

July 2006

ILR Impact Brief - Knowledge, Skills, and Performance: Getting the Most From Team Training

Bradford S. Bell
Cornell University, bb92@cornell.edu

Aleksander P.J. Ellis
University of Arizona

Robert E. Ployhart
University of South Carolina

John R. Hollenbeck
Michigan State University

Daniel R. Ilgen
Michigan State University

Follow this and additional works at: <https://digitalcommons.ilr.cornell.edu/impactbrief>

Thank you for downloading an article from DigitalCommons@ILR.

Support this valuable resource today!

ILR Impact Brief - Knowledge, Skills, and Performance: Getting the Most From Team Training

Abstract

Teams are an integral feature of the American workplace; indeed, more than 80% of the Fortune 500 companies make extensive use of work teams. Action teams, pulled together to carry out a particular time-limited function that requires the specialized expertise of its members, are becoming increasingly common. Researchers have noted that the success of these teams is often thwarted by their lack of information about teamwork in general and their insufficient mastery of basic team competencies. Most organizations train team members for the particular job at hand, so the question arises as to the utility of generic team training. In other words, would imparting knowledge and skills that could be applied in, and adapted to, any number of situations improve outcomes, and if so, what is the mechanism that facilitates this result?

Keywords

knowledge, skills, performance, team building, ILR, Impact Brief, training, American, workplace, communication

Comments

Suggested Citation

Bell, B. S., Ellis, A. P. J., Ployhart, R. E., Hollenbeck, J. R. & Ilgen, D. R. (2006). *Knowledge, skills, and performance: getting the most from team training* (Impact Brief #9). Ithaca, NY: School of Industrial and Labor Relations, Cornell University.

<http://digitalcommons.ilr.cornell.edu/impactbrief/9>

For a more in-depth analysis, please see: Aleksander, P. J. E., Bell, B., Ployhart, R. E., Hollenbeck, J. R., & Ilgen, D. R. (2005). *An evaluation of generic teamwork skill training with action teams: Effects on cognitive and skill-based outcomes*.

<http://digitalcommons.ilr.cornell.edu/articles/46/>

The ILR Impact Brief series highlights the research and project based work conducted by ILR faculty that is relevant to workplace issues and public policy. The Briefs are prepared by [Maralyn Edid](#), Senior Extension Associate, ILR School.

Required Publisher Statement

Copyright by Cornell University.

IMPACT BRIEF

BRIEF # 9 / JULY 2006 / ILR SCHOOL / WWW.ILR.CORNELL.EDU

Knowledge, Skills, and Performance: Getting the Most from Team Training

Research question: Does generic training for task and teamwork skills enhance the effectiveness of action teams, i.e., teams created for a limited period of time in order to fulfill a specialized goal?

Conclusion: Using established principles of training design, including a case-based lecture approach, generic team and task training has a significant and positive impact on the overall performance of action teams. More specifically, trained action teams expressed higher levels of knowledge about teamwork competencies and showed greater proficiency than untrained action teams in coordinating plans and tasks, collaborative problem solving, and communication. These cognitive and skill-based outcomes are interrelated and play out differently according to team members' roles; action teams benefit most from the knowledge of their most critical member.

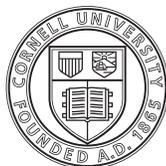
Workplace impact: Generic team and task training raises the level of teamwork competencies while lowering training costs. This training approach conveys knowledge and skills that can be applied across a range of circumstances and is suited to a broad swath of employees. Generic team and task training limits the need to retrain employees prior to each assignment and enhances organizational flexibility by facilitating faster and more effective transitions when action teams are required. It is particularly appropriate for action team

members for whom there are no substitutes, an effect that enables organizations to set training priorities and leverage limited resources. Generic training is also useful for the least critical member of a team, whose post-training knowledge of teamwork skills frees teammates to focus on essential functions.

Abstract: Teams are an integral feature of the American workplace; indeed, more than 80% of the Fortune 500 companies make extensive use of work teams. Action teams, pulled together to carry out a particular time-limited function that requires the specialized expertise of its members, are becoming increasingly common. Researchers have noted that the success of these teams is often thwarted by their lack of information about teamwork in general and their insufficient mastery of basic team competencies. Most organizations train team members for the particular job at hand, so the question arises as to the utility of generic team training. In other words, would imparting knowledge and skills that could be applied in, and adapted to, any number of situations improve outcomes, and if so, what is the mechanism that facilitates this result?

To answer these questions, the authors first developed a generic training program for action teams that could be tested in a laboratory environment. The lecture format training focused on three particular competencies that researchers have already identified as critical to high-performing action teams: planning and task coordination, collaborative problem solving, and communication. Members of 31 teams underwent training while members of another 34 teams served as the control

The ImpactBrief series highlights the research and project-based work conducted by ILR faculty that is relevant to workplace issues and public policy. Please visit <http://digitalcommons.ilr.cornell.edu/impactbrief/> for full-text pdfs.



Cornell University
ILR School

group and did not receive any training. Each team played a simulated command-and-control game that required defending territory against invading foes.

Subsequent analysis of individual and team performance indicated that generic team and task training works. The training positively affected members' knowledge of teamwork competencies as well as their skill in planning and task coordination, collaborative problem solving, and communication. These individual outcomes were successfully parlayed into team performance as the trained teams exhibited higher levels of the three competencies than did the control group.

Exactly how individual members' acquired knowledge of teamwork competencies is translated into enhanced team proficiency remains a bit murky. The researchers theorized that communication skills played this mediating role but found in the data only partial support for their hypothesis. While the exercise showed that teamwork knowledge positively affected skill levels for all three competencies, it also showed that communication skills more strongly affected collaborative problem solving than planning and task coordination when the amount of teamwork knowledge was held constant. In other words, communication skills only partly mediate the relationship between knowledge and skill.

The role of communication skills was also assessed in an effort to understand the workings of the teams' internal hierarchy. The researchers found that the knowledge of teamwork competencies by the most critical member of each team (the person whose role cannot be assumed by any other team member) significantly affected the teams' coordination, problem-solving, and communication skills. But when the most critical team member's knowledge was held constant, communication skills did not help the team turn that information into better col-

laborative problem solving but did facilitate, or mediate, improved planning and task coordination.

One surprising result concerned the least critical member of action teams. The researchers discovered that strong teamwork knowledge and skills displayed by this individual positively affected team performance. The least critical member may be able to counteract his or her apparent redundancy by taking on the more mundane tasks otherwise assumed by teammates, who can then devote their energies to carrying out more essential functions.

Methodology: Researchers measured planning and task coordination, collaborative problem-solving, and communication skills displayed by 260 college students, divided into 65 four-person teams, during a simulated action-team game. Just under half of the students were trained in generic teamwork skills, using a case-based lecture approach; all were assessed for their cognitive knowledge of the three targeted competencies. The researchers then applied statistical techniques to analyze and interpret the data.

Source publication: "An Evaluation of Generic Teamwork Skills Training with Action Teams: Effects on Cognitive and Skill-Based Outcomes" appeared in *Personnel Psychology*, (2005) Volume 58:641-672 .

by BRADFORD S. BELL
Professor of Human Resource Studies (ILR)

ALEKSANDER P.J. ELLIS
Professor, The University of Arizona

ROBERT E. PLOYHART
Professor, University of South Carolina

JOHN R. HOLLENBECK
Professor, Michigan State University

DANIEL R. ILGEN
Professor, Michigan State University

