring team development are ongoing processes," a team member explained. The team members reflected on their continuous guidance and direction of team members to achieve their goals. "We identify and understand causes for changes in behaviors to maximize productivity," one member shared. They stressed the importance of discussing key challenges and listening carefully to their team. The interviews revealed a keen focus on team dynamics. "We observe positive or negative outliers in the team," a participant added, explaining their approach to identifying and addressing issues. "We coach our team members to overcome the difficulties they face," another added, emphasizing the importance of supporting each other. "Fostering and encouraging a shared mindset is vital," one team member stated, emphasizing the need for unity and shared vision. They stressed the importance of treating the whole team fairly, without discrimination and encouraging team members to gain self-confidence.

"Providing adequate training for knowledge and skill development is a continuous effort," one team member explained, highlighting their commitment to growth and improvement. They also mentioned their practice of seeking feedback from teammates and leaders about difficulties they faced. The interviews concluded with the team members highlighting the necessity of providing the necessary support and resources for success. "We trust our team members to commence and continue their duties independently," one member stated, reflecting their belief in the capabilities of their colleagues. In closing, the interviews painted a vivid picture of a construction team dedicated to effective communication, collaborative conflict resolution, team environment and structure, roles and responsibilities clarity, performance management, and Planning and Task Distribution. Their wisdom offered a roadmap for managing the intricate life cycle of construction teams, ensuring not only the completion of projects but also the fostering of a thriving and a harmonious work environment.

Table 1: Managing Team Life Cycle - Factors and Techniques

| | |
|--|--|
| Managing the Team Life Cycle Factors | Managing the Team Life Cycle Techniques |
| Communication | Maintain consistent communication with the team. |
| | Foster open and honest dialogues within your team. |
| | Utilize diverse communication channels proficiently. |
| | Ensure that everyone is well-informed and aligned. |
| | Encourage every team member to express their thoughts. |
| | Articulate a clear vision and set expectations for the team. |
| | Periodically reinforce the team's grasp of contract documents and client/developer requirements. |
| | Actively engage in listening to your team members. |
| | Adjust your communication style as needed. |
| | Be receptive to and act on feedback. |
| | Develop strategies for enhancing your communication skills. |
| | Cultivate trust through transparent and candid communication. |
| Share information openly and honestly. | |
| Conflict Management and Dispute Resolution | Acknowledge the presence of conflicts within the team. |
| | Act as a calming influence. |
| | Practice active listening with all parties involved in the conflict. |
| | Analyze and comprehend the underlying causes of conflicts. |
| | Distinguish individuals from the issues at hand. |
| | Foster open dialogues when conflicts arise. |
| | Acknowledge differences in team members' perspectives. |
| | Identify points of agreement and disagreement. |
| | Concentrate on behaviors and events rather than personalities. |
| | Work on bridging gaps during conflicts. |
| | Generate ideas for resolving conflicts through brainstorming. |
| | Advocate for compromise and cooperative solutions. |
| | Formulate action plans for resolution. |
| | Ensure that the team has a clear understanding of the project's overarching goals. |
| Address team obstacles during weekly meetings. | |
| Establish an effective work schedule and ensure clarity in task assignments. | |
| Look beyond the incident of conflict. | |
| Team Environment and Structure | Cultivate an atmosphere of consensus and cooperation. |
| | Arrange the team for effective functioning. |
| | Set distinct boundaries and promote interdependence among members. |
| | Establish a compelling vision. |
| | Facilitate structure, create a supportive context, and foster team collaboration. |
| | Familiarize yourself with team members and maintain transparency. |
| | Demonstrate punctuality and full cooperation with all participants. |
| | Promote unity, friendliness, and empathy among team members. |
| | Actively listen to your team members. |
| | Foster a conducive environment for the exchange of ideas and questions. |
| | Cultivate a positive team culture that champions collaboration, innovation, and continuous learning. |
| Cultivate trust, responsibility, respect, and both mental and physical well-being. | |
| Setting, Clear Roles, and Expectations | Conduct an initial orientation meeting to outline project requirements. |
| | Share the explicit purpose, goals, objectives, and expectations. |
| | Ensure each team member comprehends their designated role. |
| | Establish strategies for prioritizing tasks and responsibilities. |
| | Achieve balanced workloads to optimize performance. |
| | Define SMART goals and objectives. |
| | Foster alignment of team efforts toward common goals. |
| | Prevent misunderstandings and task distribution misinterpretations. |
| | Schedule weekly team meetings at the project's outset for clarity. |
| Set Key Performance Indicators (KPIs) to gauge progress and implement transparent reporting systems. | |

| | |
|---------------------------------|--|
| | Prioritize tasks and offer task management guidance. |
| | Stress the significance of adhering to the project schedule. |
| | Define and document team processes and task execution procedures. |
| | Clearly define accountability and offer feedback. |
| | Ensure the team has access to the necessary resources. |
| | Provide awareness of project conditions, government regulations, end users, and external stakeholders. |
| | Align tasks and responsibilities with individual strengths. |
| | Utilize competency mapping to enhance team performance effectively |
| Planning and Task Distribution | Assign tasks according to individual strengths. |
| | Utilize effective project management software for work organization. |
| | Ensure the presence of a well-defined action plan and keep it updated. |
| | Provide explicit roles and responsibilities for each team member. |
| | Keep the team informed |
| | Encourage efficiency while avoiding micromanagement. |
| Performance Management | Consistently monitor and document the team's performance. |
| | Implement measures for continuous improvement in meeting targets and expectations. |
| | Carry out yearly performance assessments for all teams. |
| | Uphold both internal and external auditing processes. |
| | Offer constructive feedback. |
| | Oversee team growth and address any issues that arise. |
| | Continually guide and steer team members toward their objectives. |
| | Identify and understand causes for changes in behaviors to maximize productivity. |
| | Delve into key challenges and actively listen. |
| | Pay attention to both positive and negative outliers within the team. |
| Coaching and Skills Enhancement | Mentor your team members to help them overcome challenges. |
| | Cultivate and promote a shared mindset. |
| | Treat the entire team equitably, avoiding discrimination. |
| | Inspire the team to build self-confidence. |
| | Ensure that team members understand their roles and responsibilities. |
| | Promote activities that enhance interpersonal relationships. |
| | Deliver comprehensive training for knowledge and skill enhancement. |
| | Solicit feedback from both teammates and leaders regarding the challenges they encounter. |

CONCLUSION

In the domain of construction project management, effective team life cycle management emerges as a paramount factor in ensuring project success. The findings from our research interviews have unveiled a comprehensive array of strategies and techniques that project managers can employ to navigate this crucial aspect. These strategies encompass communication, conflict management, team environment and structure, goal setting, task distribution, performance management, and coaching and skills enhancement. As we conclude this research endeavor, it is evident that these strategies are integral components for achieving excellence in construction team management.

Recommendations

Based on the insights gained from our research, we offer the following recommendations to enhance the practice of construction team life cycle management:

Implement Effective Communication Strategies:

- Encourage regular and open communication within the team.

- Utilize diverse communication channels to ensure clarity and alignment.
- Foster active listening and adapt communication styles as needed.
- Establish a clear vision and expectations while actively sharing information and feedback.

Adopt Conflict Resolution Techniques:

- Acknowledge conflicts and work towards their resolution.
- Facilitate open discussions, focusing on behavior and common goals.
- Promote compromise, cooperation, and the development of action plans.
- Emphasize the bigger project picture during conflict resolution.

Cultivate a Supportive Team Environment:

- Foster unity, transparency, and mutual respect among team members.
- Create an atmosphere for idea-sharing and collaboration.
- Prioritize mental and physical well-being to ensure a healthy team dynamic.

Set Clear Goals and Roles:

- Hold introductory meetings to clarify project requirements and objectives.
- Establish clear roles and responsibilities for every team member.
- Establish SMART goals and align efforts toward common objectives.
- Implement efficient task distribution and provide necessary resources.

Performance Management:

- Regularly monitor and record team performance.
- Continually seek improvement and conduct annual evaluations.
- Maintain internal and external auditing practices.
- Provide constructive feedback and address challenges promptly.

Coaching and Skills Enhancement:

- Coach team members to overcome difficulties and foster self-confidence.
- Encourage fairness, trust, and strong relationships within the team.
- Invest in training and development to enhance knowledge and skills.
- Actively seek feedback from team members to identify areas for improvement.

Incorporating these recommendations into construction project management practices will not only facilitate effective management of the team life cycle but also contribute to the overall success and efficiency of construction projects. Building a collaborative and skilled team capable of addressing challenges and working towards shared goals is essential for achieving excellence in the construction industry.

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Appendix 1

Summary of Themes and Subthemes Identified from Managing the Team Life Cycle Questioners

| The theme of Managing the Team Life Cycle | 1- Sub-themes - Managing Team Life Cycle | | | | | | | | |
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| | Interviewee 1 | Interviewee 2 | Interviewee 3 | Interviewee 4 | Interviewee 5 | Interviewee 6 | Interviewee 7 | Interviewee 8 | Interviewee 9 |
| Communication | 1-Speak openly with your team 2-Communicate with the team on a regular basis 3-Keeping everyone informed and aligned 4-Using various communication channels effectively 5-Making sure everyone has a voice 6-Sharing a clear vision with the team | 1-Be open with your team 2-Direct and continuous communication for collaboration | 1-Follow up through communication with different people separately | 1-Maintain open and transparent communication | 1-Refresh the team's understanding of contract documents and client/developer requirements 2-Communicate with the team on a regular basis 3- Liaise with all parties within the project areas to avoid interruption of duties 4-Familiarize with report preparation and communication | 1-Communicate expectations 2- Communicate directly and transparently 3-Ability to adapt communication styles 4-Active listening 5-Transparency, clarity, and empathy 6- Receiving and implementing feedback 7-Facilitating strong communication among team members | - | 1-Encourage open and honest communication to build trust 2-Stressing the importance of clear and honest communication. | 1-Communicate openly and resolve team issues 2-Strategies for improving communication skills 3-Share the mission and vision 4- Actively involve all team members 5-Building trust through transparent and open communication 6-Establishing effective communication channels 7-Sharing information openly and honestly |
| Conflict Management and Dispute Resolution | 1-Accept conflict among team members 2-Stay on top of things 3-Solve problems 4- Be a calming agent 5- Listen actively 6- Analyze the root cause of conflict 7- Separate the person from the problem when it happens 8- Understanding the cause of conflicts 9-Encouraging open discussions during disputes 10-Recognizing differences among members' perspectives 11- Strategies for finding areas of agreement 12.Building bridges during conflicts 13-Promoting compromise and cooperation 14-Brainstorming solutions to conflicts 15-Developing action plans | 1- Utilizing a clear vision to resolve conflicts 2-Ensuring that the team understands the bigger picture 3-Using the team's shared vision to find common ground 4-Confront the conflict among team members | 1-Discuss in the weekly meetings the obstacles of delayed tasks 2- Involve in solving misunderstandings between the staff 3-Understand the cause of the dispute when it arises 4- Handle conflicts by ensuring clear task understanding and deadlines 5-The importance of understanding the underlying issues in conflicts 6-Addressing conflicts by tackling their core causes 7-Seeking solutions that address the root of the dispute 8-Discussing conflicts with individuals involved 9-Working collaboratively to find equitable solutions | 1- Arrange a meeting for discussion and compromise 2-The importance of open communication in resolving conflicts 3-Facilitating discussions to address team issues 4-Taking decisive actions when necessary to resolve conflicts | 1-Select a popular team leader to resolve internal disputes 2- Involve organization management to find solutions if the leader cannot resolve the dispute 3-The role of open discussions in recognizing and resolving problems 4-Proposing plans and solutions during conflicts 5-Handling conflicts through communication and problem-solving | 1- Aligning people and their work 2- Collaborating for conflict resolution 3- Encourage the participation of each team member 4- Handling conflicts over important issues through collaboration 5- Compromising for moderately important issues 6- Define the source of the conflict 7- Look beyond the incident of conflict 8- Request solutions to resolve the conflict 9- Find an agreement between conflict parties 11-Strategies for addressing conflicts within the team | 1-Deal with conflicts by fixing a good working program schedule 2- Focus on the project schedule to achieve tasks on time | 1-Effectively resolve conflicts and promote a positive team culture 2-Address conflicts promptly 3-Promote group problem-solving 4- Mentorship skill development 5-Maintaining composure during conflict situations 6-Listening carefully to each team member's perspective 7-Collaborating with team members to find solutions and prevent recurrence | 1-Resolve issues and disputes early 1- Define the root cause of conflicts or disputes 3- Listen to each party separately 4- Confrontation and conflict resolution 5- Set up a fair and impartial agreement 6-Addressing problems and conflicts within the team 7-Individual discussions and conflict resolution 8-Fairness, patience, and impartiality in dispute resolution 9-Ensuring that planned solutions are implemented |
| | 13-Avoiding misunderstandings and misinterpretations in task distribution | holistic approach to tasks | | | | 9-Scheduling regular team meetings to communicate the team objectives and goals | | | 9-Establishing clear reporting systems 10-Ensuring everyone understands their roles and responsibilities 11-Recognizing and utilizing the competencies within the team 12-Aligning tasks and responsibilities with individual strengths 13-Leveraging competency mapping for effective team performance |
| Planning and Task Distribution | 1- Delegate tasks based on strengths 2- Promote efficiency and avoid micromanagement 3- Using good project management software can greatly help organize the work | 1- Introducing a general action plan 2- Distributing tasks 3- Availability of a clear action plan and its updates | - | - | - | 1-Clearly define roles and responsibilities for every team member 2- Keep the team informed | - | 1- Focus on the working plan 2- Completing activities during the working plan 3- Following up with the project manager | - |
| Performance Management | 1-Monitor team development and resolve issues 2-Identify and understand causes for changes in team behavior to maximize productivity 3-Interview each team member 4- Discuss key challenges 5-Listen carefully 6- Take note of positive or negative outliers | 1- Monitoring the team's performance 2- Controlling the team's activities 3- Regular reporting on project status and the team's progress | 1- Team members should perform tasks on time with acceptable quality. 2-Continuous collection and evaluation of team performance 3- Provide feedback for the team to improve | 1- Monitor team members' performance 2- Evaluating individual development and progress 3- Continuous guiding and directing of team members to achieve their goals | 1- Closely monitor and evaluate team development 2- Focus on improving team performance for better work quality | 1- Regular track and record of the team performance 2-Takes action to continually improve against targets or expectations 3-Maintain internal and external auditing 4- Conduct annual performance evaluations for all team members 5- Provide feedback | - | 1-Use KPIs to measure progress 2-Self-assessment 3-Peer evaluation 4-Observations and feedback | 1-Establish clear performance evaluation criteria 2- Regular performance reviews 3- Increases performance, productivity, confidence, and problem-solving capabilities 4-Reward and motivate the team's efforts |
| Coaching and Skills Enhancement | 1- Coach your team members 2- Foster and encourage the shared mindset | - | 1- Help employees suffering from personal trouble to overcome difficulties 2-Identify the lacking area of professional skills and coaching 3-Treat the whole team fairly, without discrimination | 1- Understand the competency of each team member in solving issues/problems | 1- Trust the team members to commence and continue their duties independently 2- Encourage the team to gain self-confidence 3- Ensure team members are fully aware of their duties and responsibilities | 1- Focused on communication, problem-solving, and cooperation for quality and customer satisfaction | - | 1- Provide adequate training for knowledge and skill development 2- Look for opportunities to improve skills and knowledge 3- Take ownership of work and collaborate 4-shared responsibility 5- Seek feedback from teammates and leaders | - |

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| | 16-Ensuring follow-up on agreed-upon solutions | | | | | 12-Focusing on behavior and events rather than personalities 13-Listening carefully to all parties involved 14-Identifying points of agreement and disagreement 15-Prioritizing areas of conflict and developing resolution plans 16-Building on the success of conflict resolution | | | |
| Team Environment and Structure | 1-Establish consensus and cooperation environment 2-Organize the team to start functioning well 3-Establish clear boundaries and interdependence among members 4-Establish compelling direction 5- Enabling structure 6- Create a supportive context 7-Encourage team collaboration | Be transparent with your team | Foster collaborative efforts of the whole team | 1- Foster motivation, trust, and a healthy environment 2- Create a cooperation environment | 1- Prove punctuality and full cooperation with all participants 2- Organize the team for a smooth construction stage 3- Encourage unity, friendliness, and sympathy among team members. 4- Prove cooperation and coordination between team members | 1- Getting to know my team members 2- Build trust 3-Listening to team members 4- Encourage team collaboration | - | 1- Create an environment for sharing ideas and questions 2- Encouraging collaboration and sharing knowledge 3- Foster a positive team culture that encourages collaboration, innovation, and learning 3- Get to know team members personally 4- Be patient and flexible | 1- Members should support each other for the main team goal 2- Improves trust, responsibility, respect, mental and physical health, and motivation |
| Goals Setting, Clear Roles, and Expectations | 1- Offer a clear vision of the project, its purpose, goal, and objectives. 2-Ensure each person understands their role 3-Maintain a balance 4- Establish clear roles, responsibilities, and expectations 5- Forming a team with a clear task structure 6- Revisit project goals 7- Establish a baseline 8- Quantify what success means 9-Strategies for prioritizing tasks and responsibilities 10-Balancing workloads for optimal performance 11-Setting SMART goals and objectives 12-Aligning team efforts toward common goals | 1- Hold an early introduction meeting 2-Clarity about objectives and purpose is important at the early stage 3- The team should understand and recognize the project requirements 5-Perform the Task with a Comprehensive Vision 6-Ensuring that all aspects of a task are covered 7-Achieving a well-rounded and | 1-Align the team with the project goals 2- Let the team fully understand the project requirements | 1- Arrange weekly meetings with the team at the beginning to make things clear 2-Establish clear roles, responsibilities, and expectations 3- Ensure everyone is on the same page 4- Set KPIs to measure progress | - | 1-Set goals with clear deadlines 2- Maximize the team's ability to focus on goals 3-Defining the purpose of the team, roles and responsibilities of every member 4-Identifying team objectives and goals 5-Offering frequent check-ins to stay updated on team progress 6-Reviewing team members' work regularly 7-Prioritizing tasks and providing guidance on task management 8-Collaboratively planning and setting team goals | 1- Support the team in focusing on progress and work quality 2- Team members should understand the basic concepts of success, progress, and quality 3-Emphasizing the importance of focusing on the project schedule 4-Ensuring that team members are aware of project details | 1-Set clear roles and expectations from the beginning 2-Ensure team members understand their roles and responsibilities 3- Define and document team processes and procedures 4- Set Clear accountability 5- Provide feedback 6-Avoid micromanagement 7-Ensuring that the team has access to the necessary resources. 8-Offering positive and constructive feedback to team members. | 1-Find competency mapping in the team 2- Set out team goals and objectives 3-Provide awareness of project conditions, government regulations, end users, and external stakeholders. 4-The significance of aligning with project goals 5-Keeping focus on the project's goals and objectives 7-Ensuring team efforts contribute to project success 8-Defining project scope, job descriptions, and timelines |