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Strategic Approaches to Enhancing Project Team Dynamics for Improved Performance in the South African Construction Industry

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Abstract
The South African construction industry continues to face persistent challenges with project delays, cost overruns, stakeholder dissatisfaction, and low-quality outcomes. While technical competencies and resource management are often emphasised, the impact of project team dynamics, communication, trust, cohesion, and leadership on project performance remains underexplored. This study investigates strategies for improving project team dynamics to enhance performance outcomes in construction projects. A quantitative research approach was adopted, involving a structured questionnaire survey administered to 75 respondents, including quantity surveyors, architects, engineers, construction managers, and construction students. A total of 61 responses were analysed, yielding an 81% response rate. Descriptive statistical tools were used to identify key team dynamic indicators and effective improvement strategies. Findings revealed practical strategies such as regular feedback sessions, clear role definitions, leadership development, stakeholder engagement, and conflict resolution training as essential for optimising these dynamics and improving project delivery outcomes. This research highlights that effective team dynamics significantly influence cost efficiency, timely delivery, quality outcomes, and stakeholder satisfaction. By improving interpersonal skills, team structure, and collaborative processes, construction organisations can enhance project performance and resilience. The study provides recommendations for project managers, policymakers, and stakeholders to implement sustainable team-based interventions in the South African construction context.

Keywords
Construction industry, Team dynamics, Project performance, Communication, Conflict resolution

1. Introduction

The construction industry plays a pivotal role in national development by providing essential infrastructure, creating employment opportunities, and making significant contributions to the gross domestic product (GDP). In South Africa, the construction sector is a cornerstone of economic growth and societal advancement, underpinning vital services such as housing, transportation networks, and public facilities. Despite its critical importance, the industry is frequently challenged by issues such as cost overruns, project delays, substandard quality outcomes, and strained relationships among stakeholders (Nishaant et al., 2025). These challenges impede project success and diminish the sector's overall contribution to sustainable development. Much of the existing research on improving construction project performance tends to focus on technical and managerial aspects, including resource allocation, project planning, scheduling, risk management, and the development of professional competencies. However, the human element, particularly the dynamics within project teams, has often been overlooked or insufficiently explored, despite being a fundamental driver of project outcomes. Kozlowski and Ilgen (2006) describe project team dynamics as the complex interpersonal and structural factors that influence how teams operate and collaborate. This includes communication patterns, leadership styles, trust-building, conflict resolution, collaboration, etc.

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In the context of construction projects, which inherently involve multidisciplinary professionals working under tight deadlines and complex conditions, effective team dynamics are essential. Successful project delivery hinges on the ability of teams to work cohesively, navigate challenges collectively, and adapt to evolving project demands. Conversely, poor team dynamics frequently result in Miscommunication, delayed decision-making, unresolved conflicts, and diminished productivity, all of which negatively impact project timelines, costs, and quality.

Recent literature has increasingly recognised the importance of fostering positive project team dynamics to enhance construction performance. For example, Carreno (2024) states that regular communication and continuous feedback loops are vital to maintaining clarity, aligning expectations, and promoting collaboration among team members. Similarly, APAGYA and KWESI (2024) argue that team-building activities have been shown to strengthen interpersonal relationships and trust, which are crucial for coordinated efforts and collective problem-solving. Training in conflict resolution and leadership development helps mitigate tensions and enhances the capacity of teams to manage interpersonal challenges constructively

Moreover, Ebbers and Wijnberg (2017) highlight that clearly defined roles and responsibilities reduce ambiguity and ensure that all members understand their contributions towards project objectives. Sanyang and Ali (2023)'s study promotes diversity within teams, contributing to a wider range of perspectives and creative solutions. Decision-making processes that are transparent and inclusive further engage teams and enhance their commitment to project success. In addition to these human-centric strategies, methodologies such as continuous improvement approaches, exemplified by Lean and Six Sigma, have been applied in construction to optimise workflows, reduce waste, and enhance quality, as noted by Mophethe (2024). The integration of external collaboration with clients and other stakeholders facilitates alignment with project goals and fosters mutual trust, thereby improving overall project delivery (Larsson & Larsson, 2020). Despite this growing body of knowledge, there remains a significant gap regarding tailored strategies that address the unique socio-economic and operational realities of the South African construction industry. This study seeks to fill this gap by identifying key indicators of effective project team dynamics and investigating practical, context-specific strategies to enhance team cohesion, trust, communication, and overall performance on construction projects. The findings aim to provide actionable insights that can guide practitioners and policymakers in improving project delivery, ultimately contributing to the sustainable growth of the construction sector within South Africa.

To provide conceptual grounding, this study draws on established theories of team effectiveness. Kozlowski and Ilgen (2006) emphasise that team performance arises from the interaction of multiple factors such as communication, trust, coordination, and leadership: elements that closely reflect the strategies identified in this research. In addition, Tuckman's (1965) stages of group development (forming, storming, norming, performing) offer a useful lens for understanding how project teams evolve and why practices such as regular communication, clear role definition, and effective decision-making are critical for cohesion and performance. These frameworks help to explain why the strategies prioritised by South African construction professionals are central to improving project outcomes, while also situating the study within broader research on project team effectiveness.

2. Research Methodology

This study employed a quantitative research approach to systematically investigate strategies for improving project team dynamics within the South African construction industry. A structured questionnaire with closed-ended questions was developed to ensure uniformity in responses and facilitate quantitative analysis. The questionnaire focused on assessing various dimensions of team dynamics, including communication, leadership, decision-making, and resource management. Questionnaires are widely adopted in construction management research due to their efficiency in collecting standardised data across diverse professional groups, thereby enabling comparability and statistical analysis (Kuphanga, 2024).The use of closed-ended questions was deliberate, as it ensured uniformity in responses, minimised interpretation bias, and facilitated robust quantitative analysis. Surveys are particularly suited for examining team dynamics because they capture practitioners' perceptions of communication, leadership, and decision-making across multiple projects in a systematic manner (Connor Desai & Reimers, 2018). The convenience sampling approach, while limiting generalisability, was appropriate given the practical constraints of accessing a broad pool of industry professionals. This approach has been recognised in construction research as a pragmatic means of gaining insights when probability sampling is not feasible (Golzar, Tajik, & Noor, 2022). Consequently, the survey design provided reliable, contextually relevant data for assessing strategies to improve project team dynamics.

The research was conducted in Gauteng Province, a key economic hub where construction activities are prominent, making it an appropriate context for the study. The target population consisted of construction industry professionals, including project managers, quantity surveyors, architects, engineers, and construction managers, drawn from both

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public sector organisations and private companies. This diversity allowed for a comprehensive understanding of team dynamics across different organisational contexts.

A non-probability convenience sampling method was adopted due to practical constraints and ease of access to respondents within professional networks. A total of 75 questionnaires were distributed electronically via Google Forms, using multiple channels such as email, LinkedIn, and industry-specific professional groups to maximise reach and participation. Out of these, 61 completed and valid responses were received, yielding a strong response rate of 81%, which supports the robustness of the data collected. Data analysis was performed using IBM SPSS version 24 alongside Microsoft Excel to manage and interpret the dataset. Descriptive statistics, primarily Mean Item Scores (MIS) and Standard Deviations (SD), were calculated to rank and prioritise the various strategies based on respondents' perceptions. The internal reliability of the questionnaire was assessed using Cronbach's Alpha, which yielded a high score of 0.971, indicating excellent consistency and reliability of the measurement instrument. This confirmed that the questionnaire items were well-correlated and effectively captured the constructs under investigation. Ethical clearance from the university was obtained before data collection, ensuring that participants' confidentiality and informed consent were maintained throughout the study. Overall, the methodological approach provided a structured and reliable framework to quantitatively identify actionable strategies to enhance performance within the construction sector.

3. Results

3. 1 Background Information of Respondents

The biographical profile of the respondents reveals a diverse and professionally qualified sample of construction practitioners in Gauteng Province. The predominance of bachelor's degree holders (59.02%) and the representation of advanced qualifications, such as honours (14.75%), master's (8.20%), and doctorate (1.64%), reflect a relatively well-educated workforce. The wide range of professional roles - Quantity Surveyors (29.51%), Engineers (27.87%), Construction Managers (24.59%), Project Managers (13.11%), and Architects (4.92%) illustrates a broad spectrum of expertise critical to understanding digital procurement practices in the sector.

The respondents also vary in experience, with a significant portion (40.98%) having less than one year of experience, while 37.07% reported 1–5 years. This skew towards early-career professionals may reflect the growing interest among newer entrants in technology-driven procurement practices. The mix of employment in various institutional types - contractors (31.15%), private clients (29.51%), consultants (26.23%), and government (13.11%) highlights a balanced insight into both public and private sector involvement. Furthermore, the number of construction projects respondents had been involved in varied, with 55.74% participating in 1–2 projects, 26.23% in 3–4 projects, 8.20% in 5–6 projects, and 9.84% in more than eight projects. Most respondents had participated in only 1–2 projects (55.74%), reinforcing the predominance of emerging professionals who may have limited exposure but are positioned to adopt innovative systems. These findings suggest that while the industry is rich in technical capacity, there is still an ongoing transition towards embedding digital procurement tools. The relatively lower experience levels might indicate a need for structured upskilling programmes to enhance competence and confidence in digital procurement platforms.

3.2 Respondents Ranking

Table 1 reveals the respondents' ranking of strategies for improving team dynamics. According to the respondents, Regular communication and feedback were ranked first, with Mean scores (SD), (MS= 4.38 and SD= 0.916) and Standard Deviation (SD); Clearly defining individual roles and responsibilities ranked second with (MS= 4.31; SD= 0.923); Effective decision-making was ranked third with (MS= 4.26; SD= 0.893); Continuous improvement was ranked fourth with (MS= 4.25; SD= 0.925); Performance improvement and Resource Optimization, were both ranked fifth with (MS= 4.23; SD= 0.956); Leadership development was ranked seventh with (MS= 4.21; SD= 0.933); Client engagement was ranked eighth with (MS= 4.21; SD= 0.859); Conflict resolution training and Stakeholder management plan were both ranked ninth with (MS= 4.15; SD= 0.946); Empowering team members was ranked eleventh with (MS= 4.13; SD= 0.974); Transformational leadership was ranked twelfth with (MS= 4.11; SD= 0.985); Team-building activities was ranked thirteen with (MS= 4.08; SD= 1.005); Team diversity was ranked fourteen with (MS= 4.07: SD= 0.964) and External collaboration was ranked fifteen with (MS=3.92; SD= 1.038).

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Table 1. Strategies for improving project team dynamics for improved project performance in the construction industry

Strategies	MS	SD	R
Establishing regular team communication and feedback loops	4.38	0.916	1
Clearly defining individual roles and responsibilities	4.31	0.923	2
Enabling timely and inclusive decision-making processes	4.26	0.893	3
Embedding a culture of continuous improvement	4.25	0.925	4
Implementing structured performance review and feedback systems	4.23	0.956	5
Optimising the use of project resources	4.23	0.956	6
Developing leadership capabilities across the team	4.21	0.933	7
Actively involving clients throughout the project lifecycle	4.21	0.859	8
Providing conflict resolution skills training	4.15	0.946	9
Creating and following a structured stakeholder engagement plan	4.15	0.946	9
Empowering team members through autonomy and support	4.13	0.974	11
Adopting a transformational leadership approach	4.11	0.985	12
Facilitating purposeful team-building initiatives	4.08	1.005	13
Promoting diversity and inclusion within the team	4.07	0.964	14
Encouraging collaboration with external partners and experts	3.92	1.038	15

4. Discussion

The findings indicate a strong consensus among respondents regarding the critical strategies for enhancing project team dynamics in the South African construction industry. The high mean scores (MS) across all identified strategies reflect their perceived importance and relevance to project environments. Regular communication and feedback emerged as the most highly rated strategy, affirming that open and consistent communication is fundamental to fostering team cohesion, preventing misunderstandings, and ensuring timely issue resolution. This aligns with Zulch (2014), who emphasizes that communication is a cornerstone of successful teamwork and project delivery. The prominence of communication further underscores the multidisciplinary and fragmented nature of South African construction projects, where miscommunication across professional boundaries often contributes to delays, cost overruns, and disputes.

The clarification of roles and responsibilities was ranked second, highlighting the persistent challenge of role ambiguity in construction teams, as noted by Kabiri, Hughes and Schweber (2012). Clear role definition reduces duplication of effort and conflict, thereby enhancing team synergy and accountability. This finding reflects the complexity of South African project structures, where overlapping responsibilities among contractors, consultants, and clients frequently create inefficiencies. Effective decision-making processes and continuous improvement mechanisms were also rated highly, pointing to the sector's preference for agile and adaptive environments in which lessons learned are systematically applied to future projects. Performance feedback and resource optimization were equally prioritized, underscoring the importance of recognizing contributions and ensuring the efficient use of manpower, materials, and time - resources that are often constrained in construction projects. These findings are supported by the studies of Pesämaa, Larsson and Eriksson (2018) and Fapohunda and Chileshe (2014).

Other strategies, such as leadership development and client engagement, further illustrate the industry's recognition of relational and human-centric enablers of team effectiveness (Alibašić, 2022). Strong leadership capabilities are vital for guiding teams through complex project demands, while client involvement enhances transparency and accountability in project delivery. Although conflict resolution training and structured stakeholder engagement plans received slightly lower rankings, they remain critical in contexts involving multiple stakeholders and potential interpersonal friction.

Interestingly, strategies such as team diversity and external collaboration received comparatively lower mean scores, despite existing literature highlighting their significance for innovation and adaptability Adham and Sukkar, 2024; and Sanyang and Ali, 2023 also connotes this. This suggests that while South African professionals emphasise immediate operational efficiencies such as communication, decision-making, and role clarity, they place less importance on long-term, culture-driven strategies like inclusion and inter-organisational partnerships. This divergence points to a gap between global best practices and local priorities, warranting further exploration in future studies.

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The results have several implications for construction project managers, company leaders, contractors, consultants, industry regulators, and policymakers. At the project initiation stage, clear role allocation and communication frameworks can enhance accountability and coordination. Continuous learning and performance evaluation should be institutionalised as part of human capital development strategies. Furthermore, investment in leadership capacity-building and client engagement mechanisms can strengthen collaboration and alignment with stakeholder needs. The relatively lower ranking of diversity and external collaboration highlights underexplored opportunities that could be addressed through awareness campaigns, supportive policy frameworks, and organisational incentives aimed at cultivating inclusive and innovative teams. Taken together, these findings show that strategies which directly address interpersonal and structural coordination are prioritised in practice, while those fostering innovation and inclusivity remain underutilised. This duality underscores the importance of adopting a balanced approach that combines both immediate operational improvements and long-term team-building efforts. Overall, the study provides empirical support for prioritising soft skills, communication, and organisational culture alongside technical competencies in project management practices within the South African construction sector and beyond

5. Conclusions

This study identified several practical and high-impact strategies for enhancing project team dynamics to improve performance within the construction industry. First, fostering regular communication and feedback among team members should be prioritised, as it was rated the most effective strategy. Implementing structured communication practices such as scheduled meetings, progress reports, and digital collaboration tools can promote clarity, reduce misunderstandings, and encourage a culture of openness. Equally important is that the clear definition of roles and responsibilities for all team members is essential to reduce ambiguity and ensure accountability. Project managers should articulate and disseminate explicit role descriptions at the outset of the project. Doing so will motivate individuals to take ownership of their tasks and contribute effectively to the project goals.

Additionally, encouraging effective decision-making processes that involve team members promotes engagement and responsibility. The study also highlights the importance of continuous improvement and performance feedback mechanisms. Project teams should adopt iterative evaluation practices, such as lessons learned sessions, to identify gaps, celebrate successes, and refine their processes continually. This will not only improve project quality but also boost team morale.

Further, resource optimisation should be integrated into project planning, ensuring that both human and material resources are deployed efficiently to avoid bottlenecks and cost overruns. Utilising resource management software and tracking tools can aid in achieving this objective. Finally, investing in leadership development and client engagement is critical. Building leadership capabilities within teams enhances coordination, motivation, and conflict resolution, while actively involving clients throughout the project cycle improves alignment with client needs and fosters cooperation.

By adopting these strategies, construction organisations can enhance team synergy, minimise risks, and drive better project performance, ultimately contributing to more successful and sustainable project outcomes. Regular communication, clear role definition, effective decision-making, and continuous improvement emerged as the most critical factors, underscoring the importance of both interpersonal and organisational processes. Leadership development, client engagement, and resource optimisation also play significant roles in driving project success. The findings emphasise that a comprehensive approach, integrating strong communication, well-defined responsibilities, and ongoing feedback, is vital for fostering cohesive, efficient teams. Construction organisations should prioritise these strategies to overcome common challenges, boost collaboration, and deliver successful project outcomes.

Ultimately, strengthening project team dynamics is a foundational step towards improving overall construction industry performance. Nevertheless, this study also acknowledges certain methodological limitations, including its reliance on descriptive analysis and non-probability sampling, which constrain the generalisability of the findings. These limitations, together with opportunities for more advanced statistical modelling and longitudinal exploration, provide useful directions for future research**.**

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