Antecedents and Consequences of Team Leader Adaptability

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ABSTRACT
Although scholars have noted the importance of team leader adaptability, little research has investigated what enables leader adaptability and how adaptability is related to team performance. We find that a leader’s job-related knowledge and experience are adaptability antecedents and that they are related, in part, to team performance through adaptability.

PRESS PARAGRAPH
There is significant interest in how the characteristics of a team leader impact the team’s performance. Given the rapidly changing demands that teams face, the ability of a team leader to be adaptable and the characteristics that enable a leader to be adaptable are explored in this study. What we find is that team leaders should and do change their behavior in response to changes in the team context. This suggests that team leaders who are flexible or adaptable are better positioned to help their teams be effective. Therefore, team leader adaptability is an essential component of team success.
Evidence is accumulating that leaders play an important role in helping teams perform effectively. For example, team leaders can encourage team self-management (Manz & Sims, 1987; Tesluk & Mathieu, 1999), coach the team (Edmondson, 1999; Wageman, 2001), enhance team empowerment (Chen, Kirkman, Kanfer, Allen, & Rosen, 2007), and act as a link between the team and the broader organizational context (Druskat & Wheeler, 2003). These differing leader behaviors reflect distinct strategies leaders can employ to enhance team effectiveness.

More recently, scholars have begun to explore the contingencies on team leader behavior (Morgeson, 2005; Yun, Faraj, & Sims, 2005). In essence, this research suggests that there are a variety of situational or contextual factors that make different leader behaviors more effective. For example, Morgeson (2005) found that team leader preparation was more strongly related to effectiveness when teams encountered more novel events whereas active leader intervention activities (active coaching and sense making) were more strongly related to effectiveness when teams encountered more disruptive events.

Implicit in these contingency approaches is the notion that team leaders should (and do) change their behavior in response to changes in the team context. This would suggest that team leaders who are flexible or adaptable would be better positioned to help their teams be effective. Although the notion of leader adaptability has received some attention in the leadership literature (Denison, Hooijberg, & Quinn, 1995; Yukl & Lepsinger, 2004; Zaccaro, Gilbert, Thor, & Mumford, 1991), this research has focused on dyadic leader-member relationships and outcomes as opposed to team-level processes and outcomes.

There are, however, two streams of research that acknowledge the importance of team leader adaptability. First, Klein, Ziegert, Knight, and Xiao (2006) provide indirect evidence that team leader adaptability is important for team success. Using a qualitative methodology, they
found that “dynamic delegation” was important for the effective leadership of action teams. Key to such delegation was the willingness and ability of leaders to adapt their behavior by assuming a variety of different roles within the team. For example, Klein et al. found that team leaders (drawing from their accumulated knowledge and experience) would actively monitor the team’s performance, provide direction, and prioritize and adjust the plan of action depending on the urgency and novelty of the situation. This suggests that adaptive leaders must be flexible to adjust to the team’s changing task responsibilities and membership as well as being able to respond to shifting organizational and environmental demands.

Second, conceptual models developed by Kozlowski and colleagues (Kozlowski, Gully, McHugh, Salas, & Cannon-Bowers, 1996; Kozlowski, Watola, Nowakowski, Kim, & Botero, in press) also implicitly suggest that leader adaptability is essential for the development of coordinated, adaptive, and effective teams. Although not focusing on adaptability directly, they do suggest that leaders need to perform different functions as teams cycle through preparation-action-reflection phases of team performance. This contingent view of team leadership assumes that leaders can and must adapt in response to variations in task demands and changes in the external environment. Such adaptive leadership is viewed as an essential factor that enables team adaptability. One key antecedent to a team’s adaptive performance is the knowledge of the team leader (Kozlowski & Ilgen, 2006). This knowledge is based on the leader’s experience and his or her ability to make sense of the environment.

Both the qualitative research of Klein et al. (2006) and the conceptual models offered by Kozlowski et al. (1996, in press) suggest that team leader adaptability is an essential component of team success. Yet, despite the apparent importance of team leader adaptability, the link between leader adaptability and team performance has yet to be empirically established. Thus,
we explore the link between team leader adaptability and team performance. In addition, given
the presumed importance of adaptability, we also examine the factors that enable leaders to be
adaptable. It is to the potential antecedents of team leader adaptability that we now turn.

Antecedents of Team Leader Adaptability

Team leaders develop the ability to be adaptable based on job-relevant knowledge and
work experience. Although knowledge and experience have been intertwined in past research,
scholars have argued for differentiation between the two constructs (Campbell, McCloy, Oppler,
& Sager, 1993; Quinones, Ford, & Teachout, 1995). This research has focused on the various
dimensions of knowledge and experience and their differential impact on performance. For
example, work experience is generally defined as “the events that are experienced by an
individual that relate to the performance of some job” (Quinones et al., 1995, p. 890), whereas
job knowledge is a particular type of knowledge and a specific ability to perform tasks at work
(Morgeson, Delaney-Klinger, & Hemingway, 2005). Because work experience and job
knowledge have been shown to be significant predictors of job performance (Schmidt, Hunter, &
Outerbridge, 1986), our discussion will proceed with an explanation of how team leader
knowledge and experience are unique antecedents of both adaptability and team performance.

Knowledge

Job-relevant knowledge is a significant predictor of adaptability because it encompasses
both the declarative and procedural knowledge necessary to perform at a high level. Declarative
knowledge is knowledge of facts and an understanding of the requirements of the job, whereas
procedural knowledge is conceptualized as the application of declarative knowledge and work
experience to a particular task (Campbell et al., 1993). Although past adaptability related
research has explored various individual differences (e.g., LePine, Colquitt, & Erez, 2000;
Mumford, Baughman, Threlfall, Uhlman, & Costanza, 1993), this research has primarily been conducted in laboratory settings to isolate key individual characteristics of adaptive responses to novel events. Therefore, examining an individual’s job-relevant knowledge will be an important contribution in exploring the predictors of adaptability.

In team leadership, job-related knowledge is a particularly important antecedent to adaptability because this base of knowledge allows leaders to react to novel challenges more effectively. For example, a leader with greater knowledge of the challenges of the team will more effectively manage the routine demands of this part of team leadership. Therefore, these leaders have greater capacity to respond to more demanding issues that arise, in part because different types of knowledge are needed to react to challenges (Lord & Hall, 2005). Team leaders who possess greater knowledge will be able to draw from a more complete knowledge base and demonstrate greater adaptability.

**Hypothesis 1**: Team leaders with high levels of job-related knowledge will demonstrate greater adaptability.

Whereas increased job knowledge can lead to greater adaptability, it can also be indicative of the requisite skills to perform more effectively. Individuals differ in the amount of job-relevant knowledge that is gained from similar work experiences (Quinones et al., 1995), but those that have increased knowledge are able to perform tasks outside of the prescribed role (Morgeson et al., 2005). Mumford, Marks, Connelly, Zaccaro, and Reiter-Palmon (2000) discuss this in terms of moving from a simple knowledge structure to a more complex structure. Increased job knowledge can therefore be applied so that future performance is more efficient and accurate. Further, this knowledge can be shared with others to enhance overall team performance (Humphrey, Morgeson, & Mannor, in press). Therefore, team leaders with greater
job-related knowledge have a more complete understanding of the responsibilities and
contingencies that a team faces and will more effectively enhance team performance.

*Hypothesis 2*: Team leaders with high levels of job-related knowledge will have higher
levels of team performance.

**Experience**

Work experience in a particular domain enables individuals to be more adaptable when
they encounter novel events. Having greater career experience enables individuals to develop
more expertise (Schmidt, et al., 1986). This heightened level of expertise increases an
understanding of the job’s requirements and increases the likelihood that individuals will know
how to respond or will respond adaptively when novel events occur (Humphrey et al., in press).

Experience as a team leader indicates that the leader has confronted many team
challenges, and the familiarity with these challenges enables better and quicker decision making.
Team leaders with greater experience are more likely to be better coaches for their teams and to
have a deeper understanding of the team’s needs and challenges. In addition, team leaders with
greater experience will be able to formulate solutions to novel demands more effectively and
assess risks more appropriately which indicates greater levels of adaptability (Mumford et al.,
2000).

*Hypothesis 3*: Team leaders with high levels of experience will demonstrate greater
adaptability.

There has been considerable debate as to whether leadership experience leads to
performance. Fielder (1970, p. 1) asserted that this widely held belief was “shot to hell.” Fielder
and Garcia (1987) further asserted that there was no consistent relationship between leadership
experience and performance. Yet, subsequent studies have found relationships between
leadership experience and performance (e.g., Bettin & Kennedy, 1990), and there is considerable
evidence that work experience is an important predictor of job performance (e.g., Schmidt & Hunter, 1998). In fact, Quinones et al. (1995) describe two unique dimensions of work experience: measurement mode and level of specificity. Their findings suggest that both the measurement mode and level of specificity of one’s work experience are related to job performance. Therefore, there appears growing evidence that leader experience would in fact lead to greater team performance.

**Hypothesis 4:** Team leaders with high levels of experience will have greater team performance.

**Adaptability as a Mediator**

Thus far we have hypothesized that leader knowledge and experience will be significantly related to both adaptability and team performance. But leader adaptability is also likely to be related to team performance and thus mediate the relationship between leader knowledge and team performance and leader experience and team performance. As we discussed above, adaptability is an implicitly contingent construct, and in previous research on leader adaptability, researchers have defined and examined leader adaptability in terms of its effects on performance. Randall and Coakley (2007) discuss the adaptability of a leader in terms of mobilizing team members to do the adaptive work necessary to progress. Glover, Friedman, and Jones (2002) discuss the process by which leaders continuously assimilate information and accommodate their organizations to specific contexts in which they are embedded. The key element is that team leader adaptability can have significant positive effects on team performance.

Team leaders who demonstrate adaptability have also been recognized as demonstrating more behavioral complexity, and behaviorally complex leaders are more effective than others because they have a portfolio of leadership functions that they can perform. They can
behaviorally differentiate, or vary their performance, based on the demands of the situation (Hooijberg, 1996). This also suggests that leaders who demonstrate adaptability will be able to guide their teams to more successful outcomes than leaders who do not have this capacity. Finally, Yukl and Lepsinger (2004) propose that a leader’s adaptability is particularly important in turbulent environments because the leader can more effectively facilitate adaptation to this environment. Therefore, when a team faces unique challenges, it is the adaptability of the leader that will be particularly beneficial to the team’s performance.

**Hypothesis 5:** The relationship between team leader job-related knowledge and team performance will be mediated by leader adaptability.

**Hypothesis 6:** The relationship between team leader experience and team performance will be mediated by leader adaptability.

**Method**

**Sample**

We explored our hypothesized relationships in a sample of managers (i.e., team leaders) of Major League Baseball teams for the 1974-2002 seasons. This 29 year period was chosen because 1974 marks the start of free-agency in baseball, which dramatically changed the movement of players. In baseball, a team of twenty-five players competes against another team. At any given time, only nine team members are actively participating in the game, although other team members may be substituted in at any time. Each team competes in 162 games during the season. Baseball teams can be thought of as action teams because there is high role differentiation (roles are highly specialized) and performance episodes are repeated frequently (see Sundstrom, de Meuse, & Futrell, 1990).

Data was obtained from archival sources, baseball “experts,” and trained raters. Each of these sources is described more completely when we discuss the measures below. Where
possible, we tested our hypotheses at both the leader level (aggregated across a career) and the season level (i.e., how a leader performed in particular season). This resulted in a sample size ranging from 85-110 (depending on the analysis) at the leader level and 804 at the season level.

Measures

*Job-related Knowledge.* To determine the amount of job-related knowledge possessed by team leaders, we compiled a set of descriptive quotes from newspapers, magazines, baseball websites, and other mass media sources for each manager in the sample. This typically included 6-10 brief descriptions of each leader. To avoid biasing judgments of these descriptions, all information identifying the leaders was removed. These descriptions were then rated on a 5-point extent scale (1 = “not at all;” 5 = “to a very large extent”) by an average of 29 undergraduate students for each leader on the following item: “To what extent did/does this manager display a strong knowledge of the game of baseball (i.e., manager knows a lot about the history of the game, the rules of the game, and how to play the game)?” Raters were also given the option of selecting a “not enough information” choice in case the descriptive quotes did not enable a judgment. We averaged the ratings for each leader; interrater reliability was .86.

*Experience.* Team leader experience was operationalized in two ways. First, *career experience* reflects the amount of time a leader had been in a managerial role during his career. For the leader-level analyses, this would reflect the total amount of time spent as a manager (in years). For the season-level analyses, this would reflect the amount of time spent as a manager prior to the current season. Second, *team experience* reflects the amount of experience with the current team. This measure of experience is only relevant at the season-level and reflects the amount of time spent as a manager with the current team prior to the current season.

*Adaptability.* Team leader adaptability was operationalized in two ways. First, we had
expert raters (sportswriters who follow and write about baseball for a living) judge the overall adaptability of the leaders. These experts were provided the names of the leaders as well as the team(s) they led and years they led the team(s). The leaders were then rated on a 5-point extent scale (1 = “not at all;” 5 = “to a very large extent”) by an average of 20 experts for each leader on the following item: “To what extent did/does this manager excel at changing and adjusting his strategies and behaviors to fit his players and changing situations?” Raters were also given the option of selecting a “do not know” response option in case they were unfamiliar with the leader. We averaged the ratings for each leader; interrater reliability was .67.

Second, we obtained archival, game-by-game data on the number of lineup changes made during each game from Retrosheet (2004). Leaders are responsible for making within game changes (e.g., substituting team members as the conditions warrant) and lineup changes reflect a behavioral indicator of adaptability. When aggregated to the season (across 162 games) and leader levels, this measure of adaptability reflects literally thousands of discrete adaptive actions.

Team Performance. Team performance was operationalized as team winning percentage. This is an objective measure of team performance and answers calls to investigate team-level performance outcomes when examining team leadership (Kozlowski & Ilgen, 2006). Similar to lineup changes, there are 162 dichotomous evaluations of performance in a season. Aggregating these performance events to the season and leader levels creates a highly reliable estimate of performance.

Results

Correlations among study variables are presented in Table 1. Hypothesis 1 suggested that team leaders with higher levels of job-related knowledge would demonstrate greater adaptability. This hypothesis received support for both the expert ratings of adaptability ($r = .24, p < .05$) and
the lineup changes measure of adaptability ($r = .31, p < .01$). Hypothesis 2 suggested that team leaders with higher levels of job-related knowledge would have higher levels of team performance. This hypothesis also received support ($r = .25, p < .01$).

Hypothesis 3 suggested that team leaders with higher levels of experience would demonstrate greater adaptability. At the leader level, the relationship between career experience and adaptability was significant for the expert rating of adaptability ($r = .45, p < .01$) but not for the lineup changes measure of adaptability ($r = .10, n.s.$). At the season level, the relationship between career experience and adaptability (as indexed by lineup changes) was not significant ($r = .05, n.s.$) but the relationship between team experience and adaptability (as indexed by lineup changes) was significant ($r = .09, p < .01$). Thus, Hypothesis 3 received mixed support.

Hypothesis 4 suggested that team leaders with higher levels of experience would have higher levels of team performance. This hypothesis received support as the different experience measures were significantly related to performance at the leader ($r = .38, p < .01$) and season levels (career experience, $r = .15, p < .01$; team experience, $r = .14, p < .01$).

Hypothesis 5 suggested that the relationship between job-related knowledge and team performance would be mediated by leader adaptability. We conducted two regression analyses (for the two operationalizations of adaptability) to test this hypothesis. According to Baron and Kenny (1986), mediation is established if three conditions hold true: (1) the predictor is related to the criterion, (2) the predictor is related to the mediator, and (3) the mediator is related to the criterion when controlling for the predictor. If the predictor is not significantly related to the criterion in this third step, complete mediation is said to have occurred. Hypotheses 1 and 2 established the first two conditions for mediation. We conducted regression analyses to explore the third condition (Table 2). For the expert rating measure of adaptability, when entered
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simultaneously to predict team performance, adaptability remained significant ($\beta = .26, p < .05$) and job-related knowledge became non-significant ($\beta = .20, n.s.$). For the lineup changes measure of adaptability, when entered simultaneously to predict team performance, adaptability is marginally significant ($\beta = .18, p < .07$) but job-related knowledge remained significant ($\beta = .19, p < .05$). Thus, Hypothesis 3 was partially supported.

Hypothesis 6 suggested that the relationship between experience and team performance would be mediated by leader adaptability. We conducted four regression analyses (for the two operationalizations of adaptability and two operationalizations of experience) to test this hypothesis. As shown in Table 2, we found little support for the meditational effect of leader adaptability. In fact, in three of the analyses both experience and adaptability remained significant predictors of team performance, indicating that both have direct effects on team performance.

Discussion

In the current research we were able to link the team leader characteristics of job-related knowledge and experience to both leader adaptability and team performance. In addition, we found support for the mediating role of leader adaptability between job-related knowledge and team performance and the direct effects of both adaptability and leader experience. This represents a contribution to the literature as it is the first study that empirically establishes the link between leader adaptability and team performance and describes two distinct antecedents of adaptability.

There are several strengths of this research that deserve mention. First, we were able to operationalize several of the study constructs in different ways. For example, we explored two forms of leader experience (career and team) and two different measures of adaptability (expert
ratings and actual behaviors). Second, many of our measures were objective in nature, including experience, the lineup changes measure of adaptability, and team performance. With objective measures, there is no possibility that common perceptual biases are influencing our results. Third, we had multiple, independent data sources for our measures. This included archival sources, baseball expert ratings, and trained student ratings. As such, all hypothesis tests involved methodologically separate data. Fourth, we tested many of our hypotheses at multiple levels of analysis. Some were at the leader level (averaged across an entire career) and others were at the season level (the leader within a given season). Convergence across sources increases the confidence in our findings.

There were, however, some limitations in our research as well. Some of our hypotheses were not supported, suggesting that additional research is needed to explore the mechanisms through which leader experience influences team performance. In some instances (most notably at the season level) the effect sizes were small. Clearly, there are other factors that are important for team success beyond those investigated here. Finally, our research design does not permit us to make strong causal statements. Future research is needed to more definitively establish the connection between adaptability and team performance.
References


Table 1

*Intercorrelations Among Study Variables*

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<td>5. Adaptability (Lineup Changes)</td>
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*Note.* Leader-level correlations below the diagonal (N’s range from 85-110). Season-level correlations above the diagonal (N = 804).

* p < .05, two-tailed. ** p < .01, two-tailed.
Table 2

Mediation Analyses

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*Note. Team performance is the dependent variable in all equations.*

* \( p < .05 \), two-tailed. ** \( p < .01 \), two-tailed.*