

Are you really at the center of our success?: The effect of core roles on the relationship between
individual performance and team performance

Research Proposal

Dr. Glenn Littlepage & Olrica Turnquest

Middle Tennessee State University

Abstract

With this increase in team usage among organizations, the ability to establish teams that are able to achieve team goals is becoming increasingly important (Cohen & Bailey, 1997). Despite the myriad of factors that could potentially impact the team's success, there is one factor of interest that will be examined with this study. More specifically, this study will seek to investigate the relationship between individual performance and overall team effectiveness with the "coreness" of the role as a mediator.

A research study conducted by Humphrey, Morgeson, & Mannor (2009) is an example of support for the idea that some roles among teams are more important than others. From this study, the idea of "core roles" was established. Humphrey et al. (2009) defined "the strategic core role" as "the role or roles on a team that encounter more of the problems that need to be overcome in the team, have a greater exposure to the task that the team is performing, and are more central to the workflow of the team" (Humphrey, et al., 2009, p. 50). The results of this study indicated that those persons holding positions considered to be core roles were more crucial to overall team effectiveness.

At a Southeastern State University, an airline simulation capstone course, known as the Flight Operations Center-Unified Simulation (FOCUS) Lab proved to be the ideal environment to assess this relationship. With ten positions, including Flight Operations Coordinator (FOC), Maintenance Control, Maintenance Planning, Crew Scheduling, Weather Operations, Ramp Tower, Flight Scheduling (FOD 1), Flight Planning (FOD 2), Pilot, and Pseudo Pilot, it should come as no surprise that some roles are more salient to overall team success than others. This setting will allow the desired relationship to be studied in among a team in an already established setting.

Data collected from the FOCUS lab will be examined in this study. The data will be analyzed using a combination of ANOVAs, Correlations, and Regression Tests. Based on the extent literature related to this topic, the main hypothesis that is going to be assessed is: "The more core/central the role is, the stronger the relationship will be between Individual Job Performance and Team Effectiveness."

Research Proposal Summary

As time continues to pass and organizations continue to grow, the number of groups and teams that are seen among them is growing as well (Cohen & Bailey, 1997). Work teams within organizations can be thought of as groups of individuals who share the primary purpose of working together to solve or achieve a common goal, interacting with one another socially, and completing interdependent tasks (Mathieu, Maynard, Rapp & Gilson, 2008). A team that has been properly developed is more likely to be effective than one that has been put together haphazardly.

Team performance, as its name suggests, is comprised of the contributions made by the entire team, and like teamwork, can be considered a derivative of individual performance (i.e. each member engages in both task and teamwork behavior). Team performance comprises “how” team members come together and interact in order to complete the task (Crawford & LePine, 2013). As a result of an innovative approach to understanding team composition that has proven to be very useful in establishing successful teams is known as “role composition” (Humphrey et al., 2009). This approach “investigates how the characteristics of a set of role holders impact team performance” (p. 48). Role composition theory suggests that it is important to consider the fact that team performance is largely impacted by the contributions of its individual members. Teams are generally comprised of individual members who have been put together to complete a designated task. The fact that teams are established to complete tasks that a single individual cannot perform suggests that there are different roles that need to be filled in order for a team to operate effectively. This might lead one to wonder whether some roles are more important to the overall team success than others.

A research study conducted by Humphrey et al. (2009) is an example of support for the idea that some roles among teams are more important than others. From this study, the idea of “core roles” was established. Humphrey et al. (2009) defined “the strategic core role” as “the role or roles on a team that encounter more of the problems that need to be overcome in the team, have a greater exposure to the task that the team is performing, and are more central to the workflow of the team” (Humphrey, et al., 2009, p. 50). As a result, this study seeks to examine the relationship between individual performance and overall team effectiveness with the coreness of the role as a mediator.

At a Southeastern State University, an airline simulation capstone course, known as the Flight Operations Center-Unified Simulation (FOCUS) Lab proved to be the ideal environment to assess this relationship. With ten positions, including Flight Operations Coordinator (FOC), Maintenance Control, Maintenance Planning, Crew Scheduling, Weather Operations, Ramp Tower, Flight Scheduling (FOD 1), Flight Planning (FOD 2), Pilot, and Pseudo Pilot, it should come as no surprise that some roles are more salient to overall team success than others.

During each simulation, the team experienced “triggers” that were introduced to evaluate the effectiveness of the processes and outcomes of the team’s troubleshooting abilities. Self-reported measures including a role criticality measure, an individual performance measure, and an interpersonal teamwork performance measure were administered after each simulation. These measures will be used to determine core roles from peripheral (non-core roles) and assess individual performance, respectively. The trigger response measure was completed by members of the FOCUS lab staff after each simulation, and measures response to non-routine situations. Measures of airline efficiency yielded by the simulation software represents another measure of team performance.

Data from each simulation was collected over a period of 4 years, which produced a total of 40 teams that will be examined in this study. The data collected from the previously mentioned measures will be analyzed using a combination of ANOVAs, Correlations, and Regression Tests. Based on the extent literature related to this topic, three hypotheses are going to be assessed include:

Hypothesis 1: There is a positive relationship between individual performance and team effectiveness.

Hypothesis 2: There will be a stronger relationship between individual performance and team performance for core roles than for peripheral roles.

References

- Cohen, S. G., & Bailey, D. E. 1997. What makes teams work: Group effectiveness research from the shop floor to the executive suite. *Journal of Management*, 23, 239–290.
- Crawford, E. R., & LePine, J. A. (2013) A configural theory of team processes: Accounting for the structure of taskwork and teamwork. *Academy of Management Review* 38(1), 32–48.
- Humphrey, S. E., Morgeson, F. P., & Mannor, M. J. (2009). Developing a theory of the strategic core of teams: A role composition model of team performance. *Journal of Applied Psychology*, 94(1), 48–61.
- Mathieu, J., Maynard, M. T., Rapp, T., & Gibson, L. (2008). Team effectiveness 1997-2007: A review of recent advancements and a glimpse into the future. *Journal of Management* 34(3), 410–476.