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RESEARCH ARTICLE

Managerial coaching skill and team performance: How does the relationship work and under what conditions?

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Abstract

Empirical evidence about whether and how managerial coaching relates to team performance continues to lag behind research conducted on individual employee outcomes. We address this question by drawing on social cognition theory and turning the spotlight on the moderating role of managers' learning goal orientation and the mediating role of team-level architectural knowledge. We employ dual-source data from 182 knowledge workers and their managers nested in 60 teams in knowledge-based organisations. Our findings indicate that team-level architectural knowledge mediates the relationship between managerial coaching skill and team performance when the managers' learning goal orientation is high rather than low. Our study contributes to the human resources literature by highlighting the importance of managers in devolved developmental interventions and offers practical implications for the informed workplace use of managerial coaching.

KEYWORDS
architectural knowledge, coaching, devolved HR practices, learning goal orientation, line managers, team performance

Abbreviations: AIC, Akaike Information Criterion; BIC, Bayesian Information Criterion; CI, confidence intervals; CFI, comparative fit index; df, degrees of freedom; HR, human resources; ICC, intraclass correlation coefficient; L&D, learning and development; LGO, learning goal orientation; LMS, latent moderated structural equations; MSEM, multilevel structural equation modelling; RMSEA, root-mean-square error of approximation; SRMR, standardised root-mean-square residual.

Practitioner notes

What is currently known?

- Managerial coaching is a popular human resources (HR) practice devolved to line managers.
- As a team development intervention, managerial coaching is person focussed and team oriented.
- Managers' coaching skill is important for the effective delivery of coaching.

What this paper adds?

- Explains how managerial coaching skill relates to team performance.
- Clarifies how a manager as a coach helps build team-level architectural knowledge, that is, a body of situated knowledge about work processes, roles and dynamics.
- Shows the importance of managers' disposition in the enactment of devolved HR practices, such as managerial coaching.

The implications for practitioners

- Skilful managerial coaching is of strategic importance as it relates to team performance.
- When coaching, managers need to adopt a team approach to widen employees' perspectives and act as knowledge brokers/interpreters.
- Coaching evaluations need to involve the employees being coached.
- Coaching training for managers needs to address their learning disposition.

1 | INTRODUCTION

Coaching has long been recognised as an important human resources (HR) practice (Buyens & De Vos, 2001; Saundry et al., 2020), which has gradually been devolved to line managers (Brandl et al., 2009; Zhao & Liu, 2020). Extant literature categorises the practice of coaching by the line manager (henceforth, manager) into *person-focussed* or *managerial coaching*, whereby the manager focuses on the individual members and their contribution to the team, and *team coaching*, whereby the manager works with the team as a whole (Hackman & Wageman, 2005). Yet. albeit both types of coaching are team-oriented practices, the majority of past studies on managerial coaching focussed on individual-level outcomes. In comparison, research on how managerial coaching benefits the team, although is increasing, it still lags behind. This is problematic because managerial coaching is the most widely practised type of coaching in contemporary organisations (Segers et al., 2011), with some managers coaching individual team members daily (Dixey, 2015). Furthermore, managerial coaching is the most likely developmental intervention to receive HR investment (Shuffler et al., 2018) and thus, a risk exists of HR misplacing organisational resources in ineffective managerial coaching initiatives and training.

We contribute to addressing this gap by focussing on managerial coaching skill that is the overall ability of the manager to dyadically interact with team members using a team-oriented approach and techniques such as constructive feedback and goal setting (Dahling et al., 2016; Murphy, 2020). Specifically, we draw from previous work that recognises managerial coaching skill as a team-level resource (e.g., Murphy, 2020), and argue that the extent to which a manager is effective in coaching each team member matters in promoting team performance. Indeed, a limited number of studies have demonstrated that managerial coaching skill enhances team role clarity (Dahling et al., 2016) and team learning (Hagen & Aguilar, 2012). However, the majority of extant literature has focussed on individual-level outcomes (e.g., Huang & Hsieh, 2015; Zhao & Liu, 2020). Although the contribution of these studies is pivotal in extending our understanding of managerial coaching, the findings may not be generalisable to the team level. We are particularly interested in team performance as it is a key driving force of organisational success (Buengeler & Den Hartog, 2015).

Drawing from social cognition and specifically the salience of social stimuli (Fiske & Taylor, 2016; Taylor & Fiske, 1978) and the notion that cognition is socially situated and emergent (Semin & Smith, 2013), we propose that skilful coaching enables managers to act as knowledge brokers helping their team members to access team-level architectural knowledge, that is, a body of context-specific knowledge residing within each team member (e.g., Currie & White, 2012), and in turn to perform effectively as a team. We turn the attention to architectural knowledge in line with the aim of managerial coaching to contribute to team members' broad business understanding (Hagen & Aguilar, 2012; Huang & Hsieh, 2015) and driven by our theoretical lens that exemplifies the importance of interpersonal interactions in the development and emergence of one's social schemata (i.e., knowledge; Semin & Smith, 2013). Team-level architectural knowledge, as are other bottom-up emergent processes (Fulmer & Ostroff, 2016), is a crucial but overlooked construct for team effectiveness (Finn & Waring, 2006). Further, we build on the premise that the salience of the manager is such that their characteristics stand out in the eyes of team members (e.g., Fiske & Taylor, 2016), and focus on managers' learning goal orientation, that is, their disposition towards learning and knowledge in achievement situations (Vandewalle et al., 2019), driven by extant literature emphasising its significant role in promoting a team environment conducive to knowledge and learning (Williams et al., 2009). We suggest that the relationship between managerial coaching skill and team performance through team-level architectural knowledge is likely to be stronger when the manager's learning goal orientation is high rather than low. Figure 1 depicts our conceptualisation.

The paper makes three main contributions. First, in the light of social cognition theory, we introduce the bottom-up emergent construct of team-level architectural knowledge to illuminate how managerial coaching skill relates to team performance. We thus depart from traditional top-down approaches regarding managerial coaching (e.g., Dahling et al., 2016) and offer novel insights to the literature of team-related cognition in team development interventions (e.g., Jørgensen & Becker, 2017). Second, we point to the significance of manager dispositions, and specifically their learning goal orientation, for the effective enactment of managerial coaching. Doing so, we promote a more nuanced understanding of this devolved HR practice (e.g., López-Cotarelo, 2018). Third, we advance recent work on managerial coaching (e.g., Murphy, 2020; Zhao & Liu, 2020) by shifting the attention to the quality of the practice and unravelling the nature and role of managerial coaching as a one-on-one intervention oriented towards team development.

2 | THEORETICAL BACKGROUND AND HYPOTHESES DEVELOPMENT

2.1 | Managerial coaching

Although Mace (1950) introduced the word 'coaching' in the management literature, it was Fournies (1978) and Evered and Selman (1989) who popularised it as a key managerial tool to improve individual and team performance.

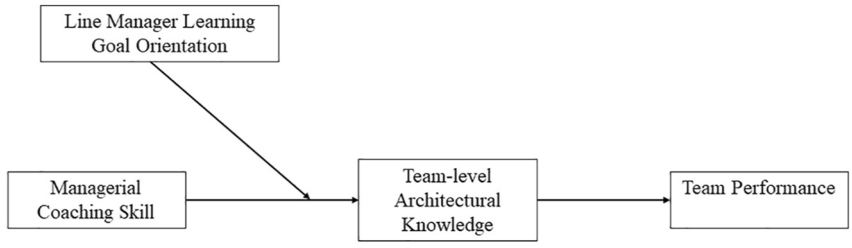

FIGURE 1 Conceptual framework

Extant studies on the *manager as a coach* have mainly focussed on three operationalisations of managerial coaching: a stream that focuses on the extent to which a manager exhibits coaching behaviours (e.g., Matsuo, 2018); a second stream that examines the extent to which managers lead by displaying a coaching style (e.g., Hui et al., 2019), and a third stream that identifies managerial coaching as a team-level resource exhibited in the managers' competence in coaching effectively the individual members of the team (e.g., Dahling et al., 2016; Hagen & Aguilar, 2012). It is to the latter stream of literature, where we endeavour to contribute with our study. We draw our rationale from Dahling et al. (2016, p. 872), who highlight that, in contrast to coaching frequency which is a purely individual-level construct, managers' coaching skill is what matters concerning team-level outcomes.

Managers who are skilled in coaching offer developmental feedback rather than merely conveying performance results (Murphy, 2020) and converse with the coachee/team member through systematic questioning to facilitate learning (Hagen & Aguilar, 2012). They also offer constructive suggestions and help each member set goals aligned with those of the team (Murphy, 2020; Nyfoudi, 2017a; Park et al., 2020). Put differently, skilful managerial coaching, as a devolved HR practice, exceeds the standard managerial tasks of performance evaluation and feedback. It is a distinct team development intervention that widens team members' perspectives and enables them to adopt a more holistic viewpoint (Shuffler et al., 2018; Zhao & Liu, 2020). Indeed, skilful managerial coaching encourages each team member to consider their work as part of a team effort, moving away from an insulated, individual, focus and towards an appreciation of the different roles, skills and knowledge residing within the team (Grant & Hartley, 2013; Park et al., 2020).

Research on the construct of managerial coaching skill has increased over the past decade. Extant studies demonstrated that it relates to individual-level task performance (Dahling et al., 2016; Ribeiro et al., 2020), work engagement (Ladyshewsky & Taplin, 2017), personal learning (Park et al., 2020), proactive career behaviours (Huang & Hsieh, 2015), as well as organisational and occupational commitment (Kuo et al., 2014; Park et al., 2020). However, research on the team-level consequences of skilful managerial coaching is still at an early stage. A limited number of studies reveal that it promotes team role clarity (Dahling et al., 2016) and learning (Hagen & Aguilar, 2012). Yet, we know little about whether and, if so, how it relates to team performance.

2.2 | Managerial coaching skill and team-level architectural knowledge

Architectural knowledge refers to knowledge about how "the components [of an organisation] are integrated and linked together" (Henderson & Clark, 1990, p. 2). It is situated knowledge about the team and the organisation, broader than 'component knowledge' that mostly comprises technical knowledge (ibid), and has been examined as a concept at different levels, including teams (e.g., Balogun & Jenkins, 2003; Finn & Waring, 2006).

Specifically, team-level architectural knowledge refers to employees' broad business knowledge, encompassing the routines, schemata and dynamics that structure team members' interactions (Currie & White, 2012). It indicates an understanding not only of the organisational products, services and the bottom line but also, of the business processes and how the organisation works (Spreitzer et al., 1997). For example, in Operating Theatre work, team-level architectural knowledge consists of an implicit understanding of the service offered, the roles and responsibilities of the different surgical team members (e.g., surgeons, nurses, anaesthetics) and of how the different members need to work together (Finn & Waring, 2006). In product innovation teams, it encompasses an inherent familiarity with the products of the organisation and line of business and also, an awareness of each other's skills, expertise, viewpoints, and how the latter can be coordinated for product development (Azzam et al., 2020). Team-level architectural knowledge represents an emergent process (Fulmer & Ostroff, 2016) as it develops over time while individual team members acquire such knowledge by working together or through training (Balogun & Jenkins, 2003; Finn & Waring, 2006).

Social cognition theory (e.g., Fiske & Taylor, 2016) explicates how team members' participation in dialogical experiences, such as managerial coaching, may facilitate the development of team-level architectural knowledge.

Specifically, social cognition posits that team members acquire schemata (knowledge) based on significant and prominent environmental stimuli overlooking less salient precipitants (Fiske et al., 1982; Fiske & Linville, 1980; Taylor & Fiske, 1978). The more the acquired schemata are situated within and informed by the team context, the more likely team-oriented social interactions to enable the development of a 'group-level intellective product' (Larson & Christensen, 1993, p. 24). In the case of managerial coaching, managers are salient members of the team. Furthermore, those adept in coaching focus both on the individual employee and the context within which the practice occurs (Shoukry & Cox, 2018). They adopt a team-oriented approach (Park et al., 2020), acknowledging the value of the team and encouraging team members to view their role as part of a greater whole in which they are active participants (Huang & Hsieh, 2015). This process alters members' focus of attention and enables the acquisition of new insight (Kluger & DeNisi, 1996) experienced as an 'aha' moment (Kounios & Beeman, 2009) that enables them to attach meaning to salient information (Hagen & Aguilar, 2012). Put differently, skilful managerial coaching serves as a team interpretive mechanism (Weick & van Orden, 1990) or 'knowledge brokering' through which team members embed, interpret and link their work-related schemata (i.e., knowledge); thus, facilitating the development of a body of knowledge beneficial for the team. Indeed, Currie and White (2012, p. 1335) highlighted that knowledge brokering by prominent members within a group plays an important role in promoting team-level architectural knowledge.

Hence, we hypothesise that:

Hypothesis 1 *Managerial coaching skill relates positively to team-level architectural knowledge.*

2.3 | Managers' learning goal orientation

Semin and Smith (2013), who elaborated on social cognition and the development of situated knowledge, posit that stimuli pertinent to a particular setting may influence how social interactions, such as managerial coaching, shape the development of a team-level body of knowledge. Based on this, salient managers' characteristics could play an important role in the way the hypothesised relationship between managerial coaching skill and team-level architectural knowledge unravels. Specifically, managers' characteristics contribute to shaping the team context (Williams et al., 2009; Zaccaro, 2012); their 'compelling presence' affects teams' climate and focus of achievement (Dragoni, 2005, p. 1091), while the team members tend to emulate their managers' characteristics (Dahling et al., 2016).

For effective managerial coaching, Murphy (2020) highlights the importance of managers' belief that individuals can develop. Indeed, managers' attitudes towards learning and knowledge acquisition represent an important, salient stimulus that renders the team context more conducive to learning (Williams et al., 2009). Extant literature has identified managers' learning goal orientation as a contextual difference that is instrumental in the successful delivery of training (e.g., Sitzmann & Ely, 2011) and the formation of learning expectations for the team (Zingoni & Corey, 2018). Managers with a high rather than low learning goal orientation tend to recognise the importance of team members' development (Marquadt et al., 2020) and encourage them to 'take on learning' while at work (Zhu & Akhtar, 2019, p. 2891). They are more likely to model their commitment to learning inside the team (Dragoni, 2005) and reinforce members' behaviours and attitudes that are similar to their own learning disposition (Dragoni & Kuenzi, 2012). Further, studies from the educational sector reveal that teachers with a strong learning goal orientation develop a supportive, learning-oriented environment (e.g., Throndsen & Turmo, 2013). Following this line of argument, highly learning goal-oriented managers are more likely to develop an environment that is conducive to knowledge and learning. Hence, we expect the relationship between managerial coaching skill and team knowledge to be stronger in teams with highly learning goal-oriented managers. Thus, we hypothesise that:

Hypothesis 2 *Manager learning goal orientation moderates the positive relationship between managerial coaching skill and team-level architectural knowledge. The relationship is stronger for high rather than low manager learning goal orientation.*

2.4 | Managerial coaching skill and team performance

Team performance refers to the quality, quantity and timeliness of work achieved at the team level, as well as team members' cooperation (Sparrowe et al., 2001). It has been identified as an important consequence of team-related training (Salas et al., 2008) and team knowledge (Shuffler et al., 2018).

Hackman (1987) indicated that team members' knowledge is a key process criterion of team effectiveness and that developmental interventions are instrumental in knowledge brokerage helping team members identify fellow peers with the required knowledge needed. Currie and White (2012) further emphasised the importance of knowledge brokering especially concerning architectural knowledge that is at the disposal of the team through its members. Similarly, skilful managerial coaching as a team development intervention broadens team members' perspectives (Zhao & Liu, 2020) enabling them to interpret their and their team members' insight and knowledge adopting a team approach (Park et al., 2020). In turn, this enables team members to use the available architectural knowledge for problem-solving (Hagen & Aguilar, 2012) in collective and coordinated action (Zaccaro et al., 2001), which assists team members with different individual interests to work together for a common purpose (Nyfoudi et al., 2020) and thus, to perform effectively as a team. Indeed, team-level architectural knowledge has been found pivotal for team effectiveness (Finn & Waring, 2006).

Further, according to social cognition theory (Semin & Smith, 2013), prominent figures' salient characteristics influence how knowledge within a team is constructed. Concerning managerial coaching, the role of the manager is prominent in relation to the rest of the team. Furthermore, the provision of a supportive learning environment in coaching is instrumental for the development of the team and its outcomes (Huang & Hsieh, 2015; Kuo et al., 2014). Thus, notwithstanding manager's coaching skill, their attitude towards learning plays an important role in the way in which team-level architectural knowledge is developed through coaching. Accordingly, when the manager's learning goal orientation—a characteristic that favours learning and knowledge acquisition—is high rather than low, it is more likely for managerial coaching skill to relate to team performance via team-level architectural knowledge. Hence, we hypothesise that:

Hypothesis 3 *Manager learning goal orientation moderates the mediated relationship between managerial coaching skill and team performance via team-level architectural knowledge in such a way that the relationship is stronger for high rather than low manager learning goal orientation.*

3 | METHOD

3.1 | Sample and procedure

We focussed on knowledge workers, that is, office workers with knowledge creation as part of their job requirements, as they and their teams are the most likely employees to benefit from supportive managerial practices, including coaching (Joo, 2010). We conducted the study in one Greek and two British organisations (in Machinery, Consumer Services and Professional Training, respectively). In all three cases, the managers had particular objectives to meet through their teams, while the team members were mostly located within the same or nearby offices.

Data access was granted through a gatekeeper (i.e., the HR or Learning and Development [L&D] manager). Before the data collection, the gatekeeper sent an e-mail cover letter to all the potential participants informing them about the study, its voluntary and confidential character, and the authors' contact details. Subsequently, a different HR or L&D employee liaised with the first author and provided the necessary information for the data collection process to begin (e.g., participants' e-mails, team membership). Thereupon, the same author approached the employee members of all the teams and highlighted that their answers would only be used for research purposes, no information would

reach their managers, and the participating organisations would only receive aggregated non-identifying information. Thereafter, the same author approached the team managers, reiterating the ethos of the study.

We translated both the managers' and team members' questionnaires into Greek using Brislin's (1986) translation-back-translation technique to ensure that their items captured the same meaning and significance for all respondents. First, we translated both questionnaires into Greek and then, a bilingual office worker translated them back to English. Thereupon, a native English HR and psychometrics expert compared the translated-back-to-English questionnaires with the English versions. The comparison yielded minor changes in two items in the Greek translation of the employee questionnaire. Subsequently, we sent both questionnaires to the three firms to ensure the wording resonated with their business context.

3.2 | Participants

We distributed 452 questionnaires (86 managers and 366 team members) and collected back 242 fully completed and matched responses (60 managers and 182 team members), which represents a 53.54% completion rate (69.77% for managers and 50.00% for employees). Regarding the sample demographics, 37.45% of the 242 respondents were females, 63.00% had an undergraduate university degree as their highest qualification, and 46.00% were between 26 and 36 years old. Further, 46.67% out of the 60 teams worked for the Machinery organisation, 28.33% for the Consumer Services organisation, and 25.00% for the Professional Training organisation. Each team had a different manager and the size ranged from two to 10 individuals with an average of three employees per team. We chose to include all groups with two or more respondents based on recommendations that their exclusion would lead to biased results (Biemann & Heidemeier, 2012). The team-level response rate for fully completed questionnaires ranged from 20% to 100% with an average response rate of 87% per team.

3.3 | Measures

The items of the measures and their respective anchor or Likert scales are available in the Appendix.

Managerial coaching skill was measured adapting Smither et al. (2003) scale, which exclusively measures the coachees' perceptions of the coach's effectiveness contrary to other skill-based coaching scales (e.g., McLean, et al., 2005) more appropriate for self-reporting research designs (Hagen & Peterson, 2015). The scale's Cronbach's alpha reliability was 0.92.

Manager's learning goal orientation was assessed using Vandewalle's (1997) scale and its Cronbach's alpha reliability was 0.92.

Team-level architectural knowledge was measured using the respective sub-scale of the Prospector measure (Leslie & Braddy, 2011; Spreitzer et al., 1997). We customised each manager's questionnaire based on the number of employees they had to rate depending on the team size. For confidentiality reasons, we used initials to indicate each employee on the managers' questionnaire and asked managers to rate each member per se. The Cronbach's alpha of the scale was 0.91.

Team performance was measured using Sparrowe et al.'s (2001) scale. Managers were asked to rate their team in four areas. The Cronbach's alpha reliability of the scale was 0.80.

3.3.1 | Control variables

The study controlled for team size, members' aggregated position tenure, managers' gender, and organisational setting to account for potential influences on the relationships under examination in line with previous work indi-

cating a theoretical connection with the relationships under investigation (Dahling et al., 2016; Salas et al., 2008; Ye et al., 2016). We controlled for organizational setting by creating two dummy variables, Org.Alpha and Org.Beta, representing the Machinery and Professional training organisations, respectively, with reference group the Consumer Services firm. It is noteworthy that while we collected data from British and Greek participants, making generalisations about cultural differences from a comparison between two British and one Greek organisation would make our work susceptible to existing criticisms in cross-cultural research (e.g., Latifi, 2006; Shaiq et al., 2011). Instead, controlling for organisational membership has allowed us to focus on our model under investigation and isolate as much as possible any variance attributable to organisational/national differences (Spector & Brannick, 2011).

Little theoretical and empirical evidence exists that either performance approach or avoid goal orientation complement or compete with the moderating effect of learning goal orientation on relationships between developmental practices and learning or performance-related outcomes to warrantee their inclusion as control variables (e.g., Peng et al., 2019; Runhaar et al., 2010). Nevertheless, we reran the analysis including them as additional control variables to check if the findings change. Given that we received almost identical results, we decided to exclude them from the analysis.

3.4 | Validity

We conducted Confirmatory Factor Analysis (CFA) to ensure construct validity (see Table 1). The hypothesised four-factor structure fit the data well ($\chi^2(129) = 289.88$, comparative fit index [CFI] = 0.929, root-mean-square error of approximation [RMSEA] = 0.083, standardised root-mean-square residual [SRMR] = 0.059, Akaike Information Criterion [AIC] = 7519.467), while it achieved a significantly better fit than the three-, two- and one-factor models. The average variance extracted for all constructs as well as the factor loadings for each item were above the recommended lower limits of 0.50 and 0.45, respectively (Bagozzi & Yi, 1988; Hair et al., 2014).

3.4.1 | Analyses

We tested our first and second hypotheses using multilevel structural equation modelling (MSEM) and specifically, the latent moderated structural equation method (LMS; Klein & Moosbrugger, 2000). As we were interested in examining the relationship between the team-level component of managerial coaching and the team-level component of members' architectural knowledge, MSEM was preferable to multilevel modelling because it allows for the decomposition of moderation effects at different levels (Preacher et al., 2016).

TABLE 1 Confirmatory factor analyses for hypothesised variables

Models	x^2	$\Delta\chi 2$	df	RMSEA	SRMR	CFI	Akaike
Four-factor model	289.88***	-	129	0.083	0.059	0.929	7519.47
Three-factor model[a]	433.14***	143.26***	132	0.112	0.076	0.868	7656.73
Two-factor model[b]	1031.99***	742.11***	134	0.192	0.169	0.606	8251.58
Single-factor model	1693.25***	1403.37***	135	0.252	0.254	0.316	8422.51

Abbreviations: df, degrees of freedom; RMSEA, root-mean-square error of approximation; SRMR, standardised root-mean-square residual.

[a]In this model, the items of team knowledge and team performance were loaded on the same factor.

[b]In this model, the items of team knowledge, team performance and manager learning goal orientation were loaded on the same factor.

***$p < 0.001$.

We tested our final hypothesis using Hayes' (2017) PROCESS procedure (model 7). This technique enables the simultaneous examination of "multiple influences on a consequent variable" (Hayes, 2017, p. 48) and hence, it is advantageous against other multi-step procedures (Pak & Kim, 2018).

3.5 | Aggregation

In line with our theoretical framework, the above-mentioned PROCESS procedure required the aggregation of the constructs of managerial coaching skill and architectural knowledge. We, therefore, calculated team-level psychometric properties for both coaching skill ($rwg_{(j)}$ = 0.85, intraclass correlation coefficient [ICC](1) = 0.17) and architectural knowledge ($rwg_{(j)}$ = 0.87; ICC(1) = 0.28), the values of which justified aggregation (Biemann et al., 2012; LeBreton & Senter, 2008).

4 | RESULTS

4.1 | Descriptive statistics and zero-order correlations

Table 2 summarises the means, standard deviations and zero-order correlations of the study variables.

4.2 | Hypotheses testing

As shown in Table 3, the analysis yielded a significant positive relationship between managerial coaching skill and team-level architectural knowledge (β = 0.89, p < 0.05); thus, supporting Hypothesis 1. The analysis also revealed that learning goal orientation moderates the relationship between managerial coaching skill and team-level architectural knowledge (β = 0.11, p < 0.01). Simple slope analysis adopting the Johnson–Newman technique (Preacher et al., 2007) indicated that the region of significance for the moderator includes values above β = 4.87. Figure 2 depicts the interaction effects. Furthermore, in line with Klein and Moosbrugger (2000), a comparison of the model fit indices (AIC = 1975.56, Bayesian Information Criterion [BIC] = 2065.28) to one where the moderation path was set to zero (AIC = 2202.16, BIC = 2285.47) demonstrated that the moderation model provided a better fit to the data. Overall, the findings provided support for hypothesis 2.

Further, as illustrated in Table 3, the analysis yielded a significant positive relationship between team-level architectural knowledge and team performance (β = 0.31, p < 0.001) and a significant index of moderated mediation (β = 0.10; CI: 0.01, 0.20). We also calculated conditional indirect effects of coaching skill on team performance via team-level architectural knowledge using bootstrapping (n = 10,000; Preacher et al., 2007). Table 4 shows the different levels of the indirect effect at different levels of the moderator, including the 95% bootstrapped confidence intervals. As hypothesised, the higher the learning goal orientation of the manager, the stronger the relationship between coaching skill and team performance via team-level architectural knowledge. For low levels of learning goal orientation, the mediated relationship was insignificant, indicating that the strength of the mediated relationship varied across different levels of managers' learning goal orientation; thus, supporting Hypothesis 3.

5 | DISCUSSION

In this study, we draw on the social cognition theory and, in particular, the salience of social stimuli and the notion that cognition is socially situated and emergent, to develop and test a conceptual framework on whether and, if so, how, and under what conditions managerial coaching skill relates to important team outcomes. The findings revealed

TABLE 2 Means, standard deviations and correlations

	M	SD	1	2	3	4	5	6	7	8	9
Team member level (*N* = 182)											
1. Coaching skill	5.53	1.13	-								
2. Architectural knowledge	5.46	0.98	0.10								
Team level (*N* = 60)											
1. Org.Alpha	0.47	0.50	-								
2. Org.Beta	0.25	0.44	−0.54***	-							
3. Team position tenure	3.74	3.20	0.44***	0.12	-						
4. Team size	3.90	2.05	−0.23	0.39**	0.03	-					
5. Manager's gender	0.77	0.43	0.28*	−0.59***	0.03	−0.12	-				
6. Coaching skill[a]	5.54	0.84	−0.12	0.02	−24*	−0.14	−0.19	-			
7. Architectural knowledge[b]	5.46	0.95	0.51***	−0.36**	0.18	−0.18	0.16	0.17	-		
8. Manager's learning goal orientation	6.13	0.91	0.22	−0.13	−0.01	17	−0.04	0.14	0.28*	-	
9. Team performance	4.21	0.53	0.25	0.05	0.25	−0.12	−0.19	0.18	0.53***	0.15	-

Note: Org.Alpha and Org.Beta are dummy variables for Machinery and Professional training organisations, respectively, with reference group the Consumer Services firm; Team Position Tenure = team-level average of members position tenure (in years); Manager's Gender equals 0 for females and 1 for males.

[a]The aggregated construct of managerial coaching skill.

[b]The aggregated construct of architectural knowledge.

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

TABLE 3 Results of moderation and moderated mediation analysis

	Team-level architectural knowledge, Model 1	Team-level architectural knowledge, Model 2	Team performance, Model 3
Intercept	0.22 (2.01)	4.20*** (0.06)	2.66***(0.42)
Org.Alpha	0.85* (0.34)	0.77* (0.36)	0.03 (0.18)
Org.Beta	−0.32 (0.45)	−0.17 (0.43)	0.19 (0.22)
Team position tenure	0.02 (0.05)	0.02 (0.05)	0.03 (0.02)
Team size	0.00 (0.05)	−0.03 (0.06)	−0.03 (0.03)
Manager's gender	−0.08 (0.33)	0.04 (0.33)	−0.25 (0.17)
Coaching skill	0.89* (0.38)	−0.04 (0.18)	0.04 (0.07)
Manager's LGO		−0.42 (0.26)	
Manager's LGO × coaching skill		0.11** (0.04)	
Team knowledge			0.31*** (0.07)

Note: Org.Alpha and Org.Beta are dummies for Machinery and Professional training organisations, respectively, with reference group the Consumer Services firm; Team Position Tenure = team-level average of members' position tenure (in years); Manager's Gender equals 0 for females and 1 for males.

Abbreviation: LGO, learning goal orientation.

*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

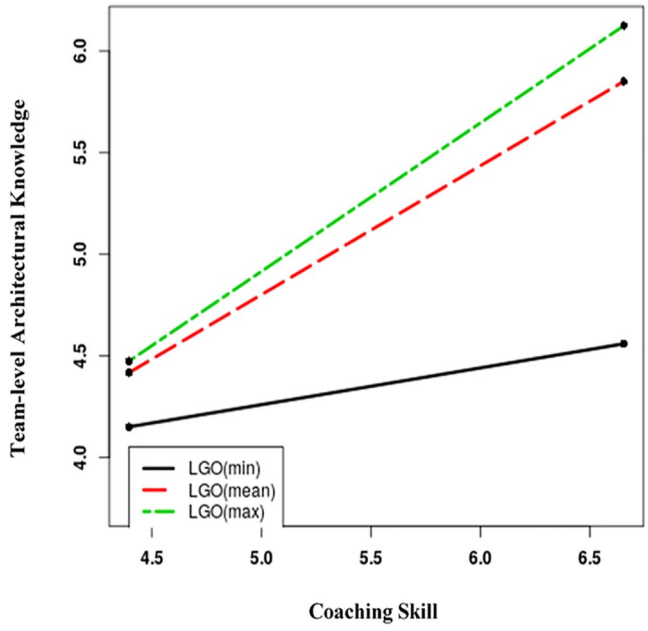

FIGURE 2 Managers' learning goal orientation (LGO) as a moderator between managerial coaching skill and team-level architectural knowledge

TABLE 4 Conditional indirect effects of coaching skill on team performance

Values of manager's learning goal orientation	Bootstrapped indirect effect	Bootstrapped SE	Bias-corrected 95% CI
16th percentile	0.01	0.06	(−0.092, 0.139)
50th percentile	0.11	0.05	(0.021, 0.228)
90th percentile	0.15	0.06	(0.040, 0.285)

Note: Unstandardised regression coefficients. Number of bootstrap samples: 10,000. Coaching skill and learning goal orientation were mean centred.

that managerial coaching skill relates to team performance via team-level architectural knowledge when the managers' learning goal orientation is high rather than low.

5.1 | Theoretical implications

The study offers three main contributions. First, in line with social cognition theory (Fiske & Taylor, 2016), we introduce in the discourse the construct of team-level architectural knowledge, which consists of situated cognition about business processes, roles and dynamics, and is instrumental for team effectiveness (Finn & Waring, 2006). Doing so, we unravel how the idiosyncratic character of managerial coaching as a one-on-one intervention enables team members to widen their perspectives and consider their role in the team. Our study, thus, moves away from the traditional top-down approach concerning managerial coaching skill (e.g., Dahling et al., 2016) towards bottom-up emergent processes that help achieve collective outcomes (Fulmer & Ostroff, 2016). Albeit extant literature has supported a link between managerial coaching and knowledge (e.g., Huang & Hsieh, 2015), little theoretical substantiation had been developed to explain how the relationship unfolds. This lack of theorisation and empirical support hinders the scientific examination of team development interventions, including managerial coaching. Given the importance

of team performance for organisational success (Buengeler & Den Hartog, 2015), our findings are instrumental in explicating how managerial coaching could add value to the organisation. Thus, the study adds to the limited literature on the relationship between managerial coaching skill and team-related outcomes (e.g., Dahling et al., 2016; Nyfoudi, 2017b), and contributes to the development of a more comprehensive theory of managerial coaching (e.g., Beattie et al., 2014). In addition, it expands the literature on team development interventions (e.g., Jørgensen & Becker, 2017) and specifically the importance of team-related cognition in such interventions (Salas et al., 2008).

Second, our research contributes to the literature on devolved HR practices (e.g., López-Cotarelo, 2018; Purcell & Hutchinson, 2007) by providing original insight on the conditions under which managerial coaching, that is, an L&D intervention conducted by the manager, relates to key team outcomes. In particular, we advance our understanding of the enactment of HR practices by identifying managers' learning disposition as a key boundary condition. Indeed, our study demonstrates that managers' learning goal orientation matters when it comes to devolved L&D practices. Thus, our work begins to illuminate a rather neglected area, the importance of managers' propensities as contextual team differences. To this effect, the study advances a more nuanced understanding of the practice, according to which managerial coaching is not a panacea but its promotion in the workplace needs to align with managers' learning disposition.

Third, our study adds to the coaching literature (e.g., Murphy, 2020) by offering novel insights on managerial coaching as a team-oriented practice and its function to streamline the attention of the team members towards stimuli that are relevant for the team. By shifting the focus on the quality of managerial coaching as a team resource, our work accentuates the strategic importance of managerial coaching skill and is in line with previous literature highlighting the instrumentality of managers' skills in the effective implementation of devolved HR practices (e.g., Guest et al., 2020; Trullen et al., 2016). Furthermore, we move away from self-report assessments and examine team members' perceptions of their managers' coaching skill. This is pivotal as employee perceptions attest for actual (implemented) rather than intended HR practices (Kuvaas & Dysvik, 2010) and thus, our study contributes to a more holistic appreciation of the practice.

5.2 | Practical implications

Given the importance of teams and their performance in contemporary organisations (Buengeler & Den Hartog, 2015), our findings demonstrate that the return on investment in managerial coaching could be substantial. Indeed, the study found that between two teams with a manager of the same high (moderate) levels of learning goal orientation, the team receiving more skilful managerial coaching by one unit will perform 0.15 (0.11) units better. Such effect sizes highlight that skilful managerial coaching can make a difference for teams and thus, provide justification for the allocation of resources to the enhancement of managers' coaching skills (Murphy, 2020).

Also, our study encourages evaluating the added value of coaching at multiple levels and beyond managers' self-reports (Ely et al., 2010). Specifically, we used team members' evaluations of managers' coaching skill and managers' evaluations of team performance. Organisations and HR departments promoting managerial coaching as a strategic practice for teams need to move beyond 'happy sheets' to achieve a more comprehensive appreciation of the effectiveness of managerial coaching at work.

Further, the findings highlight managers' learning goal orientation as an instrumental contextual characteristic in the relationship between managerial coaching skill and team knowledge. Since the goal of a training intervention may trigger trainees' state goal orientation (Salas et al., 2012), managerial coaching training could incorporate specific and challenging learning goals to heighten managers' state learning goal orientation. This suggestion is congruent with Heslin and VandeWalle's (2008) findings that growth–mind-set training may increase managers' inclination towards coaching.

5.3 | Limitations and future directions

Notwithstanding the contributions of our study, certain limitations exist. The study adopted a cross-sectional design, and hence detection of causal relationships is limited. We mitigated this limitation by drawing upon previous research supporting that managerial coaching precedes employee outcomes (Segers et al., 2011). Future research may employ experimental designs that may assist in establishing causality.

Further, the study focussed on teams of knowledge workers located in proximity with each other. Thus, the findings may not be directly replicable in differing settings, including virtual and globally distributed teams. Future studies may need to account for important factors in such contexts, including disruptive exigencies (Biron et al., 2020; Prouska et al., 2022). Furthermore, multicultural teams are highly prevalent, especially in large organisations and cross-cultural differences may lead to contradicting expectations and behaviours (Yaconi, 2001). Overall, a key area for future research is the examination of the types of teams, in which managerial coaching is beneficial.

It is also important to note that despite Smither et al.'s (2003) coaching scale focussed on the areas of constructive feedback and goal-setting that have been identified as the main areas of managerial coaching skill (Dahling et al., 2016; Murphy, 2020) and although it has been validated for designs in which the coachees report on the coaches' coaching skill (rather than the coaches themselves), it was originally developed to assess executive coaches' skill. We, however, took remedial actions and adapted the scale for managerial coaching: (1) we excluded the item "Encouraging you to coach and give feedback to others" because it was not in line with the operationalisation of the construct of managerial coaching skill, which entails the manager coaching each team member rather than team members coaching each other (e.g., Dahling et al., 2016; Murphy, 2020), and (2) we changed the original 'raters' to 'fellow team members' of the Appendix item 1.iv, guided by extant literature (e.g., Park et al., 2020) highlighting that skilful managerial coaching entails team-orientation. Nevertheless, more studies are needed to further validate the use of the amended scale as an effective measurement tool for managerial coaching skill.

Furthermore, we collected data from British and Greek participants and although we were careful to select organisations that were similar in terms of culture, focus, and international orientation whilst solely focussing on knowledge workers, national cultural differences may be present. In this regard, we reran the analysis using the country (instead of organisational) setting as control variable and found almost identical results (i.e., index of moderated mediation: β = 0.10; CI: 0.02, 0.19) and the control variable country (β = −0.06) insignificant. Accordingly, albeit it seems that differences between the British and Greek settings are not instrumental in our study, an important future research direction is the examination of cultural differences, especially in less internationally oriented organisations.

Future studies could also perform meta-analyses to compare the contribution of managerial and team coaching to team effectiveness and assess whether the HR's investment is better spent in one or the other. Indeed, meta-analysis is a particularly instrumental method in comparing the effectiveness of different interventions and offering an integrated understanding over and above primary research (Gurevitch et al., 2018). Finally, future studies may focus on the 'dark side' or the antecedents of managerial coaching; thus, contributing towards a more holistic appreciation of this devolved HR practice.

6 | CONCLUSION

We advance a moderated mediation model to examine the relationship between managerial coaching skill and team performance via team knowledge. Our findings reveal that the relationship is significant only for teams with managers of moderate to high levels of learning goal orientation. We, thus, contribute to a more nuanced conceptualisation and informed use of managerial coaching in the workplace.

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CONFLICT OF INTEREST

The authors wish to declare that an early version of the manuscript was presented at the 77th Annual Meeting of the Academy of Management.

DATA AVAILABILITY STATEMENT

The data of this study are available from the corresponding author upon request.

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APPENDIX

1. Managerial Coaching Skill Items (Adapted from Smither et al., 2003)

    i. Helping you interpret your feedback results by asking questions to uncover reasons for the feedback.

ii. Helping you link your feedback to your business plan/situation.
iii. Offering you useful suggestions, advice or insights to set goals for development.
iv. Helping you identify ways to share feedback with your colleagues and to solicit ideas for improvement.
v. Contributing to job performance and career development.

(1 = Very ineffective; 7 = Very effective)

2. Architectural Knowledge Items (Leslie & Braddy, 2011; Spreitzer et al., 1997)

i. Has a solid understanding of our products and services.
ii. Knows how the various parts of the organisation fit together.
iii. Knows the business.
iv. Understands the financial side of the business.

(1 = Strongly Disagree; 7 = Strongly Agree)

3. Learning Goal Orientation (Vandewalle, 1997)

i. I am willing to select a challenging work assignment that I can learn a lot from.
ii. I often look for opportunities to develop new skills and knowledge.
iii. I enjoy challenging and difficult tasks at work where I'll learn new skills.
iv. For me, development of my work ability is important enough to take risks.
v. I prefer to work in situations that require a high level of ability and talent.

(1 = Strongly Disagree; 7 = Strongly Agree)

4. Team Performance (Sparrow et al., 2001)

i. Quality of work.
ii. Quantity of work.
iii. Collaboration.
iv. Timeliness.

(1 = Very Poor; 5 = Excellent)