# From Coaching Leadership Style to Construction Industry Project Success: Modelling the Mediating Role of Team Building and Goal Clarity

**Aqeel Wahab Siddiqui[1*], Shakir Iqbal[2], Muhammad Bilal Shaukat[3], Khawaja Fawad Latif[4]**

[1,2,3]Department of Management Sciences, Abasyn University, Peshawar, Pakistan
[4]Department of Management Sciences, Comsats University Lahore, Pakistan

## ABSTRACT

This study aims to determine the impact of the Coaching Leadership style (CL) on Project Success (PS) by applying the concept from the Resource Based View - (RBV) and Social Identity Theory - (SIT). This study further ascertains the mediating role of team building and goal clarity in the relationship between CL and PS. The data were collected from 302 project management professionals working in the Construction industry of Pakistan. The study applied partial least squares structural equation modeling to validate the direct and mediating effect. The results indicated that CL has a positive and significant impact on project success. Moreover, the results further validated that team building and goal clarity mediates the relationship between coaching leadership and project success. There is a dearth of empirical investigation on the relationship between CL and PS in developing republics context. This study makes a significant contribution to the field of Construction industry project management by demonstrating that CL impacts PS while team building and goal clarity mediate this relationship. This is one of the earliest studies that explores the inter-relationship among CL, PS, and team outcome.

Managers worldwide grapple with intricate challenges concerning leadership styles in contemporary business practices. Effective leaders must prioritize proactive actions, risk management, and fostering competitiveness to attain objectives and secure an enduring

competitive edge (Villaluz & Hechanova, 2019). The leadership literature acknowledges a diversity of leadership styles and their possible implications on projects, organizational performance, and management. The success of a project is dependent upon different situational factors and the methodology selected for a project. A growing literature emphasizes that leadership is one of the most significant individual influential predictors of project performance and success (Aga et al., 2016; Latif & Nazeer et al., 2020). Hence, the leader has been considered as a distinct resource of an organization (Galbreath, 2005).

Project researchers have paid less attention to project leadership, which pertains to the expansion of human skills and prosperity (Byrne & Barling, 2015; Muñiz Castillo & Gasper, 2012). The conventional leadership styles associated with old business setups are unable to fulfill modern firms' demands (Mabey et al., 2012). An inadequate leadership style increases the unpredictability of authority, influence, and directives, endangering project success (Müller & Turner, 2007). Hence, leadership behaviors need to be discussed from a coaching leadership viewpoint (Mairami et al., 2020).

Coaching leader is extremely effective in situations when results/performance need to be improved. Essentially, this kind of leadership assists followers in developing their abilities. Coaching leaders motivate, inspire, and encourage subordinates (Raza et al., 2018). Coaching leadership is one of the most underutilized management techniques in the contemporary workplace. Leaders avoid this choice for one simple reason: they lack the time to pause and assist others with their duties. This technique takes a long time and a lot of patience to generate results. Certain businesses may not be able to make such an upfront expenditure (Mairami et al., 2020).

Prior research highlighted the relationship between CL and different employee behaviors. For instance, scholars like Huang and Hsieh (2015) examined the impact of CL on subordinates in role and proactive career behaviors and found a significant impact; however, the relationship between CL and PS remains unexplored. A study presented by Berg and Karlsen (2016) discussed various tools and techniques of coaching leadership style, which are helpful to project managers for efficient project management. They further highlighted that future research should focus on CLS to gain a comprehensive understanding of coaching leader behavior on project success. Similarly, Li et al. (2022) explored the impact of CL on subordinates' divergent innovative behavioral performance and established a significant direct impact of CL to promote subordinates' divergent innovation performance. They further suggested that CL practices should combine with employees' effectiveness in future research to augment organizational success. Moreover, Wang et al. (2017) analyzed the impact of CL style on subordinates' social responsibility behavior and found that CL put more consideration to the employees' benefits and personnel development as compared to other leadership style. They suggested that their research model should be further deepened by adding more variables to explore the influence of CL style in relation to organizational success. Furthermore, Peng et al. (2019) investigated the relationship between CL and employees' career success and found that CL style has an inherent benefit in predicting employees' career success. They further recommended examining the relationship between CL, employee behaviors, and success.

Project-based organizations are becoming increasingly popular. There is a need to investigate various limitations and leadership styles that might assist project teams in achieving their ultimate goals of project success. The concept of coaching leadership is new in Pakistan's

organizational structure, but it demands a lot of attention, and as a result, it has not achieved the acceptance and popularity it deserves. Leadership alone cannot be sufficient to contribute to better project success (Latif et al., 2021). There is consensus in the literature that various factors may interfere with leadership and project success (Yang et al., 2014). Studying mediating variables in the relationship can help explain the role of leadership's effect on project success and further clarify the paths through which leadership can lead to improved project success (Aga et al., 2016; Latif & Nazeer et al., 2020). In addition, the underlying processes by which leadership styles impact project performance should be investigated (Aga et al., 2016).

Existing research calls for investigation of team outcomes variables such as team building activity and goal clarity, which further mediates the relationship between coaching leadership and performance-based outcomes (e.g., Latif et al., 2021; Shuffler et al., 2018; Zahur et al., 2022). Teamwork has been considered one of the most important capabilities needed in the working environment (Latif & Williams, 2017). Ozigbo et al. (2020) stated that a project team integrates balanced skills for project success, though it is essential to be fostered over time. Zahur et al. (2022) argued that leadership significantly influenced innovative teamwork in enterprise resource planning, eventually resulting in project success. Latif and Sajjad et al. (2020) emphasized team-level issues, for instance, team building to increase efficiency. It is critical to explore this connection since empirical data on the mediating function of team activities such as team building in the relationship between leadership and performance, is scarce (Chou et al., 2013). Thus, despite team building being a vital contributing factor, its facilitating role in CL-PS relationship is not adequately inspected.

Goal clarity is important for project management and completion since, without it, the project will not meet the stakeholders' expectations (Tyssen et al., 2014). Individual and group high performance is based on goal clarity (Anderson & Stritch, 2016). If objectives are not clearly stated, the individual's performance level remains ineffective. In defining their duties, what they need to be done, and what they expect of them, in particular in the various project circumstances, GC has helped the project team members (Patanakul et al., 2016). However, goal clarity should exist; it is the manager's or leader's duty to communicate the goals and objectives to workers in order to eliminate ambiguity. When a goal is defined, workers are strongly driven to accomplish it, and the project succeeds (Raziq et al., 2018). Research calls for examining the role of goal clarity vis-à-vis transactional leadership style and project success (Tyssen et al., 2014).

The extant literature highlights numerous knowledge gaps concerning the role of CL, team building, goal clarity, and project success, which require scholars' attention. First, even though the concern of coaching leadership style is emerging, the application of CL practices is still considerably underdeveloped (Peng et al., 2019). However, Project management professionals have yet to infuse CL initiatives to manage their projects more efficiently (Berg & Karlsen, 2016). Second, the extant literature highlighted the relationship between CL and various employees related behavioral outcomes; however, the role of CL in relation to project performance and success is not adequately addressed (Li et al., 2022; Wang et al., 2017). Third, the extant literature showed that the relationship between CL and performance was studied through various mediating mechanisms (Peng et al., 2019). CL is an emerging concept; hence, the direct association between CL and project success may further require a mediating mechanism. Existing research calls for the investigation of team outcome variables such as team

building and goal clarity, which further explain the effect of CL on project success (Aga et al., 2016; Ali et al., 2020). For instance, Aga et al. (2016) argued that leadership practices become critical to project management and success. They recommended exploring team-related variables such as team-building activities to bridge the relationship between leadership and project success. Similarly, Raziq et al. (2018) noted that there is less empirical evidence to specify what project consequences might be affected while using a coaching leadership style. They recommended analyzing the mediating role of goal clarity in the relationship between leadership and project success. Finally, the application of leadership practices has been continually growing in construction management. According to the Pakistan Economic Survey for the fiscal year 2019-2020, it's noteworthy that the construction sector holds significant economic potential. According to the survey, its estimated value stands at Rs. 316 billion, although some analysts suggest it may represent a much larger share of the country's GDP, ranging from 10% to 13% (http: tradingeconomics.com). Over the past five fiscal years, the construction sector has consistently contributed between 2.33% and 2.85% to Pakistan's GDP, averaging around 2.53%. However, despite its economic significance, the construction sector has encountered a range of challenges in achieving project objectives. These challenges have manifested in the form of subpar output quality and performance issues, particularly concerning cost and time overruns (Memon et al., 2023). It is evident that addressing these issues in the construction industry is crucial for maximizing its contribution to Pakistan's GDP and ensuring the successful completion of projects. Moreover, Iqbal and Husnain (2022) highlighted that the relationship between CL and PS in the construction sector in developing countries is still in its infancy. Based on these literature gaps, the purpose of this study is to explore the impact of coaching leadership style on project success with the mediating role of team building and goal clarity. Consequently, this study's research questions include:

1. Does coaching leadership style impact project success?
2. Does team building mediate the relationship between coaching leadership and project success?
3. Does goal clarity mediate the relationship between coaching leadership and project success?

The RBV theory, as described by Barney (1991) and Wernerfelt (1984), underscores the notion that a firm's competitive advantage is contingent upon its distinctive bundle of resources and capabilities. Within our study's context, coaching leadership can be regarded as a valuable resource. Coaching leaders contribute unique knowledge, skills, and a motivational approach, serving as distinctive resources that can potentially contribute to project success. Our investigation aims to discern how coaching leadership functions as a distinctive organizational resource, and we examine its role in augmenting a construction firm's competitive advantage within the industry. Additionally, our research draws upon Social Identity Theory, as proposed by Tajfel et al. (1979), to delve into the intricacies of team dynamics within construction projects. Social Identity Theory posits that individuals categorize themselves into various social groups, and their self-esteem is closely linked to their group identity. In construction teams, workers often identify themselves with the project team, and their sense of belonging and commitment to the team can profoundly impact overall performance. Leveraging Social Identity Theory, our study explores how coaching leadership nurtures a sense of identity and

belonging within construction teams. By investigating how coaching leaders can enhance team cohesion and foster a shared project identity, our research endeavors to elucidate the social dynamics that contribute to project success in the construction industry. The incorporation of RBV and Social Identity Theory enriches our theoretical framework, providing a more comprehensive perspective on the intricate relationship between coaching leadership and the attainment of project success in construction (Barney, 1991; Tajfel et al., 1979; Wernerfelt, 1984).

This research adds to the theory in subsequent ways. At first, this research employed social identity theory-SIT and the resource-based view-RBV to link CL, team building, goal clarity, and PS. According to SIT, personnel tend to classify themselves and others in social groups like organizational membership (Tajfel et al., 1979). The RBV perceives business setup as a collection of distinctive resources that act as the basis of the organization strategy and the key source of effectiveness (Barney, 1991). CL practices are rare, iterative, fast-growing, and valuable (Li et al., 2022; Peng et al., 2019), like any other uncommon RBV resource. This endeavor enhances the literature on RBV and SIT by establishing the relationships amongst CL, team outcomes, and PS. Second, our research makes a significant contribution in CL implementation, which can be beneficial for the Construction sector of Pakistan to recognize the importance of the CL approach and stimulate team building and goal clarity to augment greater Construction project success. Third, we introduced the mediating mechanism of team building and goal clarity through which CL impacts project success. Fourth, this research will make a significant contribution where it serves as a foundational study in the context of Pakistan that other studies can build upon to dive deeper into the area. The study will also encourage practitioners, trainers, and Construction project managers to excel in coaching leadership practices, thereby helping to improve firm performance.

## Literature Review and Hypotheses Development
### *Coaching Leadership*
Coaching leaders entails imparting knowledge and managing subordinates. A coaching leader is extremely effective in situations when results/performance need to be improved. Essentially, this kind of leadership assists followers in developing their abilities. Coaching leaders motivate, inspire, and encourage subordinates (Raza et al., 2018). The coaching approach is recognized to create future subordinates and to build dialogue and flexibility. It enhances workers' performance and identifies their strengths and weaknesses (De Las Mercedes et al., 2014). A case study of subordinate coaching showed that team coaching efforts should be connected to organizational strategy and goals (Mukherjee, 2012). In addition, coaching leadership enhances both team and individual development (Matsuo, 2018).

Leadership should be firmly established and able to support and channel the rest of the organization toward the effective implementation of team coaching. Scholars (e.g., Coates, 2013) discovered that group coaching within a leadership development program enhanced learning transfer, while (Vesso & Alas, 2016) discovered that group coaching improved teams' perceptions of the leader's trustworthiness and task orientation. Team coaching should be linked with organizational policies and active support of leadership (Mukherjee, 2012). A well-managed, diverse staff may improve strategic organizational objectives. Participants with a

broad variety of expertise and skills achieve increased productivity and enhance the chance of successful innovation (Agrawal, 2012).

## *Project Success*

Numerous firms use a project-based approach to conduct daily business activities (Kazmi et al., 2016). A project is a group of experts working together to achieve a specific goal in a limited time and cost (Sydow et al., 2004). Project is a key asset to forge competitive advantages and generate economic value (Zhang et al., 2018). Success is characterized as the completion of a project with optimal use of resources (Basten et al., 2011). It is apparent from the literature that measuring success is a crucial task. Project success is a multi-dimensional construct. Project success is deemed an important and crucial subject of project management research and the ultimate objective of many project-based organizations (Yudi et al., 2018). In the prevailing literature, the "iron triangle" that is cost, time, and quality has been widely considered the key to project success (Atkinson, 1999). Iron triangle criteria are still regarded as essential for assessing project performance.

There is an emergent acknowledgment among researchers and policymakers that in addition to the conventional iron triangle, various other factors including user acceptance, stakeholder gratification, corporate success and commercialization, and future prospects and opportunities, played central roles in project success (Ika, 2015). Nasir and Sahibuddin (2011) categorized people, processes, and technology as a critical success factor. Belassi and Tukel (1996) classified the critical success factors into four categories which are factors related to the project, project manager and team, business, and external environment. Three primary success factors in project-based organizations are an influence on consumers, satisfying design goals, and advantages of the company (Wu et al., 2017). According to Bogopa and Marnewick (2022), project success depends on good leadership, a committed and motivated team, client involvement, clear requirements, and project goals. Projects must possess the satisfaction of project stakeholders, particularly the project team and client, to achieve performance excellence (Baker et al., 1997).

## *Coaching Leadership and Project Success*

Scholars like Berg and Karlsen (2016) highlighted the importance of coaching leadership style and explored how leaders conduct a Coaching Leadership Style (CLS) behavior in a project management environment and should thus be of interest to managers who seek effective leadership tools and practices. They further emphasized that leaders must have an extensive toolkit, which includes trademark qualities, self-management, and culture, to thrive in a coaching leadership style to augment greater project success. Coaching leadership is a modern technique promoted to grow, empower, and retain people in companies. The extant literature highlighted that few empirical kinds of research have investigated the connection between management coaching and employee performance outcomes (Novak et al., 2019).

Coaching is certainly a fundamental management ability (Anderson, 2013); nevertheless, it is still unclear how coaching abilities and behavior are linked to various theories and orientations of leadership. The study of coaching leadership Overcoming possible obstacles to successful coaching such as managers' attitudes, agency rules, and time limitations, should be addressed as they may prevent the coaching of workers from having a full impact. The above

developments in the corporate environment and the changing nature of work may be the basis for increased attention and focus on coaching in companies (Mihiotis & Argirou, 2016). From the point of view of coaching leadership, stakeholders stressed the need for management to ensure that workers can carry out their specific duties and newly needed creative tasks efficiently and effectively (Mom et al., 2015). Coaching leadership promotes two distinctive benefits for project employees to complete their project successfully: (a) it offers constructive tools with which staff may also enhance work performance, and (b) coaching leadership can help stakeholders understand their duties and responsibilities better (Hui et al., 2013) which in turn to augment project success.

The extant literature highlighted that leadership styles have become a great source of project performance and success. For instance, Meso and Smith (2000) stated that firms' knowledge resource support to outperform and accomplish higher levels of organizational performance. Al-Hakim and Hassan (2016) found a significant correlation between leadership and project success. Latif et al. (2021) affirmed that leadership has a substantial effect on project success. Likewise, in their study, Mariam et al. (2022) confirm a significant connotation between leadership and project success. Based on these lines of logic, this study proposed the following hypothesis.

**H1:** Coaching leadership style has a positive and significant impact on project success.

### *Mediating Role of Team Building*

A team is "a distinguishable group of two or more individuals who interact in a dynamic, interdependent, and adaptive manner towards a common and valued goal, objective, or mission, who each have specific roles or functions to perform, and who have a limited life-span of membership" (Paris et al., 2000). Scholars like Ooko (2013) define building as a group of individuals working together on a particular project or task to accomplish the intended organizational objectives. Team building has been considered an imperative intervention to upsurge team structure and organizational harmony to meet the desired objectives. Scholars like Masanja and Chambi (2020, p. 96) emphasized that "it is important to assess the team building activities to ensure sustainable organizational growth". In the same spirit, da Silva et al. (2013) discussed that vigilant selection of project team participants positively affects project management activities.

The extant literature highlighted the relationship between leadership, team building and project success. For instance, Yang et al. (2011) stated that leadership and teamwork should be equitable on both sides of a coin; they are both equally likely to augment project success. Aga et al. (2016) concluded that firms need to adopt leadership practices for the successful completion of projects. Moreover, they found that team building positively and significantly mediates the relationship between transformation leadership style and project success. In addition, Yang et al. (2011) stressed that project success can be achieved effectively by utilizing appropriate leadership styles that increase the advantages of team-building methods. According to Braun et al. (2013), leadership develops trustful contact and communication between team members by promoting team-building components, including goal orientation, role definition, interpersonal connections, and problem-solving. This will, in turn, raise project performance and success. Furthermore, Kissi et al. (2013) argued that how supportive team members view

their work environment influences their level of enthusiasm, energy, and effort throughout project execution. It is critical to explore this connection since empirical data on the mediating function of team activities such as team building in the relationship between leadership and performance, is scarce (Chou et al., 2013). Based on these lines of logic, this study proposed the following hypothesis.

**H2:** Team building significantly mediates the relationship between coaching leadership style and project success.

## *Mediating Role of Goal Clarity*

The extant literature highlighted that goal clarity is a motivational orientation that influences how individual approaches, understand, and respond to achievement situations (Elliot & Church, 1997). The leadership must clarify the subordinates' goals from the beginning of the project and should constantly prompt the subordinates with the expected/updated goals during the project. Goal ambiguity/lack of information concerning the expected standard and anticipation would lead to failure (Lee et al., 2009). An upright project manager will eliminate all ambiguities in terms of the goals, necessities, and specifications by applying operational communication and will make project execution less complex for the project subordinates (Grant, 2012). As a result, the project would be completed as per the expected specifications and will meet the end user requirements and satisfaction of stakeholders. The project's success is seen with the eyes of the customer, and when the customer is satisfied, the project can be considered successful (Kerzner, 2013). Therefore, good project leadership would lead to a clearer understanding of the goals, which would then lead to project success.

The extant literature highlighted the relationship between leadership, goal clarity, and project success. For instance, scholars like Tyssen et al. (2014) studied transactional and transformational leadership styles, goal clarity, and project success. They argued that the impact of transactional leadership style on project success increases with higher goal clarity. Similarly, Raziq et al. (2018) studied the association between leadership, goal clarity, and their impact on project success in mega project-based organizations. They found that goal clarity significantly mediates the relationship between leadership style and project success. In addition, Hu and Liden (2011) argued that the project team must be clear on the project objectives and overall scope. Thus, goal clarity and a suitable leadership style contribute to team and firm performance (Hu & Liden, 2011). Based on the above discussion, this study proposed the following hypothesis.

**H3:** Goal clarity significantly mediates the relationship between coaching leadership style and project success.

The extant literature comprehensively explores coaching leadership style, team building, and goal clarity within the construction industry context. It elucidates the attributes of coaching leaders, emphasizing their role in knowledge transfer, motivation, and inspiration, drawing upon insights from scholars such as Raza et al. (2018) and De Las Mercedes et al. (2014). The review offers a nuanced understanding of project success, encompassing traditional dimensions like cost, time, and quality while expanding on contemporary facets such as user acceptance and stakeholder satisfaction (Atkinson, 1999; Ika, 2015; Nasir & Sahibuddin, 2011).

Connecting coaching leadership with project success underscores the significance of a coaching leadership style in project management environments, as suggested by Berg and Karlsen (2016) and Novak et al. (2019). Our research is also in line with a recent study conducted by Ahmed et al. (2023), who concluded that task-oriented, relationship-oriented, and innovation-oriented leadership competencies positively impact project success. Furthermore, the review explores the mediating roles of team building and goal clarity, drawing on insights from Yang et al. (2011) and Hu and Liden (2011), elucidating how these factors contribute to project success. This literature review synthesizes diverse theories and empirical studies to establish a robust foundation for understanding coaching leadership, team building, and goal clarity in the construction industry. Figure 1 displays the research model.

**Figure 1**
*Research Model*
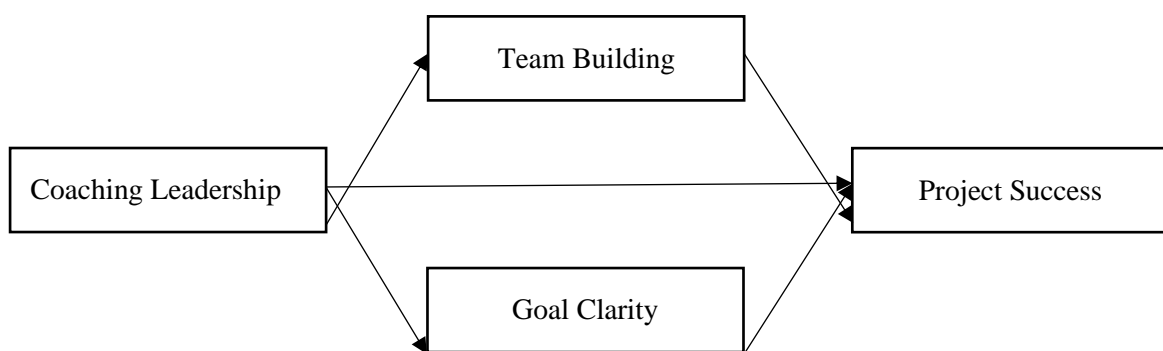


## Method
### Sample and Procedure
Construction sectors are playing a protuberant role in the economic progression of developing republics (Shaukat et al., 2022). Therefore, the successful completion of projects has increasingly paid attention to considering leadership competencies in emerging republics, such as Pakistan (Iqbal et al., 2020). Prior research recognized the role of coaching leadership as a key driver of sector project success (Mairami et al., 2020). Construction firms are now moving towards sustainable project management because projects are complex and require sustainable solutions to handle certain customer requirements effectively to achieve project success (Ullah et al., 2020). However, construction industry professionals require an open and facilitating environment to express and cultivate their novel ideas into innovative construction endeavours/projects (Shaukat et al., 2022). Hence, it is imperious to examine the connotation between coaching leadership and project success in mechanically equipped construction sector firms (Mairami et al., 2020). Therefore, we selected employees working in the Construction Industries of Pakistan to evaluate the relationship between the proposed variables. Construction industries make up the study sample as these enterprises perhaps have a wider coverage of the adaptation of leadership practices (Iqbal et al., 2020).

The present research is quantitative, cross-sectional, and survey questionnaire-based. In quantitative research, the researchers have utilized two common research methodologies, mainly survey research and experimental research (Creswell, 2009). A survey research methodology was applied in this study, as this approach helps to provide standardized

information to describe variables and to examine the proposed relationships between the variables (Malhotra & Grover, 1998). This research is a co-relational designed to determine the impact of coaching leadership on project success with the mediating role of team building and goal clarity. The Pakistan's construction firms have been approached to obtain the necessary data for further analysis and to generalize the result accordingly. The units of analysis for this study were project managers and project team members. A convenience sampling technique was used for data collection because it helps to gather data from respondents in an efficient manner.

The data was gathered from project managers and team members working in Pakistani construction industries through creating a Google form (online), keeping in mind the safety measures due to the current pandemic situation as well as via personal visits where applicable. Participants were encouraged to be confident in the information they provided for this research. The questionnaire was divided into two main sections. At first, respondents were asked to provide their demographic information such as gender, age, qualification, and experience. In the subsequent section, questions were asked about the research variables including coaching leadership, project success, team building, and goal clarity. A five-point Likert scale has been used, ranging from strongly disagree to strongly agree. A total of 350 questionnaires were distributed among project managers and team members in construction-related firms. Out of which 322 questionnaires were received back. Following the completion of the data-gathering process for the research study, each of the gathered questionnaires was assigned a specific number. A total of 20 surveys were rejected because numerous statements were left blank by study participants, leaving data gaps. There were no missing data points in the items relevant to the study constructs in the remaining 302 useable replies. For this study, a total of 302 replies were selected, with a response rate of 86.28% for further analysis.

Participants in the study were asked to provide demographic information. The gender distribution of the respondents revealed that males (n = 264) made up 87.4% of the overall sample, while females (n = 38) made up 12.6%. In addition, respondent age information is divided into six age groups including 18-25, 23-33, 26-33, 34-41, 42-49, and 50 or above years of age. The majority of the study's participants were between the ages of 34 and 41, with 143 (49.7%) belonging to this age group. The age range 50 and above had the smallest number of respondents, with only one response (0.3%). Moreover, study participants were asked to provide information on their formal education level. Matric, Intermediate, Bachelor's, Master's, and PhD degrees were used to determine years of education. The majority of the respondents (n = 187) held a Bachelor's degree, accounting for 61.9% of the whole sample, while Master's degree holders (n = 84) made up 27.8% percent. Furthermore, the mainstream respondents (n = 232) had an experience between 5 and fewer years than the whole sample.

## Instrumentation and Measures

The research instruments were developed using measurement scales identified from previous studies for the current study. Necessary adaptions are made to make sure items fit into the context of the current research. The questionnaire items included four variables including the independent variable – coaching leadership, the dependent variable – project success, and two mediator variables, i.e., team building and goal clarity. All variables items were measured using

a five-point Likert scale ranging from strongly disagree to strongly agree. The questionnaire items are presented in Appendix A.

*Coaching Leadership:* The scale for coaching leadership has been adopted from the research work of (Huang & Hsieh, 2015). All four items have been adopted. The sample questions of coaching leadership are "my leader would rather work with others to complete tasks", "as a part of a workplace group, my leader prefers to work for group consensus".

*Project Success.* The scale for project success has been adopted from the research work of (Engelbrecht et al., 2017). All six items have been adopted. The sample questions of project success are "the project was implemented and used by the business", and "the project was delivered within the allocated time and budgeted cost".

*Team Building.* The scale for team building has been adopted from the research work of (Potnuru et al., 2018). All five items have been adopted. The sample questions of team building are "team members have the complementary skill sets to accomplish their roles within the team", and "the team uses an effective short and long-term strategic plan".

*Goal Clarity.* The scale for goal clarity has been adopted from the research work of Hoegl and Parboteeah (2003). All five items have been adopted. The sample questions of team empowerment are "there were clear and comprehensible goals for this project", and "the goals and requirements of the customers were clear for this project".

## Data Analysis Procedure

In this research, IBM SPSS version 21 has been used for data entering and screening, and only filtered data were selected for data analysis. This research used Smart PLS-4 software for model assessment. Partial least square structural equation modeling (PLS-SEM) has been applied to investigate the research data gathered from the respondents. PLS-SEM technique has been widely acknowledge in the leadership studies for data analysis and generalization of the results (Aga et al., 2016; Latif & Sajjad et al., 2020).

## Results

### Measurement Model

We evaluate the measurement model in five ways: outer loadings, Cronbach's alpha, composite reliability, convergent validity, and discriminant validity (Table 1, 2, 3). The normal threshold range of outer loadings is > .50 (Bagozzi et al., 1991; Gefen & Straub, 2005). All the items' outer loading lies within the prescribed limit; however, one team Building (TB5) item was removed due to low factor loadings. The composite reliability normal range of a construct is .70 (Bagozzi et al., 1991). The result has shown all variables possessed higher composite reliability. Besides, Saunders et al. (2009) stated that Cronbach's coefficient alpha is a general technique to assess the internal consistency of multiple items. Cronbach's coefficient alpha normal range of a variable is .70 (Nunnally, 1978). The results of the study indicated that reliability has been well established using Cronbach's alpha.

**Table 1**

*Factor Loading, Reliability, and Validity*

| Variable (s) | | Loading | Alpha | CR | AVE |
|---|---|---|---|---|---|
| Coaching Leadership | CL1 | .69 | | | |
| | CL2 | .81 | .66 | .80 | .51 |
| | CL3 | .81 | | | |
| | CL4 | .50 | | | |
| Project Success | PS1 | .70 | | | |
| | PS2 | .74 | | | |
| | PS3 | .73 | .82 | .87 | .53 |
| | PS4 | .74 | | | |
| | PS5 | .73 | | | |
| | PS6 | .74 | | | |
| Team Building | TB1 | .79 | | | |
| | TB2 | .74 | .76 | .85 | .58 |
| | TB3 | .75 | | | |
| | TB4 | .78 | | | |
| Goal Clarity | GC1 | .73 | | | |
| | GC2 | .76 | | | |
| | GC3 | .69 | .75 | .83 | .50 |
| | GC4 | .70 | | | |
| | GC5 | .66 | | | |

*Note.* CL: Coaching leadership; PS: project success; TB: team building; GC: Goal clarity

We measure convergent validity through Average Variance Extracted (AVE) for whom the acceptable limit is .50 (Fornell & Larker, 1981). Subsequently, all variables hold convergent validity. We analyzed the cross-loading analysis, HTMT ratio, and Fornell and Larker Criteria for discriminant validity. According to Henseler et al. (2015), the acceptable limit of HTMT-ratio is < .90 and the relevant confidence interval is 1. Table 2 shows that HTMT values and confidence interval values of each variable are less than .90 and 1, respectively, thus establishing convergent validity. Moreover, Fornell and Larker (1981) recommend that the square root of the AVE of a construct must be larger than the correlations among the rest of the variables. Table 2 shows that this study fulfills the criteria of Fornell and Larker. Finally, the cross-loading analysis showed items were loaded to the relevant constructs and presented in Table 3.

**Table 2**

*HTMT Ratio and Fonell and Larcker Criterion*

| **HTMT Ratio** | | | | |
|---|---|---|---|---|
| Variable (s) | CL | GC | PS | TB |
| Coaching Leadership | | | | |
| Goal Clarity | .82 | | | |
| Project Success | .70 | .86 | | |
| Team Building | .77 | .89 | .78 | |
| **Fornell and Larcker Criterion** | | | | |
| Variable (s) | CL | GC | PS | TB |
| Coaching Leadership | .71 | | | |
| Goal Clarity | .59 | .71 | | |
| Project Success | .53 | .69 | .73 | |
| Team Building | .55 | .68 | .63 | .76 |

**Table 3**

*Cross Loading Analysis*

| Variable (s) | | CL | GC | PS | TB |
|---|---|---|---|---|---|
| Coaching Leadership | CL1 | .69 | .42 | .37 | .34 |
| | CL2 | .81 | .47 | .41 | .46 |
| | CL3 | .81 | .50 | .43 | .43 |
| | CL4 | .50 | .27 | .27 | .34 |
| Goal Clarity | GC1 | .45 | .73 | .53 | .55 |
| | GC2 | .44 | .76 | .58 | .54 |
| | GC3 | .37 | .69 | .46 | .45 |
| | GC4 | .42 | .70 | .47 | .44 |
| | GC5 | .42 | .66 | .39 | .42 |
| Project Success | PS1 | .45 | .53 | .70 | .48 |
| | PS2 | .33 | .50 | .74 | .49 |
| | PS3 | .39 | .46 | .73 | .48 |
| | PS4 | .41 | .48 | .74 | .44 |
| | PS5 | .31 | .46 | .73 | .33 |
| | PS6 | .40 | .58 | .74 | .51 |
| Team Building | TB1 | .42 | .49 | .47 | .79 |
| | TB2 | .40 | .51 | .53 | .74 |
| | TB3 | .40 | .50 | .48 | .75 |
| | TB4 | .47 | .58 | .46 | .78 |

## Structural Model

For the present research study, the Structure Equation Model (SEM) is evaluated by the prescribed guidelines of Hair et al. (2017). In the first phase, we evaluated the coefficient of determination ($R^2$) and the predictive relevance measure ($Q^2$). The results reflected that 53% ($R^2$ = .53) change was observed in project success, and 30% ($R^2$ = .30) and 35% ($R^2$ = .35) variances accounted in team building and goal clarity, respectively, due to coaching leadership which reflects the model's sufficient predictive accuracy (Hair et al., 2017). Besides, we measured $Q^2$ by using the blindfolding technique. The $Q^2$ values of project success, team building, and goal clarity are .26, .29, and .34, respectively, which are greater than zero and subsequently characterize the robust predictive relevance of the SEM framework (Hair et al., 2017).

## Hypotheses Testing

We evaluate hypotheses testing by analyzing the direct and mediating impact (Table 4, Figure 2). H1 assessed whether coaching leadership has a substantial impact on project success. The results showed that coaching leadership has a positive and significant influence on project success ($\beta$ = .12, $t$ = 1.95, $p$ < .02); therefore, the H1 of the study was supported. We assessed mediation analysis using two mediator variables (a) team building and (b) goal clarity, between the relationship of predictor variable coaching leadership and criterion variable project success (H2 and H3). To access the mediation result, we performed a bootstrapping procedure through Smart PLS-4. The result indicated that the indirect effect of coaching leadership through team building and goal clarity on project success was found significant (H2: $t$ = 10.44, $p$ < .001 and H3: $t$ = 9.28, $p$ < .001). The total effect of coaching leadership on PS was significant ($t$ = 13.40, $p$ < .001). With the inclusion of the mediators, the effect of coaching leadership on PS was still significant ($\beta$ = .18, $t$ = 2.72, $p$ < .003). This reflected complementary partial mediation; therefore, H2 and H3 of the research were supported.

In our results section, we rigorously analyzed our hypotheses and found strong support for our research findings. Firstly, we confirmed that coaching leadership significantly impacts

project success (H1), highlighting its importance in the construction industry. Furthermore, our mediation analysis revealed that coaching leadership not only directly influences project success but also does so indirectly through two mediators: team building (H2) and goal clarity (H3). These findings emphasize the critical role of coaching leadership in construction projects, as it enhances team-building activity and goal clarity, ultimately contributing to project success. In the broader context of leadership within the construction industry, our results highlight coaching leadership as a valuable strategy for addressing the complex challenges faced in construction projects. These insights can guide leadership practices in the sector, emphasizing the significance of coaching leadership for improving project outcomes and aligning with industry demands for effective leadership.

**Table 4**

*Direct and Mediation Analysis*

|  | β | SD | | t | | p | Decision |
|---|---|---|---|---|---|---|---|
| H1: CL->PS | .12 | .06 | | 1.95 | | .02 | Supported |
|  | Total Effect | | Direct Effect | | | Indirect Effect | |
|  | t | p | t | p | Hypotheses | t | p |
| CL->PS | 13.40 | .001 | 1.95 | .02 | H2: CL->TB->PS | 10.44 | .001 |
|  |  |  |  |  | H3: CL->GC->PS | 9.28 | .001 |

**Figure 2**

*Structural Model*



In a nutshell, this study employed PLS-SEM to examine the link between proposed variable relationships. PLS-SEM is a nascent tool for data examination, which is widely accepted by the researchers of social and business sciences (Hair et al., 2017). The PLS-SEM process normally consists of two separate stages, which include measurement model specification and structural model assessment (Ringle et al., 2020). In the measurement model, the data reliability and validity were assessed. The measurement model evaluates constructs' outer loading, Cronbach alpha, convergent, and discriminant validity to carry forward further analysis. Data reliability was determined by using loadings, composite reliability, and alpha. The findings lie within the acceptable limits, thus establishing good reliability statistics. Data validity was established

using convergent and discriminant validity. Convergent validity was assessed through Average Variance Extracted (AVE). The AVE values of the study lie within the acceptable range. Whereas discriminant validity was assessed through the HTMT ratio, Fornell and Larcker criteria, and cross-loading analysis. All statistical outcomes established this study's discriminant validity.

In the subsequent stage, we performed a structural model assessment to validate the link between proposed variable relationships. The structural model assessment estimates path coefficients and checks for their significance level. The significance of all structural path models was determined using empirical t-value and p-value. In doing so, we assessed the PLS path model, using coefficient of determination, predictive relevance, and direct and mediation analysis. The findings lie within the acceptable limit, thus confirming the validity of the research model and establishing the correlation between coaching leadership, team building, goal clarity, and project success.

## Discussion

This endeavor investigates the impact of coaching leadership on project success with the mediating role of team building and goal clarity in the construction sector of Pakistan. The findings of this study support the notion that those private and public sector construction firms that adopt coaching leadership practices can better initiate team building and goal clarity to ensure construction project success. Our observations and acceptance of hypotheses indicate that coaching leadership is essential for the stakeholders to manage their incorporation into the project.

The results positively answer RQ1 – Does coaching leadership have an impact on project success? The result confirms that coaching leadership has a positive and significant impact on project success ($t = 1.95$, $p < .02$). Accordingly, it can be argued that leadership coaching competencies positively contribute to project success. The outcomes of this research also confirmed the prior research conducted by Zwikael and Unger-Aviram (2010), who concluded that coaching leadership is a leader's positive attitude of constantly educating, counseling, and directing project team members, as well as being actively engaged to meet the deadlines and work for achieving the project's goal efficiently which further impact on project success. Besides, our results also aligned with Christianto and Smarandache's (2020, p. 2) findings, who argued that "one of the most effective leadership styles is a leader-coach approach. Organization stakeholders have found that the emerging practice of leadership coaching can increase the success of executives while enhancing the quality of the workforce and organizational culture overall". In addition, our findings address the call of Tran et al. (2018), who proposed whether and how different leadership styles impact construction project success.

This study found a significant mediating role of team building in the relationship between coaching leaders and project success. The outcomes established this hypothesized relationship. The current result aligned with the findings of the extant investigation, which support and witness the significant mediating role of team building. For instance, Aga et al. (2016) concluded that firms need to adopt leadership practices to successfully complete projects. Moreover, they found that team building positively and significantly mediates the relationship between leadership style and project success. Similarly, Kissi et al. (2013) stated how supportive team members perceive their work environment affects their zeal, energy, and efforts

during project execution. They continue by saying that leadership may affect a project's success by creating an environment where project teams can contribute to project success. Moreover, Berg and Karlsen (2016) argued that a leader is a well-organized firm human resource responsible for project planning, organizing, executing, motivating, leading, and controlling the project team for successful project completion. In addition, Gundersen et al. (2012) highlighted that the leader, with the help of team building intervention, increases the likelihood of project success. Hence, this study found that leadership practices develop competent project teams, due to which the project is implemented in a synchronized fashion. Team building competency of the coaching leader shapes robust cohesion between the team members, which directly leads the project toward success.

This study found a significant mediating role of goal clarity in the relationship between coaching leaders and project success. The outcomes established this hypothesized relationship. The current result aligned with the findings of the extant investigation, which support and witness the significant mediating role of goal clarity. For instance, scholars like (Raziq et al., 2018) studied the important relationship between leadership, goal clarity, and their impact on project success in mega project-based organizations. Moreover, they found that goal clarity positively and significantly mediates the relationship between leadership style and project success. Similarly, Tyssen et al. (2014) studied transactional and transformational leadership styles, goal clarity, and project success. They argued that the impact of transactional leadership style on project success increases with higher goal clarity. In addition, Hu and Liden (2011) argued that the project team needs to be clear on the project objectives and the project's overall scope. Thus, goal clarity and a suitable style of leadership contribute to team performance and firm performance (Hu & Liden, 2011).

## Conclusion

This research highlighted imperious novel constructs, coaching leadership, team building, and goal clarity to make the project more successful. The study offered one of the earliest endeavors to establish the hypothesized framework. This study aims to assess the impact of coaching leadership style on project success in the construction sector of Pakistan. This study also focused on the role of team building activity and goal clarity (as a mediator) in the association of coaching leadership and project success. The data was collected from 302 experienced professionals working in the construction industry. Results showed a significant positive association between coaching leadership and project success. A partial mediation of team building and goal clarity exists in the relationship between coaching leadership and project success.

Project managers should be required to exhibit superior coaching leadership characteristics to manage their subordinates in terms of building better project teams and goal clarification, which in turn improve productivity and performance outcomes. Policymakers and project leaders should develop a strategic plan for the smooth implementation of leadership practices and provide a vibrant environment for the project team to complete a project in more effective modus. Hence, the Construction industry of Pakistan is more likely to gain a highly competitive edge if a manager possesses qualities of coaching leadership, team building, and goal clarification.

## Research Implications

This research highlights the theoretical and practical implications explored in the Construction sector of Pakistan. Theoretically, the validation of the proposed relationships sheds light on the contribution of CL and team outcomes in leading to project success. More broadly, this research contributes to the development of studies connecting coaching leadership, team building, and goal clarity and strengthens the association evinced in the literature that the CL contributes to project success, hence further emphasizing the distinctiveness of CL in contrast to other leadership styles.

## Practical Implications

The practical implications of this research are profound for the construction sector in Pakistan. Project managers and leaders should recognize the pivotal role of coaching leadership in enhancing project success. To ensure better project outcomes, it is imperative for managers to cultivate coaching leadership characteristics that focus on educating, counseling, and directing project team members while actively engaging to meet project deadlines and goals efficiently. Additionally, this study emphasizes the importance of team building and goal clarity as mediators in the relationship between coaching leadership and project success. Therefore, organizations should invest in fostering a work environment that promotes team cohesion and a clear understanding of project objectives. Policymakers and project leaders should develop strategic plans that encourage the adoption of coaching leadership practices and provide the necessary support and resources for their implementation. Ultimately, the construction industry in Pakistan stands to gain a significant competitive advantage when managers possess qualities of coaching leadership, prioritize team building, and ensure goal clarity within their projects. In a nutshell, the implementation of coaching leadership practices by construction managers not only advances their subordinates' outcomes using team building and goal clarification but also results in improving project success. This shows that firms should focus on CL practices that improve team outcomes by paying attention to professional growth, providing the team with a vibrant environment, and enriching team health, safety, and conduct within the firm. By doing this, construction firms might become in a superior stage to manage leadership and team outcomes to prosper success.

## Limitations and Recommendations

The study has a few limitations. To begin with, it is imperative to acknowledge that the data collected for this research originated from employees within Pakistan's construction sector. Therefore, while this framework has proven applicable in this specific context, it opens avenues for broader applicability in diverse settings. Secondly, the study employed a cross-sectional data-gathering approach; however, future endeavors could greatly benefit from incorporating longitudinal data collection techniques. Thirdly, it is worth noting that this study was conducted with a relatively limited number of participants. In subsequent studies, expanding the pool of respondents should be a priority to enhance the robustness of the findings.

Fourthly, team building and goal clarity served as mediators in this study. Future research should aim to encompass a more comprehensive array of team-related outcomes. This could encompass variables such as team empowerment, team cohesion, team commitment, and team communication as potential mediating factors between various leadership styles and project

success. Finally, considering the growing importance of sustainability and the pursuit of Sustainable Development Goals (SDGs), sustainable leadership is gaining prominence within project-based organizations. In this context, the facilitating mechanism of sustainable project management (SPM) between sustainable leadership and sustainable firm performance will become more beneficial in future research agendas.

## Declarations
## Acknowledgements
Not applicable.

## Disclosure Statement
No potential conflict of interest was reported by the authors.

## Ethics Approval
Not applicable.

## Funding Acknowledgements
Not applicable.

## Citation to this article
Siddiqui, A. W., Iqbal, S., Shaukat, M. B., & Latif, K. F. (2023). From coaching leadership style to construction industry project success modelling the mediating role of team building and goal clarity. *International Journal of Organizational Leadership, 12*(First Special Issue), 142-164. https://doi.org/10.33844/ijol.2023.60377

## Rights and Permissions

## References

Aga, D. A., Noorderhaven, N., & Vallejo, B. (2016). Transformational leadership and project success: The mediating role of team-building. *International Journal of Project Management*, *34*(5), 806–818.

Agrawal, V. (2012). Managing the diversified team: challenges and strategies for improving performance. *Team Performance Management: An International Journal*, *18*(7/8), 384–400.

Ahmed, R., Philbin, S. P., & Paracha, O. S. (2023). Investigating the impact of task-oriented, relationship-oriented, and innovation-oriented leadership competencies on project success in Pakistan: A moderated model of multi-dimensional senior management support. *Engineering Management Journal*, 1–24.

Al-Hakim, L. A., & Hassan, S. (2016). Core requirements of knowledge management implementation, innovation and organizational performance. *Journal of Business Economics and Management*, *17*(1), 109–124.

Ali, M., Zhang, L., Shah, S. J., Khan, S., & Shah, A. M. (2020). Impact of humble leadership on project success: the mediating role of psychological empowerment and innovative work behavior. *Leadership & Organization Development Journal, 41*(3), 349–367.

Anderson, D. M., & Stritch, J. M. (2016). Goal clarity, task significance, and performance: Evidence from a laboratory experiment. *Journal of Public Administration Research and Theory*, *26*(2), 211–225.

Anderson, V. (2013). A Trojan horse? The implications of managerial coaching for leadership theory. *Human Resource Development International*, *16*(3), 251–266.

Atkinson, R. (1999). Project management: cost, time and quality, two best guesses and a phenomenon, its time to accept other success criteria. *International Journal of Project Management*, *17*(6), 337–342. https://tradingeconomics.com/pakistan/gdp-from-construction (accessed on 7 May 2022).

Bagozzi, R. P., Yi, Y., & Phillips, L. W. (1991). Assessing construct validity in organizational research. *Administrative Science Quarterly*, 421–458.

Baker, B. N., Murphy, D. C., & Fisher, D. (1997). Factors affecting project success. *Project Management Handbook*, 902–919.

Barney, J. B. (1991). Firm resources and sustained competitive advantage. *Journal of Management, 17*(1), 99–120.

Basten, D., Joosten, D., & Mellis, W. (2011). Developing a situational model of information system project success. *International Research Workshop on IT Project Management 2011*. 10. https://aisel.aisnet.org/irwitpm2011/10

Belassi, W., & Tukel, O. I. (1996). A new framework for determining critical success/failure factors in projects. *International Journal of Project Management*, *14*(3), 141–151

Berg, M. E., & Karlsen, J. T. (2016). A study of coaching leadership style practice in projects. *Management Research Review*, *39*(9), 1122–1142.

Bogopa, M. E., & Marnewick, C. (2022). Critical success factors in software development projects. *South African Computer Journal*, *34*(1), 1–34.

Braun, S., Peus, C., Weisweiler, S., & Frey, D. (2013). Transformational leadership, job satisfaction, and team performance: A multilevel mediation model of trust. *The leadership quarterly*, *24*(1), 270–283.

Byrne, A., & Barling, J. (2015). Leadership and project teams. *The Psychology and Management of Project Teams*, 137–163.

Chou, H. W., Lin, Y. H., Chang, H. H., & Chuang, W. W. (2013). Transformational leadership and team performance: The mediating roles of cognitive trust and collective efficacy. *Sage Open*, *3*(3), 2158244013497027.

Christianto, V., & Smarandache, F. (2020). A review of coaching leadership style in transformational leadership practices. https://www.secondcominginstitute.com/vixra/coaching.pdf

Coates, D. (2013). Integrated leadership development programmes: are they effective and what role does coaching play? *International Journal of Evidence Based Coaching & Mentoring*, *Special Issue, 7*, 39–55.

Creswell, J. W. (2009). Mapping the field of mixed methods research. *Journal of Mixed  Methods Research*, *3*(2), 95–108.

da Silva, F. Q., França, A. C. C., Suassuna, M., de Sousa Mariz, L. M., Rossiley, I., de Miranda, R. C., ... & Espindola, E. (2013). Team building criteria in software projects: A mix-method replicated study. *Information and Software Technology*, *55*(7), 1316–1340.

De Las Mercedes, J., Jack, T., Lara, N., & Zoghi, B. (2014, October). *Innovative educational methods in teaching sustainable energy* [Paper presentation]. International Energy and Sustainability Conference (pp. 1–7). IEEE.

Elliot, A. J., & Church, M. A. (1997). A hierarchical model of approach and avoidance achievement motivation. *Journal of Personality and Social Psychology*, *72*(1), 218.

Engelbrecht, J., Johnston, K. A., & Hooper, V. (2017). The influence of business managers' IT competence on IT project success. *International Journal of Project Management*, *35*(6), 994–1005.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with un-observable variables and measurement error. *Journal of Marketing Research, 18*(1), 39–50.

Galbreath, J. (2005). Which resources matter the most to firm success? An exploratory study of resource-based theory. *Technovation*, *25*(9), 979–987.

Gefen, D., & Straub, D. (2005). A practical guide to factorial validity using PLS-Graph: Tutorial and annotated example. *Communications of the Association for Information systems*, *16*(1), 5.

Grant, A. M. (2012). Leading with meaning: Beneficiary contact, prosocial impact, and the performance effects of transformational leadership. *Academy of Management Journal*, *55*(2), 458–476.

Gundersen, G., Hellesøy, B. T., & Raeder, S. (2012). Leading international project teams: The effectiveness of transformational leadership in dynamic work environments. *Journal of Leadership & Organizational Studies*, *19*(1), 46–57.

Hair, J. F. Jr, Hult, G. T. M., Ringle, C., & Sarstedt, M. (2017). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM),* 2nd ed. SAGE Publications, Thousand Oaks, CA.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science, 43*(1), 115–135.

Hoegl, M., & Parboteeah, K. P. (2003). Goal setting and team performance in innovative projects: On the moderating role of teamwork quality. *Small Group Research*, *34*(1), 3–19.

Hu, J., & Liden, R. C. (2011). Antecedents of team potency and team effectiveness: An examination of goal and process clarity and servant leadership. *Journal of Applied psychology*, *96*(4), 851.

Huang, J. T., & Hsieh, H. H. (2015). Supervisors as good coaches: Influences of coaching on employees' in-role behaviors and proactive career behaviors. *The International Journal of Human Resource Management*, *26*(1), 42–58.

Hui, T. Y., Sue-Chan, C., & Wood, R. E. (2013). The contrasting effects of coaching style on task performance: The mediating roles of subjective task complexity and self-set goal. *Human Resource Development Quarterly, 24*(4), 429–458.

Ika, L. A. (2015). Opening the black box of project management: Does World Bank project supervision influence project impact?. *International Journal of Project Management*, *33*(5), 1111–1123.

Iqbal, A., Latif, K. F., & Ahmad, M. S. (2020). Servant leadership and employee innovative behaviour: exploring psychological pathways. *Leadership & Organization Development Journal*, *41*(6), 813–827.

Iqbal, S., & Hussain, S. M. (2022). The Impacts of Leadership Style on the Team Performance in the Construction Sector of Pakistan. *Journal of Development and Social   Sciences, 3*(3), 727–733.

Kazmi, S. S., Rafi, A., & Hassan, M. (2016). Impact of benefit realization management on two-dimensional model of project success: evidence from Pakistani telecom industry. *International Review of Management and Marketing*, *6*(4), 32–37.

Kerzner, H. (2013). *Project management: A systems approach to planning, scheduling, and controlling.* Wiley.

Kissi, J., Dainty, A., & Tuuli, M. (2013). Examining the role of transformational leadership of portfolio managers in project performance. *International Journal of Project Management*, *31*(4), 485–497.

Latif, K. F., Afzal, O., Saqib, A., Sahibzada, U. F., & Alam, W. (2021). Direct and configurational paths of knowledge-oriented leadership, entrepreneurial orientation, and knowledge management processes to project success. *Journal of Intellectual Capital*, *22*(1), 149–170.

Latif, K. F., Nazeer, A., Shahzad, F., Ullah, M., Imranullah, M., & Sahibzada, U. F. (2020). Impact of entrepreneurial leadership on project success: mediating role of knowledge management processes. *Leadership & Organization Development Journal*, *41*(2), 237–256.

Latif, K. F., Sajjad, A., Bashir, R., Shaukat, M. B., Khan, M. B., & Sahibzada, U. F. (2020). Revisiting the relationship between corporate social responsibility and organizational performance: The mediating role of team outcomes. *Corporate Social Responsibility and Environmental Management*, *27*(4), 1630–1641.

Latif, K. F., & Williams, N. (2017). Team effectiveness in non-governmental organizations (NGOs) projects. *Evaluation and Program Planning*, *64*, 20–32.

Lee, J. W., Rainey, H. G., & Chun, Y. H. (2009). Of politics and purpose: Political salience and goal ambiguity of US federal agencies. *Public Administration*, *87*(3), 457–484.

Li, L., Huang, G., & Yan, Y. (2022). Coaching Leadership and Employees' Deviant Innovation Behavior: Mediation and Chain Mediation of Interactional Justice and Organizational Identification. *Psychology Research and Behavior Management,* 3861–3874.

Mabey, C., Kulich, C., & Lorenzi-Cioldi, F. (2012). Knowledge leadership in global scientific research. *The International Journal of Human Resource Management*, *23*(12), 2450–2467.

Mairami, M. B., Ombugadu, T. J., & Olaleye, Y. O. (2020). Assessing the Adoption of Leadership Styles by Project Managers within Construction Firms. *African Scholar Journal of Environmental Design and Construction Management*, 325–342.

Malhotra, M. K., & Grover, V. (1998). An assessment of survey research in POM: from  constructs  to  theory. *Journal  of  Operations Management*, *16*(4), 407–425.

Mariam, S., Khawaja, K. F., Qaisar, M. N., & Ahmad, F. (2022). Knowledge-oriented leadership, team cohesion, and project success: A conditional mechanism. *Project Management Journal*, *53*(2), 128–145.

Masanja, N. M., & Chambi, W. (2020). An assessment of team building activities for sustainable organizational growth at selected private and public entities in Arusha,  Tanzania. *International Journal of Innovation in Education and Business (IJIEB), 2*, 94–105.

Matsuo, M. (2018). How does managerial coaching affect individual learning? The mediating roles of team and individual reflexivity. *Personnel Review*, *47*(1), 118–132.

Memon, A. H., Memon, A. Q., Khahro, S. H., & Javed, Y. (2023). Investigation of project delays: Towards a sustainable construction industry. *Sustainability*, *15*(2), 1457.

Meso, P., & Smith, R. (2000). A resource-based view of organizational knowledge management systems. *Journal of Knowledge Management*, *4*(3), 224–234.

Mihiotis, A., & Argirou, N. (2016). Coaching: from challenge to opportunity. *Journal of Management Development*, *35*(4), 448–463.

Mom, T. J., Fourné, S. P., & Jansen, J. J. (2015). Managers' work experience, ambidexterity, and performance: The contingency role of the work context. *Human Resource Management*, *54*(S1), s133–s153.

Mukherjee, S. (2012). Does Coaching Transform Coaches? A Case Study of Internal Coaching. *International Journal of Evidence Based Coaching & Mentoring*, *10*(2).

Müller, R., & Turner, R. (2007). The influence of project managers on project success criteria and project success by type of project. *European Management Journal*, *25*(4), 298–309.

Muñiz Castillo, M. R., & Gasper, D. (2012). Human autonomy effectiveness and development projects. *Oxford Development Studies*, *40*(1), 49–67.

Nasir, M. H. N., & Sahibuddin, S. (2011). Critical success factors for software projects: A comparative study. *Scientific Research and Essays*, *6*(10), 2174–2186.

Novak, M. D., DiGennaro Reed, F. D., Erath, T. G., Blackman, A. L., Ruby, S. A., & Pellegrino, A. J. (2019). Evidence-based performance management: Applying behavioral science to support practitioners. *Perspectives on Behavior Science, 42*, 955–972.

Nunnally, J. C. (1978). *Psychometric theory*. McGraw-Hill.

Ooko, P. A. (2013). *Impact of teamwork on the achievement of targets in organisations in Kenya. A case of SOS children's villages, Eldoret* [Doctoral dissertation, University of Nairobi].

Ozigbo, A. M., Idegbesor, M., Ngige, C. D., & Nwakoby, N. P. (2020). Team building and performance in organizations: An exploration of issues. *International Journal of Management and Entrepreneurship*, *2*(1), 184–199.

Paris, C. R., Salas, E., & Cannon-Bowers, J. A. (2000). Teamwork in multi-person systems: a review and analysis. *Ergonomics*, *43*(8), 1052–1075.

Patanakul, P., Pinto, J. K., & Pinto, M. B. (2016). Motivation to perform in a multiple-project environment: The impact of autonomy, support, goal clarity, and opportunities for learning. *Journal of Engineering and Technology Management*, *39*, 65–80.

Peng, Z., Gao, B., & Zhao, H. (2019). Coaching leadership and subordinates' career success: The mediating role of leader–member exchange. *Social Behavior and Personality: an international journal, 47*(11), 1–8.

Potnuru, R. K. G., Sahoo, C. K., & Sharma, R. (2018). Team building, employee empowerment and employee competencies: Moderating role of organizational learning culture. *European Journal of Training and Development*, *43*(1/2), 39–60.

Raza, B., Ali, M., Ahmed, S., & Ahmad, J. (2018). Impact of managerial coaching on organizational citizenship behavior: The mediation and moderation model. *International Journal of Organizational Leadership*, *7*, 27–46.

Raziq, M. M., Borini, F. M., Malik, O. F., Ahmad, M., & Shabaz, M. (2018). Leadership styles, goal clarity, and project success: Evidence from project-based organizations in Pakistan. *Leadership & Organization Development Journal*, *39*(2), 309–323.

Ringle, C. M., Sarstedt, M., Mitchell, R., & Gudergan, S. P. (2020). Partial least squares structural equation modeling in HRM research. *The International Journal of Human Resource Management*, *31*(12), 1617–1643.

Saunders, M., Lewis, P., Thornhill, A., & Wilson, J. (2009). *Business research methods.* Financial Times, Prentice Hall.

Shaukat, M. B., Latif, K. F., Sajjad, A., & Eweje, G. (2022). Revisiting the relationship between sustainable project management and project success: The moderating role of stakeholder engagement and team building. *Sustainable Development, 30*(1), 58–75.

Shuffler, M. L., Diazgranados, D., Maynard, M. T., & Salas, E. (2018). Developing, sustaining, and maximizing team effectiveness: An integrative, dynamic perspective of team development interventions. *Academy of Management Annals*, *12*(2), 688–724.

Sydow, J., Lindkvist, L., & DeFillippi, R. (2004). Project-based organizations, embeddedness and repositories of knowledge. *Organization Studies*, *25*(9), 1475–1489.

Tajfel, H., Turner, J. C., Austin, W. G., & Worchel, S. (1979). An integrative theory of intergroup conflict. *Organizational Identity: A Reader, 56*(65), 9780203505984-16.

Tran, N. H., Hallinger, P., & Truong, T. (2018). The heart of school improvement: a multi-site case study of leadership for teacher learning in Vietnam. *School leadership & management, 38*(1), 80–101.

Tyssen, A. K., Wald, A., & Spieth, P. (2014). The challenge of transactional and transformational leadership in projects. *International Journal of Project Management*, *32*(3), 365–375.

Ullah, M., Khan, M. W. A., Hussain, A., Rana, F., & Khan, A. (2020). A construct validation approach for exploring sustainability adoption in Pakistani construction projects. *Buildings*, *10*(11), 207.

Vesso, S., & Alas, R. (2016). Characteristics of a coaching culture in leadership style: the leader's impact on culture. *Problems and Perspectives in Management, 14*(2), 306–318.

Villaluz, V. C., & Hechanova, M. R. M. (2019). Ownership and leadership in building an innovation culture. *Leadership & Organization Development Journal, 40*(2), 138–150.

Wang, Y., Yuan, C., & Zhu, Y. (2017). Coaching leadership and employee voice behavior: A multilevel study. *Social Behavior and Personality: An International Journal, 45*(10), 1655–1664.

Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic Management Journal, 5*(2), 171–180.

Wu, Z., Nisar, T., Kapletia, D., & Prabhakar, G. (2017). Risk factors for project success in the Chinese construction industry. *Journal of Manufacturing Technology Management*, *28*(7), 850–866.

Yang, L. R., Huang, C. F., & Hsu, T. J. (2014). Knowledge leadership to improve project and organizational performance. *International Journal of Project Management*, *32*(1), 40–53.

Yang, L. R., Huang, C. F., & Wu, K. S. (2011). The association among project manager's leadership style, teamwork and project success. *International Journal of Project Management*, *29*(3), 258–267.

Yudi, F., Walters, T., Ismail, M. N., Seo, Y. W., & Kaimasu, M. (2018). Managing project success using project risk and green supply chain management: a survey of automotive industry. *International Journal of Managing Projects in Business*, *11*(2), 332–365.

Zahur, H., Ali, M. I., & Gul, M. (2022). The role of knowledge-oriented leadership and team creativity in ERP project success. *Pakistan Social Sciences Review*, *6*(2), 721–732.

Zhang, L., Cao, T., & Wang, Y. (2018). The mediation role of leadership styles in integrated project collaboration: An emotional intelligence perspective. *International Journal of Project Management*, *36*(2), 317–330.

Zwikael, O., & Unger-Aviram, E. (2010). HRM in project groups: The effect of project duration on team development effectiveness. *International Journal of Project Management, 28*(5), 413–421.

## Appendix A

*Questionnaire*

| | |
|---|---|
| *Coaching leadership* | |
| | y leader would rather work with others to complete tasks. |
| | s a part of a workplace group, my leader prefers to work for group consensus. |
| | 'hen a decision is to be made, my leader prefers to (participate with others to Determine the outcome. |
| | 'hen analyzing a problem, my leader tends to rely on group ideas. |
| *Project success* | |
| 1 | The project was implemented and used by the business. |
| 2 | The project was delivered within the allocated time. |
| 3 | The project was delivered within the budgeted cost. |
| 4 | The project was delivered within the agree scope. Scope changes to be approved by the business. |
| 5 | The project achieved/realized the business expected commercial and user benefited as outlined in the business case. |
| 6 | The project was delivered according to agreed quality. |
| *Team building* | |
| 1 | Team members have the complementary skill sets to Accomplish their roles within the team. |
| 2 | The team uses an effective short and long-term strategic Plan. |
| 3 | Team members are familiar with each other's roles and job Responsibilities. |
| 4 | The team members communicate well with one another. |
| 5 | Everyone on a team has a significant amount of influence On decisions that affect team performance. |
| *Goal clarity* | |
| 1 | There were clear and comprehensible goals for this project. |
| 2 | The goals and requirements of the customers were clear for this project. |
| 3 | The goals and requirements of the management were clear for this project. |
| 4 | Substantial project goals changed during the project. |
| 5 | Project goals were changed often. |