6 EDITION

Group Dynamics for Teams

Daniel Levi
David A. Askay

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6th Edition

For my parents, who still have no idea what I studied in graduate school. I hope this helps to finally explain things.

And to my wife, Bethany, and children Emelyn and William for the endless interruptions. You redirected me toward what matters most.

—David

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Daniel Levi

California Polytechnic State University, San Luis Obispo

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Thousand Oaks, California 91320
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Brief Contents

Detailed Contents

New to This Edition

This edition marks numerous revisions to this text, both major and minor. While the essence of the book remains the same, each chapter has been revised, pruned, expanded, or restructured in some way. New engaging examples illustrate concepts central to team functioning. These changes are not merely cosmetic—the number of references in this edition more than doubled, growing from 528 to 1,113. Of these references, 280 represent studies and examples published since 2014. This was done with the dual purpose of supporting assertions with the latest scientific knowledge and serving as a reference for students wanting to learn more.

Additionally, several chapters have been completely rewritten and updated. A summary of major chapter revisions is provided here:

- Chapter 1: New discussion of why understanding groups and teams is important for students, organizations, and society. In-depth differentiation between groups and teams. Expanded summary of contemporary group dynamic research that includes robotic teammates, artificial intelligence, and wearable sensors.
- Chapter 2: Incorporation of Marks, Mathieu, and Zaccaro's (2001) temporal model of teamwork processes. New discussion of mindsets drawing upon Amy Edmondson's work on teaming.
- Chapter 3: The negative effects of too many and too challenging goals are discussed. Wells Fargo's unauthorized creation of 2 million bank accounts serves as a poignant example. Expanded discussion of how norms form and impact group functioning clarify these concepts. Illustrations of how norms shape group behaviors, including the development of gendered communication norms in oil rig workers and the underhanded free shot technique shunned by basketball players.
- Chapter 4: Expanded and updated discussion of cohesion, team adaptability, team learning, shared mental models, transactive memory systems, and reflexivity that references recent scholarship. A new activity to visually track and reflect on teamwork behaviors is described.
- Chapter 5: Revised and expanded discussion of social-values orientation, benefits of competition, cooperative learning experiences, and skills associated with cooperation.
- Chapter 6: New concepts include using boundary objects to reduce miscommunication in teams, empirically based guidelines for giving an apology to repair trust, and updated recommendations for virtual and face-to-face team meetings.

- Chapter 7: Restructured the chapter to emphasize task, process, and relational conflict in teams. Additional content describes how to strategically align conflict management style with the kind of conflicts that the team is experiencing. New discussion reveals how to reduce team conflict through cognitive reappraisals.
- Chapter 8: Expanded discussion of responses to social influence, including defiance, resistance, compliance, and acceptance. New content describes different social-influence tactics in virtual contexts. Team empowerment is discussed in greater detail and is clarified through the extended example of a captain's unconventional command of a nuclear submarine.
- Chapter 9: Completely revised and expanded the discussion of decision making. New topics include the influence of culture on preference for different techniques, poor decisions through decision fatigue, and heuristics. Examples are provided of various decision-making strategies, such as aggregating individual responses without interaction to discover the location of a sunken submarine. Emerging decision-making methods are introduced, including the wisdom of crowds, prediction markets, and machine learning. Four methods for integrating artificial intelligence into decision making are discussed.
- Chapter 10: Completely revised and restructured chapter to describe trait, behavioral, contingency, relational, charismatic, functional, and shared leadership. Followership is also emphasized to illustrate the mutually reinforcing relationship between leaders and followers. Expanded discussion distinguishes between leader emergence and leader effectiveness. Leader–member exchange (LMX) theory discussed with more depth, with special attention given to how unequal relationships between team members can produce inequalities. A table describing dimensions of high-quality versus low-quality communication exchanges grounds understanding of this important theory.
- Chapter 11: Completely revised and restructured this chapter on problem solving. New discussions distinguish between well-structured and ill-structured problems. Greatly expanded section on rational problem solving discusses problem recognition, problem definition, problem analysis, establishing solution criteria, generating alternatives, selecting a solution, and implementing and evaluating the solution. For each step of this sequence, specific evidence-based guidance is offered.
- Chapter 12: Completely revised and restructured this chapter to focus on creativity, innovation, and design thinking. New discussion of moving an idea from generation to implementation emphasizes the changing skills and mindsets required of team members as they move through this process in an organizational context. Introduction to the design thinking process, a popular approach to collaboration

and creativity, is given. Several illustrative examples, including Embrace's development of a low-cost infant incubator, the founding of Zappos, and GE redesigning the MRI experience for children, illustrate these mindsets and processes. Specific creativity techniques, tools, and mindsets are described, such as mind mapping, validating assumptions, and building experiential prototypes.

- Chapter 13: Revised the discussion of diversity and added a new focus on difference and inclusion. Situates the importance of managing diversity and inclusion within contemporary workplace and societal contexts. New content focuses on individual traits (authoritarianism and social-dominance orientation) that contribute to intergroup dynamics. Features a new discussion of how different kinds of stereotypes manifest in different kinds of behaviors and attitudes. The categorization–elaboration model is introduced to emphasize the importance of information elaboration in order to maximize the benefits of diversity. Inclusivity is highlighted; it's essential to supporting diversity in teams. A new survey and the end of the chapter measure the level of work group inclusion felt by each member.
- Chapter 14: A new introduction describes the concept of culture in greater detail and offers an example to illustrate how it impacts behavior. The section on team culture has been expanded to describe how teams can create and reinforce values, using Amazon's continued use of the inexpensive "door desk" as an example. It also describes when a strong team culture is a disadvantage using the example of the challenges faced by an experienced team of engineers mandated with designing an inexpensive printer. Misalignments between team and organizational culture are discussed, and this includes an example showing how a team culture prevented the use of organizationally sanctioned parental leave. The section on intercultural dimensions of culture has been expanded and now recommends care in broadly applying cultural dimensions to individuals based on work by Brewer and Venaik (2014). A new section introduces Earley and Ang's (2003) concept of cultural intelligence to explain how metacognition, motivation, and behaviors are critical for success in multicultural teams.
- Chapter 15: This chapter has been restructured around the two dimensions of virtuality: communication technologies and geographic dispersion. New research on several kinds of virtual-teamwork technologies is presented, including text-based messaging, conferencing, social media, and 3D virtual environments. Guidance for writing effective e-mail messages is a new addition, as is an updated table summarizing various communication technologies. A new section organized around O'Leary and Cummings's (2007) conception of geographic dispersion discusses the differential impact of spatial, temporal, and configurational dispersion on team functioning. The

end of the chapter now focuses on techniques for managing virtual teams, including intercultural communication competences, trust development techniques, developing virtual teams, and leadership.

- Chapter 16: Revised this chapter to focus on team performance management systems. Guidance is provided in developing measurements for individual and team performance, along with a new discussion of practical skills for designing, measuring, and implementing team performance evaluation systems based on Aguinis, Joo, and Gottfredson (2011). Practical guidance on giving performance feedback to individuals and teams in a productive manner is provided.
- Chapter 17: Reframed the chapter to situate team building and team training within the contemporary concept of team development interventions. New discussion emphasizes the development of the attitudes, behaviors, and cognitions (the ABCs) of teamwork. Revised discussion of team building includes a new activity called "I like, I wish" to develop interpersonal relationships. Expanded discussion of team training includes best practices drawn from recent research: conducting a needs analysis, fostering a team-training environment, designing an effective program, evaluating the program, and sustaining training impact.

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We both appreciate the communication studies, psychology, business, and engineering students in our group dynamics and teamwork classes, who have helped teach us what is important about how teams operate. We thank the many students who also provided feedback on drafts of this edition. The support of various editors at SAGE Publications has been invaluable. We have also benefited from the many anonymous academic reviews of the book and proposed revisions.

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About the Authors

Daniel Levi is a professor in the Psychology and Child Development Department at Cal Poly, San Luis Obispo, California. He holds an MA and a PhD in environmental psychology from the University of Arizona. He teaches classes in teamwork and in environmental and organizational psychology. His teamwork class was designed primarily for engineering and business students at Cal Poly. He has conducted research and worked as a consultant with factory and engineering teams for companies such as Nortel Networks, TRW, Hewlett-Packard, and Philips Electronics. In addition, he has worked on international team research projects in Europe and Asia.

Dr. Levi's research and consulting with factory teams primarily focused on the use of teams to support technological change and the adoption of just-in-time and quality programs. This work examined a variety of team issues, including job redesign, training, compensation, supervision, and change management approaches. His work with professional teams primarily was accomplished with engineering design teams. These projects examined the use of concurrent engineering, self-management, and the globalization of teams. The topics of this work included the impact of information technology on teams, facilitation and training needs for professional teams, and the impacts of organizational culture and leadership.

Early work on the book was sponsored by an engineering education grant from NASA. This project focused on the development of teamwork skills in engineering students working on multidisciplinary projects. This project led to the development of cases and activities for learning teamwork skills and research on teamwork training and evaluating and rewarding student teams. Recent research on student teams examines gender and cross-cultural issues, social support within teams, and bullying and hijacking in student teams.

David A. Askay is an associate professor in the Communications Studies Department and faculty fellow in the Center for Innovation and Entrepreneurship at Cal Poly, San Luis Obispo. He earned an interdisciplinary PhD in organizational science from the University of North Carolina at Charlotte (2013) and teaches in the areas of group communication, organizational communication, and design thinking. His recent research investigates group decision making using artificial intelligence, socialization of online gig workers, and group identity in hidden organizations.

Introduction

There are two sources of information about teamwork. First, there is a large body of research in psychology and the social sciences called group dynamics that examines how people work in small groups. This research was collected over the past century and has developed into a broad base of knowledge about the operation of groups. Second, the use of teams in the workplace has expanded rapidly during the past three decades. Management researchers and applied social scientists have studied this development to provide advice to organizations about how to make teams operate more effectively. However, these two areas of research and knowledge often operate along separate paths.

The purpose of this book is to unite these two important perspectives on how people work together. It organizes research and theories of group dynamics in order to apply this information to the ways in which teams operate in organizations. The concepts of group dynamics are presented so they are useful for people who work in teams and also to enlarge their understandings of how teams operate. It is hoped that this integration helps readers better understand the internal dynamics of teams so they can become more effective team leaders and members.

The larger goal of this book is to make teams more successful. Teams are important in our society, and learning teamwork skills is important for individual career success. This book presents many concepts related to how teams operate. In addition, the chapters contain application sections with techniques, advice for leading virtual teams, case studies (called Team Leadership Challenges), surveys, and activities designed to develop teamwork skills. The appendix contains tools and advice to help students in project teams. Teamwork is not just something one reads about and then understands; teamwork develops through guided experience and feedback. This book provides a framework for teaching about teams and improving how teams function.

Overview

The 17 chapters in this book cover a wide range of topics related to group dynamics and teamwork. These chapters are organized into four parts: characteristics of teams, processes of teamwork, issues teams face, and organizational context of teams. An appendix provides advice and tools to support student project teams.

Part I: Characteristics of Teams

Chapters 1 and 2 provide an introduction to group dynamics and teamwork. Chapter 1 explains the differences between groups and teams. This chapter also

examines the purpose of teams in organizations and why they are increasing in use. It concludes with a brief history of both the use of teams and the study of group dynamics.

Chapter 2 explores the characteristics of successful teams. It explains the basic components necessary to create effective teams and examines the conditions and characteristics of successful work teams. It presents both traditional perspectives toward team success and a positive-psychology perspective. In many ways, this chapter establishes a goal for team members, whereas the rest of the book explains how to reach that goal.

Part II: Processes of Teamwork

Chapters 3 through 6 present the underlying processes of teamwork. Chapter 3 examines the processes and stages that relate to forming teams. Team members must be socialized or incorporated into teams. Teams must establish goals and norms (operating rules) to begin work. These are the first steps in team development.

Chapter 4 presents some of the main processes and concepts from group dynamics that explain how teams operate. Working together as a team affects the motivation of participants, both positively and negatively. Team members form social relationships with one another that help define their identities as teams. Teams divide tasks into different roles to coordinate the work. The behaviors and actions of team members can be viewed as either task oriented or social, both of which are necessary for teams to function smoothly. Teams are dynamic entities that adapt to changes and learn how to work together more effectively.

One of the underlying concepts that defines teamwork is cooperation. Teams are a collection of people who work cooperatively together to accomplish goals. However, teams often are disrupted by competition. Chapter 5 explains how cooperation and competition affect the dynamics of teams.

Team members interact by communicating with one another. Chapter 6 examines the communication that occurs within teams. It describes the communication process, how teams develop supportive communication climates, and the effects of emotional intelligence on communication. The chapter also presents practical advice on how to facilitate team meetings and develop skills that help improve team communication.

Part III: Issues Teams Face

The third part of the book contains seven chapters that focus on a variety of issues that teams face in learning to operate effectively. Chapter 7 examines conflict and conflict resolution in teams. Although conflict often is viewed as a negative event, certain types of conflict are both healthy and necessary for teams to succeed. The chapter explains the dynamics of conflict within teams and discusses various approaches to managing conflict in teams.

Chapter 8 describes how power and social influence operate in teams. Different types of power and influence tactics are available to teams and their

members; the use of power has wide-ranging applications and effects on teams. In one important sense, the essence of teams at work is a shift in power. Teams exist because their organizations are willing to shift power and control to teams.

The central purpose of many types of teams is to make decisions. Chapter 9 examines group decision-making processes. It illustrates operative conditions when teams are better than individuals at making decisions and the problems that groups encounter in trying to make effective decisions.

Chapter 10 presents various approaches to understanding leadership, with an emphasis on leadership models that are useful for understanding team leadership. The chapter examines self-managing teams in detail to illustrate this important alternative to traditional leadership approaches.

The different methods that teams use to solve problems are examined in Chapter 11. The chapter compares how teams solve problems with how teams should solve problems. The chapter presents a variety of problem-solving techniques and processes to help improve how teams analyze and solve problems.

Creativity, innovation, and design thinking are discussed in Chapter 12. The chapter examines the evolution in skills and mindsets required of team members as they move from creativity to innovation in organizational contexts. Next, the process of design thinking—a collaborative approach to creativity and innovation—is thoroughly described with ample examples and techniques. The conclusion describes different factors that discourage creativity in teams and presents some techniques that foster team creativity.

Chapter 13 examines how diversity is a resource that offers multiple perspectives to teams. However, individual, social, and cognitive processes can promote stereotypes and in-group favoritism that interferes with these benefits. Managing group processes to facilitate information elaboration is necessary to fully benefit from diversity. Supporting diversity in teams also requires fostering an inclusive work group climate.

Part IV: Organizational Context of Teams

The final section of the book presents a set of issues that relate to the use of teams in organizations. Chapter 14 examines the relationship between teams and culture. Culture defines the underlying values and practices of a team or organization. Teams develop cultures that regulate how they operate. Work teams are more likely to be successful if their organization's culture supports them. International culture has many impacts on teamwork. Transnational teams need to develop a hybrid culture that mediates the cultural differences among its members. Cultural intelligence is a set of characteristics that facilitates cultural adaptation and team success.

Although teams often are thought of as people interacting directly with one another, Chapter 15 examines the impacts of teams that interact through technology. Virtual teams comprise members who may be dispersed around the world and use a variety of technologies to communicate and coordinate their efforts. However, most teams rely on communication technologies. The selection and use of these technologies change some of the dynamics of the teams' operations.

Chapter 16 examines approaches to evaluating and rewarding teams. One of the keys to developing effective teams is creating a mechanism to provide quality feedback to teams so they can improve their own performance. Performance evaluation systems help provide feedback, while reward programs motivate team members to act on this information.

Team development interventions, which offer various approaches for improving how teams operate, are the focus of Chapter 17, the final chapter. Organizations use team-building techniques to help teams get started, overcome obstacles, and improve performance. Teamwork training helps develop people skills so that everyone can work together more effectively.

Appendix: Guide to Student Team Projects

One of the reasons students want to learn about group dynamics is to improve the effectiveness of their teams at work and school. As a teacher of group dynamics and teamwork, I require students to work on a large project throughout the course. Working on their team project provides the students with an opportunity to try out the ideas they are learning in the course.

The Guide to Student Team Projects contains some of the tools and advice that students need to successfully complete a team project. The appendix covers topics, such as how to start a team, plan a team project, monitor the progress of the team and project, write as a team, and end the team. This is practical advice on techniques and activities to help improve the team's performance.

The student project teams in my classes range from five to seven members who are randomly appointed to the team. They are given a large and poorly structured assignment, requiring them to clarify and negotiate the specifics. The teams must conduct periodic group process evaluations so that they regularly discuss and try to improve the teamwork process. Although I grade the quality of the team's final product, the students grade the performance of the individual team members. (This is a very important step, and we spend class time discussing how to do this.)

Although this is a guide for student projects, the tools in the appendix are useful for many types of project teams.

Learning Approaches

Learning how to work in teams is not a matter of simply reading about group dynamics. Fundamentally, teamwork is a set of skills that must be developed through practice and feedback. In addition to presenting information about how teams operate, this book contains four other types of material that are helpful for developing teamwork skills: application sections, case studies, surveys, and activities.

Many chapters in the book incorporate application sections. The purpose of these sections is to provide practical advice on applying the concepts in the

chapters. These sections focus on presenting techniques rather than theories and concepts. These techniques can be applied to the existing teams or can be used with a team in a class to practice the skills. Virtuality is now in the fabric of many teams. Most chapters contain a discussion of virtuality and provide practical advice for dealing with the group dynamics problems created by working in a virtual team setting.

All chapters end with case studies and teamwork activities. The case studies, called Team Leadership Challenges, present a difficult team problem and contain discussion questions for providing advice to the team's leader. The cases use a variety of student and work teams. By using the concepts in the chapter, the cases can be analyzed and options for the team leaders developed.

Eight of the chapters contain brief psychological surveys that examine a personal orientation toward a teamwork issue presented in the chapter. Survey topics range from attitudes toward teamwork, to cooperativeness, to preferred conflict styles, to opinions about team rewards. Discussion questions after the surveys help students and other team members understand the impact of individual differences on teamwork.

The teamwork activities examine a topic in the chapter and then include a set of discussion questions designed to apply what has been learned to actual teams. Some of the activities are structured discussions or small-group exercises. However, most of the activities are structured observations of how teams operate. One of the most important ways to improve both one's teamwork skills and the operation of teams is to learn how to be a good observer of group processes. These observation activities are constructed to develop these skills.

There are several options that can be used for the observation activities. If the observers belong to functioning teams, then they can observe their own teams. For example, a teamwork class might have students working on project teams. Use the observation activities to study and provide feedback to the project teams, or create groups in class settings and give group assignments. There are many books on small-group activities to use to create assignments for the groups. Small-group discussions of the Team Leadership Challenges provide an alternative activity to observe how groups interact. A class can use several groups with an observer assigned to each group or a single group that performs while being surrounded by many group process observers. Finally, ask students to find a team that they can observe as part of an ongoing class project.

Each of the activities includes an objective, an activity, analysis, and discussion sections. The structure of the activities makes them suitable for homework assignments or for entries in group dynamics journals. The basic structure of the written assignments includes answering the following questions: What did you observe? How did you analyze this information? How would you apply this knowledge?

By working through the applications, cases, surveys, and activities presented here, team members gain practical skills and knowledge that can be directly applied to improve the operations of their teams and the ultimate success of teamwork.

PART

I

Characteristics of Teams

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CHAPTER 1

Understanding Teams

A team is a special type of group in which people work interdependently to accomplish a goal. Organizations use many different types of teams to serve a variety of purposes. The use of teams to perform work has a long history, but during the past few decades, organizational teamwork has changed: It has expanded rapidly because of changes in the nature of work and the structure of organizations. The scientific study of group dynamics provides useful insights into how teams operate and how they can be improved.

Learning Objectives

1. Understand the importance of groups and teams.
2. Distinguish between groups and teams.
3. Describe how teams are used in organizations.
4. Explain the differences between work groups, teams, and self-managing teams.
5. Understand why the use of teams by organizations is increasing.
6. Understand how the study of group dynamics has changed over time.

1.1 Why Groups and Teams Matter

Groups are central to our lives, our work, and our society. Interaction with groups—familial, social, educational, occupational, and political—profoundly shapes our sense of who we are, what we do, and what we believe. The achievements of groups can be inspiring, such as firefighter crews battling wildfires to engineers developing the next technological breakthrough. Indeed, most great accomplishments of human progress resulted from groups of humans working together. Our participation in groups can be a powerful source of identity, belonging, meaning, and achievement.

Teamwork can represent the best of us, but it can also embody the worst. As inspiring as displays of effective teamwork may be, we often struggle to replicate similar success in our own experiences. Unfulfilling prior group interactions and projects lead people to approach group work with apprehension, frustration, and even hate (Sorensen, 1981). People also understand teamwork very differently (Rentsch, Heffner, & Duffy, 1994). This makes it ineffective to bring people together, call them a team, and hope that it all works out. Yet, despite all the group projects that educators, managers, and organizations assign, relatively little time is spent on learning about the group dynamics that effectively create and sustain teams.

Reliance on teamwork is only increasing in the workplace. Responding to society's increasingly complex challenges requires integrating disparate skills and knowledge. Teamwork is among the most heavily valued skills by employers across industries (NACE, 2019). However, the importance of understanding group dynamics extends well beyond this. It provides insights into navigating the social structures and organizations present in our everyday lives (Fine, 2012). It makes us more aware of the invisible forces that influence our behaviors and the behaviors of those around us. It also empowers us to play a more active role in shaping these forces. Through understanding group dynamics, we learn more about ourselves, our workplaces, and our interactions with others.

1.2 Defining Groups

A group is more than just a collection of people. There is a difference between the people who are in a park, the work group that is assembling a product, and the team playing football. The definition of a group can be just as varied, with scholars categorizing groups based on their size, their features, and the contexts in which they operate. A group is defined as *two or more individuals who mutually influence each other while interacting to achieve a common goal*. When broken down into its parts, this definition helps us to understand some essential characteristics of groups.

A group consists of *two or more individuals*. The minimum number of members to be considered a group is surprisingly unresolved. Some argue that dyads (two people) are more ephemeral, evoke different and stronger emotions, and are simpler than groups (Moreland, 2010). Others assert that group processes, like ostracism and social loafing, still emerge in dyads (Williams, 2010). While the minimum number of members is debated, groups do not have an upper limit. Groups include people in a stadium doing "the wave," a flash mob performing a dance, or thousands of people collaborating on a Wikipedia page.

Group members *mutually influence each other*. As individuals interact, they shape the feelings, attitudes, behaviors, and cognitions of each other (Bell, Brown, Colaneri, & Outland, 2018). It is through their actions (and inactions) that group members can foster (or hinder) social relationships, rally (or demoralize) the group, share (or withhold) their perspectives, and reinforce (or change) the norms that govern group behaviors. Group interactions are always

happening, and they are continually producing some influence on the operation of the group. Some interactions may help the group adapt to changing circumstances, make better decisions, and manage conflict. Others can constrain action, produce poor decisions, and fan strife among members. Often, both happen in groups at the same time.

Finally, group members are *interacting to achieve a common goal*. Groups need to have a reason to exist. Groups like families, friends, and social organizations generally have a goal of enabling interpersonal relationships or providing affection and belonging. Work groups operating in the context of organizations are directed to achieve organizational goals, such as assembling a product or making strategic decisions. As group members interact, two psychological processes tend to occur: social identification and social representation (Hayes, 1997). *Social identification* refers to the recognition that a group exists separately from others. It is the creation of a belief in "us versus them." Identification is both a cognitive process (classifying the world into categories) and an emotional process (viewing one's group as better than other groups). *Social representation* is the shared values, ideas, and beliefs that people have about the world. Over time, belonging to a group changes the ways its members view the world. The group develops a shared worldview through member interactions.

While this definition may conjure a straightforward and static view of groups, the reality is more nuanced. In fact, groups are always changing. They evolve in response to earlier successes and failures. Social relationships develop as members express differing options and preferences. Individual motivation and commitment waxes and wanes as outside pressures interfere with group goals. Groups emerge from the ongoing interpersonal interactions that occur between members—their group dynamics (Donnellon, 1996). At each step of the way, group dynamics continually create, shape, and redefine how members interact and relate to each other. The steps taken determine the group's success.

1.3 Defining Teams

Despite the prevalence of teams in organizations, the scholarly distinction between groups and teams can be fuzzy and inconsistent. Some simply consider teams to be groups that work in organizations (Parks & Sanna, 1999). However, scholars often classify a team as a particular type of group that requires higher levels of coordination and collaboration. Teams are structured groups of people working on defined common goals that require coordinated interactions to accomplish their tasks (Forsyth, 2018). By integrating complementary skills and knowledge, teams can tackle more complex problems, tasks, or goals. This definition emphasizes a key feature of a team: that members work interdependently on a common project for which they all are accountable. However, other qualifiers can distinguish groups from teams.

Katzenbach and Smith (2001, 2015) distinguish between groups and teams based on their performance results. They assert that the performance of work groups is based on individual contributions. Imagine a group report in which

each member writes a different section, and someone simply combines them. Here, members are not actively collaborating with each other. By contrast, team performance is based on both individual contributions and collective work products that manifest from joint contributions. Teamwork is seen in a group report written collaboratively, whereby members build upon the ideas of others. Effective teams have members who are committed to their common purpose, have specific performance goals connected to this purpose, have the right mix of complementary skills, have agreement on how the work will get done, and hold each other accountable for performance.

Another approach to understanding teams focuses on their teamwork behaviors: *how* teams go about doing their tasks (Fisher, 2014; Marks, Mathieu, & Zaccaro, 2001). Teamwork consists of the interactions that occur between individuals. Several behaviors are associated with teamwork, such as decision making, situational analysis, information sharing, and self-evaluation. However, decades of research have identified only a handful of teamwork behaviors that appear to be universally relevant across teams or tasks. Of these, the most prevalent are coordination, communication, and adaptability (Salas, Reyes, & McDaniel, 2018).

Teams can be defined in terms of their interdependence, shared accountability, performance results, and behaviors. Additionally, we can see that *group* is a more inclusive term than *team*. Groups range in size from two to thousands, whereas teams have a narrower range of sizes. A dating couple may be considered a group but not a team. Political parties and social organizations are groups but not teams. Members of an organizational work group might share information and have overlapping goals, but they are not significantly interdependent in achieving them. A team is not simply people who belong to the same group or who are jointly functioning in the same place, such as students listening to a lecture. A team typically operates within an organizational context and is composed of 3 to 12 people with interdependent goals, complementary skill sets, and differentiated roles. Research on groups typically is conducted in laboratory settings, whereas research on teams typically is done in field studies that focus on the use of teams in the workplace (Kerr & Tindale, 2004).

Because there is no firm dividing line between a group and a team, the use of these terms in this book is somewhat arbitrary. When referring to research on group dynamics, especially laboratory research, the term *group* is used. When talking about applications in work environments where people are interdependent, the term *team* is used. For the in-between cases, *group* and *team* are used interchangeably.

1.4 Why Organizations Use Teams

As ubiquitous as teamwork appears in contemporary organizational life, this is a relatively recent development. Since the 1900s, scientific management has been the dominant approach to organizing people to perform tasks, which uses managerial control to produce certainty and predictability (Taylor, 1923). It remains in

use today across many industries to efficiently make standardized products and services in large quantities.

In scientific management, managers or technical experts analyze a task and divide it into interconnected small activity units that are then performed by individuals. The system is designed such that each activity is linked to another activity, and individuals work separately to complete the entire task. Imagine workers on an assembly line. The role of the manager is to conform worker behaviors to the needs of the system, as deviation produces quality defects and inefficiencies. This requires that managers monitor, control, and reward or punish each worker's individual performance. In other words, managers think and control while workers execute.

This traditional approach works very well under certain conditions, such as call centers, assembly plants, and fast-food restaurants. It requires that the task remains consistent for some time because it is difficult and costly to change the system. It requires that the process not be too complex or easily disrupted because the workers doing routine activities are unaware of what happens in other parts of the system. It focuses on productivity and often ignores concerns about quality and customer service because these factors require a greater commitment to the job. It assumes that there are workers who are willing to perform routine activities under controlled situations. Under these conditions, scientific management is often the best approach, and the time and expense of developing teams are not needed.

The world, however, has changed since Taylor outlined the principles of scientific management, bringing with it new challenges for organizations. Modern organizations are shifting to teamwork because of changes in the characteristics of organizations and work.

Organizational Characteristics

New technologies are disrupting industries, connecting people in new ways, and transforming production, management, and governance (Schwab, 2016). Expanding markets and global competition demand that businesses rapidly innovate to meet shifting consumer needs. Addressing complex challenges like space exploration, cybersecurity, and climate change requires integrating knowledge that is spread across many diverse specialists. Organizations that survive are those that learn and adapt. Take, for example, the now-bankrupt video rental company Blockbuster. Once the market leader, they once laughed off a proposed partnership with Netflix in 2000 (Sandoval, 2010). Less than 10 years later, Blockbuster's relevance evaporated during the rise of streaming video rentals. While Blockbuster was highly efficient in distributing rentals of physical media, this became an obsolete need in the marketplace. Traditional management approaches and mindsets excel at creating a product efficiently—but not necessarily the right product. As organizations adapt to changing and uncertain environments, managers no longer hold all the answers for directing what workers should be doing; they may not even know what tasks need to get done or how to do them.

Faced with increasing complexity, uncertainty, and ambiguity, organizations embrace teamwork as a structure that facilitates learning, adaptation, and creativity. Teams are essential when the goal is to innovate or improve the way a product is made or a service is provided; when the job is complex; when customer service and quality are important; or when rapid change is necessary. These are the conditions that create the need for teams (Helper, Kleiner, & Wang, 2010). These conditions also encourage organizations to shift to simpler organizational hierarchies, a transition driven by the desire to save costs and increase flexibility by reducing layers of management. To a certain extent, teams have replaced managers, and teams now often carry out many traditional management functions. After all, if team members are the knowledge specialists and there are limited routine tasks to oversee, then what is the purpose of a manager? Emerging from this perspective is a shift from managing people to follow the status quo to leading people through transformation.

Finally, teams provide other benefits to organizations (Delarue, Van Hootegem, Procter, & Burridge, 2008). Organizations using a teamwork approach are associated with greater operational outcomes (e.g., productivity, innovation, quality, and flexibility) and financial outcomes (e.g., profitability and reducing costs). Additionally, employees on teams can experience greater job satisfaction, commitment, trust, and reduced turnover and absenteeism. Teams provide a way to integrate and coordinate the various parts of an organization and do this in a more timely and cost-effective manner than traditional organizational hierarchies. Teams execute tasks better, learn faster, and change more easily than traditional work structures, which are all characteristics required by contemporary organizations.

Job Characteristics

Technological change, offshoring, and automation have been replacing routine work for decades, particularly in developed countries (Reijnders & de Vries, 2018). Nonroutine jobs involve more complexity, interdependence, uncertainty, variety, and change than routine jobs. Jobs of this type are difficult to manage in traditional work systems but are well suited for teamwork (Mohrman, Cohen, & Morhman, 1995).

Nonroutine jobs requiring teamwork are growing in many contemporary work settings like health care, marketing, sales, research, engineering, and design. Imagine designing a new product for the marketplace. Design, manufacturing, marketing, and sales of the product require expertise from a variety of disciplines and support from many parts of an organization. For example, few individuals possess all the necessary knowledge and expertise to bring a product to completion, but a team approach can integrate diverse knowledge. In addition, using team members from several departments enhances support within the organization for the new product. The team members help coordinate the project throughout the organization.

The complexity of a problem or task often requires multiple forms of expertise. No one person may have all the skills or knowledge to complete a task or

solve a problem, but a team may have sufficient expertise to deal with the task or problem. Complexity also implies that problems may be confusing or difficult to understand and solve. Here, the value of teamwork lies not only with multiple forms of expertise but also with multiple perspectives. People learn from each other during group interactions, which helps them to gain new perspectives in analyzing problems and developing solutions. Diversity is a resource that benefits teams.

1.5 Purposes and Types of Teams

Organizations use teams in a variety of ways. Because of this variety, there are many ways to classify teams, and these classifications help explain the psychological and organizational differences among different types of teams. One important distinction is the relationship of the team to the organization. Teams vary depending on how much power and authority they are given by their umbrella organizations.

How Organizations Use Teams

Teams serve a variety of functions for organizations. The day-to-day operations of organizations can be shifted to work teams that build products or provide services (e.g., factory production teams or airline crews). Design teams investigate ill-structured problems to innovate new solutions. Advisory teams gather information, provide recommendations, and deal with special problems. For instance, a team might be created to suggest improvements in work processes. Teams can help manage coordination problems by linking disparate parts of organizations. Budget or planning committees might be composed of members from several departments, for example. Finally, teams can help organizations adapt by planning for the future or managing transitions.

Sundstrom, McIntyre, Halfhill, and Richards (2000) identify six types of work teams based on the functions they perform:

1. Production teams, such as factory teams, manufacture or assemble products on a repetitive basis.
2. Service teams, such as maintenance crews and food services, conduct repeated transactions with customers.
3. Management teams, composed of managers, work together, plan, develop policy, or coordinate the activities of an organization.
4. Project teams, such as research and engineering teams, bring experts together to perform a specific task and then disband.
5. Action or performing teams, such as sports teams, musicians, military units, and surgical teams, engage in brief performances that are

repeated under new conditions and that require specialized skills and extensive training or preparation.

6. Parallel teams are temporary ones that operate outside normal work, such as employee involvement groups and advisory committees that provide suggestions or recommendations for changing an organization.

Classifying Teams

Teams are classified by ways other than the types of activities they perform (Devine, Clayton, Philips, Dunford, & Melner, 1999). They can be classified by their degree of virtuality—the extent to which the team is geographically dispersed and uses technology (Gilson, Maynard, Jones Young, Vartiainen, & Hakonen, 2015). Ad hoc or temporary teams are studied in such contexts as software development (Prikladnicki, Perin, Marczak, & Dutra, 2017), health care (Kim, Song, & Valentine, 2018), and online multiplayer games (Kou & Gui, 2014). Swift-starting action teams (Wildman, Fiore, & Burke, 2011; Wildman et al., 2012) have highly trained members who have no prior work experience with one another yet must perform demanding, complex, time-pressured projects from the moment they start working together (e.g., cybersecurity response, military combat units, disaster response teams).

One of the most important distinctions among types of teams is empowerment, or how much power and authority is allocated to the team by the organization (Spreitzer, 1995). This shifting of power affects leadership, decision making, and how the work activities of team members are linked. Moreover, team members that perceive a high sense of control over their work experience greater job satisfaction and organizational commitment (Seibert, Wang, & Courtright, 2011).

There are three options for organizing people in the workplace: a work group, a team, or a self-managing team (McGrath, 1984). The differences among these options are presented in Table 1.1. *Work groups* are part of the organization's hierarchical system. Supervisors or managers who control the decision-making process lead these work groups. Group members typically work on independent tasks that are linked by the supervisor's direction or by the work system.

Teams have some limited power and authority so they can operate somewhat independent of the organization's hierarchy. Their leaders are selected by management and given some managerial power. Team leaders can use a variety of techniques for making decisions, such as using the team to provide advice about decisions, having the team vote, or using consensus to make decisions. Team members' work activities are interdependent and coordinated by the leaders.

Self-managing teams are given significantly more power and authority than traditional work groups and are more independent of an organization's hierarchy. Team members typically select their leaders; as a result, the leaders have limited power and must facilitate—rather than control—their teams' operations. The leaders must rely on democratic or consensus decision making because they have no authority to make teams accept decisions. The work of

Table 1.1 Organization of People Into Work Groups

	Work Group	Team	Self-Managing Team
Power	Part of organization's hierarchy, management controlled	Linked to organization's hierarchy, some shift of power to team	Linked to organization's hierarchy, increased power and independence
Leadership	Manager or supervisor controlled	Leader, with limited managerial power, selected by organization	Leader, the team facilitator, selected by the team
Decision making	Authoritarian or consultative	Consultative, democratic, or consensus	Democratic or consensus
Activities or tasks	Independent	Interdependent, coordinated by leader	Interdependent, coordinated by team members

Source: Adapted from McGrath, J. (1984). *Groups: Interaction and performance.* Englewood Cliffs, NJ: Prentice Hall.

team members is highly interdependent, and all team members work together to coordinate activities.

1.6 History of Teams and Group Dynamics

The use of teams in organizations has changed significantly over the past century. During that period, the scientific study of group dynamics has evolved into an interdisciplinary research field.

Foundations of Teamwork

The industrial revolution shifted most work organizations to a hierarchical approach that used scientific management to design jobs (Taylor, 1923). Manufacturing jobs were simplified, and professionals and managers were brought in to ensure that the production system operated efficiently. Scientific management was a system that worked well but one that also created problems: It alienated workers, who then became increasingly difficult to motivate. It became more difficult to set up as technical systems increased in complexity. It was inflexible and difficult to change. Finally, it was difficult to successfully incorporate new goals aside from efficiency (such as quality).

The scientific management model of organizations began to be questioned during the 1920s and 1930s because of social problems in the workplace. The

Hawthorne studies—research projects designed to examine how environmental factors, such as lighting and work breaks, affected work performance—inadvertently revealed that social factors had a meaningful impact on performance (Mayo, 1933). In some cases, because people were being studied, they tried to perform better (what social scientists now call the *Hawthorne effect*). In other cases, group norms limited or controlled performance. For example, studies of the "bank wiring room" showed that informal group norms had a major impact on the performance of work groups (Sundstrom et al., 2000). The "group in front" frequently engaged in conversation and play but had high levels of performance, while the "group in back" engaged in play but had low levels of performance. The work groups enforced group production norms: Members who worked too fast were hit on the arm by coworkers, a practice known as *binging*. In addition to the substantial impact on productivity of these informal work group norms, work groups were able to effectively enforce norms, resulting in positive or negative benefits to the organization.

During the 1960s and 1970s, organizational psychologists and industrial engineers refined the use of teams at work. Sociotechnical systems (STS) theory provided a way to analyze what people do at work and to determine the best way of organizing them (Appelbaum & Batt, 1994). According to STS, teams should be used when jobs are technically uncertain rather than routine, when jobs are interdependent and require coordination to perform, and when the environment is turbulent and requires flexibility. Many jobs today meet these criteria. The most famous applied example of STS was at the Volvo car facilities in Sweden. The assembly line approach to work was redesigned to be performed by semiautonomous groups. Although there were several successful demonstrations of the value of using teams at work, this teamwork approach did not become popular.

The contemporary emphasis on teamwork has its origins in another change that occurred during the 1970s. The rise of Japan as a manufacturing power resulted in the distribution of high-quality, inexpensive products into the global marketplace. When business experts visited Japan to see how Japanese goals had been achieved, they found that teamwork in the form of *quality circles* seemed to be the answer. Quality circles are voluntary teams of production workers and supervisors who meet to analyze problems and develop solutions to quality problems in the manufacturing process. Throughout the 1980s, companies in the United States and Europe experimented with quality circle teams (and later total quality management teams). The jobs performed by workers were still primarily individual, but workers were organized in teams as a way to improve quality and other aspects of production.

The focus on quality in manufacturing launched the teamwork movement, but other factors have sustained it. The increased use of information technology, the downsizing of layers of management, business process reengineering, and globalization have all contributed to the use of teams. Teamwork in U.S. companies expanded rapidly during the 1990s and included more professional and managerial teams. Research shows that 85% of companies with 100 or more employees use some type of work teams (Cohen & Bailey, 1997). In addition, some businesses are restructuring and using teams as a central element in the integration of various parts of their organizations (Mohrman et al., 1995).

Because of the changing nature of teams, three issues are increasingly important: dynamic composition, technology and distance, and empowerment and delayering (Tannenbaum, Mathieu, Salas, & Cohen, 2012). Teams now operate in a more dynamic and complex environment. Rather than stable teams that work together for long periods of time, contemporary teams are often more transitory with changing membership. Teamwork can be done by people working together in one place or distributed around the globe. In either case, teams are relying on technology to support their communications and work. As organizations rely more on the use of teams, power is shifting from traditional organizational hierarchies to teams. Teams are replacing many traditional management functions.

Contemporary technological, societal, and economic changes are creating monumental shifts in our work practices, organizational structures, and teams. It is an exciting time to study teamwork and group dynamics. First, globalization has profoundly impacted work environments (Earley & Gibson, 2002). Research investigating the impact of different types of cultures and diversity on teamwork is essential as the global workforce becomes more multinational (Kirkman, Shapiro, Lu, & McGurrin, 2016). This also underscores a critical limitation of our scientific knowledge of teams: most psychological research has been generated from people in western industrialized societies. This means that many "universal" assumptions and models about teams are based on studies of just 12% of the global population (Arnett, 2008). Many well-established conclusions about team effectiveness do not hold true when studied in different cultures (Feitosa, Grossman, & Salazar, 2018).

Second, technology offers new ways of studying team interactions, providing feedback to members, and augmenting teamwork. Humans are now collaborating alongside machine teammates—robots, artificial intelligence, and augmented reality. This spurs a need to better understand the implications of emerging technologies on group dynamics (Seeber et al., 2018). Crowd-based labor platforms enable larger, more diverse, more distributed, and more ephemeral groups to work together (Retelny et al., 2014). Wearable sensors are capable of tracking and measuring team members' interactions, including movements, proximity, posture, body movements, speaking time, and verbal activity (Chaffin et al., 2017). These sensors offer a promising way to investigate group interactions and to act as a real-time behavioral feedback tool. Finally, algorithms can monitor, evaluate, and fit team members to their most effective team structures (Zhou, Valentine, & Bernstein, 2018).

Foundations of Group Dynamics

An unfortunate gap exists between our understanding of work teams and the study of group dynamics. The scientific study of groups began at the turn of the 20th century with the work of Norman Triplett (1898). Triplett's research showed the effects of working alone versus working in a group. For example, he observed that bicycle racers who pedaled around a racetrack in groups were faster than those who pedaled around alone. This effect is called *social facilitation* because the presence of other people facilitates (or increases) performance.

Early studies in psychology had a similar perspective in that they were designed to show how groups affected individual performance or attitudes. Although this was group research, the focus was on individuals. Psychologists did not treat groups as an entity appropriate for scientific study. This perspective changed during the 1940s, however, because of the work of Kurt Lewin and his followers (Lewin, 1951). Lewin created the term *group dynamics* to show his interest in the group as a unit of study. For the first time, psychologists took the study of groups seriously rather than simply looking at the effects of groups on individuals. Lewin's innovations in research methods, applications, and focus still define much of the study of group dynamics today.

Lewin developed a new approach to research in psychology. He began with the belief that "there is nothing so practical as a good theory" (Lewin, 1951, p. 169). His innovation was in refining how theories in psychology should be used. He developed an approach called *action research*, where scientists develop theories about how groups operate and then use their theories in practical applications to improve the operations of groups. The process of applying a theory and evaluating its effects is then used to refine the theory and improve the operations of groups.

One of Lewin's primary concerns was social change. He believed it is easier to change a group than it is to change an individual. If the behavior of individuals is changed and the individuals return to their everyday life, the influence of the people around them tends to reverse the behavior change. If the behavior of a group of people is changed, the group continues to reinforce or stabilize the behavioral change in its members. Lewin developed models of organizational change and group dynamics techniques that are still used today.

Mainstream social psychologists returned to their focus on theory-oriented laboratory studies during the 1950s and 1960s. Their research primarily examined topics such as conformity and helping behavior, which focused on the effects that groups have on individuals rather than on group dynamics. Research on group dynamics shifted to sociologists like Robert Bales, who used the study of small groups to understand social systems. Their research used laboratory groups and led to the development of various systems for categorizing the group process, such as *interaction process analysis* (Bales, 1950).

During this period, organizational and humanistic psychologists studied a special type of laboratory group called *t-groups* (also called *encounter groups*). These small, unstructured groups were encouraged to engage in open and personal discussions, often over a series of days. Participation in these groups was supposed to increase self-awareness, interpersonal communication skills, and group process skills. Their popularity decreased as concerns with ethics and transfer of training issues raised questions about their value. (See Chapter 17 for a further discussion of these issues.)

By the 1990s, research on teamwork moved from social-psychology studies of small groups in laboratories to other disciplines (Stewart, 2010). Researchers from sociology, anthropology, political science, communication, business, and education now study aspects of group dynamics. Although psychological research remains dominated by laboratory studies on how groups operate, many other disciplines emphasize applied research and study teams in real-world settings. Theory on group dynamics is changing and becoming more sophisticated

(Hackman, 2012). Rather than simple models that look at cause–effect relationships, new models focus on the dynamic conditions that help teams manage their processes (Barley & Weickum, 2017; Driskell, Salas, & Driskell, 2018). Instead of looking at group behavior as the sum of individual variables, there is a focus on the emergent properties of teams.

The search to find the best approach to manage teams has been replaced by the recognition of what is termed *equifinality*—that there are many ways for a team to operate successfully. Even teams with similar resources, structure, leadership, and goals can vary on their performance (Barley & Weickum, 2017). With no singular way forward, teams need to discover and forge their own path to success. Teamwork training and group interventions from third parties are effective ways this can be achieved (Lacerenza, Marlow, Tannenbaum, & Salas, 2018). Additionally, fostering team reflexivity—when members collectively reflect upon and modify the group goals, approaches, interactions, and processes—can likewise increase team performance, satisfaction, commitment, and innovation (Chen, Bamberger, Song, & Vashdi, 2018; Konradt, Otte, Schippers, & Steenfatt, 2016; Schippers, Den Hartog, & Koopman, 2007; West, 2000). In learning about theories of group dynamics, you can gain a conceptual framework and vocabulary to aid in this process of reflexivity.

Summary

Groups are more than just collections of people. Groups have goals, interdependent relationships, interactions, structured relations, and mutual influence. Individuals are aware of their membership in groups and participate in order to satisfy personal needs. Although the distinction between groups and teams is not completely clear, the term *teamwork* typically is used to describe groups that are a part of sports or work organizations. Team members work interdependently to accomplish goals and have the power to control at least part of their operations.

Organizations are shifting away from individual work performed in hierarchical work structures and toward team-based operations. The changing goals in organizations that must deal with the evolving work environment are driving this shift. Jobs are becoming increasingly complex and interdependent, and organizations are finding that they must be more flexible. All these changes encourage the use of teamwork.

Organizations use teams in several ways. Teams provide advice, make things or provide services, create projects, and perform specialized activities. Teams also vary according to the power they have, their types of leadership and decision-making processes, and the tasks they perform. These factors define the differences among traditional work groups, traditional teams, and self-managing teams.

Working in small groups was common before the industrial revolution, but scientific management simplified jobs and created hierarchical work systems. The Hawthorne studies of the 1930s demonstrated the importance of understanding the aspects of work related to social relations. Following World War II, researchers began to experiment with work teams. During the 1960s, STS presented a way to analyze work and identify the need for teams. However, it was the rise of Japanese

manufacturing teams during the 1980s that led to the increased use of teamwork in the United States. Paralleling this growth in the use of teams, the social sciences developed the field of group dynamics, which focuses on understanding how groups operate. Today, group dynamics is a scientific field that provides information useful in improving the operations of teams.

Team Leadership Challenge 1

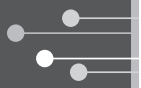
You are the manager of hundreds of workers in a car assembly plant. The plant has been traditionally organized, with the manager running the assembling line and supervising each employee individually. Each worker is proficient in carrying out a single task on the assembly line. Recently, however, workers began to be absent, gamble, and purposefully make mistakes—leaving necessary bolts loosened or placing broken glass to rattle around in doors—due to dissatisfaction with their working conditions.

You have heard a lot about the advantages of shifting to teamwork, which is supposed to improve worker morale and the quality of products. However, you have also heard that it can be challenging to create and manage teams. You are comfortable and capable as a traditional manager but think maybe you should try something new, such as teamwork.

What are the pros and cons of reorganizing the assembly line into a team? What would this look like? How much authority or control should you maintain over the team?

This was a similar circumstance facing General Motors (GM) at their Fremont factory in the 1980s. GM eventually formed a joint venture with Toyota, called NUMMI, intending to learn about their lean and team-based approach to manufacturing. Morale and quality improved, shifting the Fremont plant from among the worst-performing car factories in the United States to one of the best-performing factories. However, the success of this approach failed to spread to other factories at GM. The plant closed in 2010 and reopened as the Tesla Factory. *This American Life* offers an engaging podcast detailing this story called NUMMI 2015 (www.thisamericanlife.org/561/nummi-2015)

Survey: Attitudes Toward Teamwork



Purpose: Understand your attitudes about the use of teams at work. Do you believe that teams are an effective way to work? Do you enjoy the social aspects of teamwork? The answers to these questions may help you decide how you want to participate in teams.

Directions: Think about the last time you worked on a team project. Use the following scale to show how much you agree with the list of statements about teamwork:

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

_____ 1. Using a team was an effective way to do the project.

_____ 2. My team was good at resolving internal conflicts and disagreements.

_____ 3. The project the team performed was challenging and important.

_____ 4. I made new friends while working on the team.

_____ 5. My team developed innovative ways of solving team problems.

_____ 6. I really liked getting to know the other members of the team.

_____ 7. Management provided adequate feedback to the team about its performance.

_____ 8. Personal conflicts rarely disrupted the team's functioning.

_____ 9. My team had clear direction and goals.

_____ 10. Team members treated each other with respect.

_____ 11. My team was good at implementing the plans it developed.

_____ 12. The members of my team worked well together.

_____ 13. The assignment my team worked on was well suited for teamwork.

_____ 14. There was rarely unpleasantness among members of the team.

_____ 15. I learned a lot from working on this team.

_____ 16. Participating in the team helped develop my social skills.

_____ 17. My team was good at regulating its own behavior.

_____ 18. I felt supported by my teammates.

_____ 19. My team had good leadership.

_____ 20. The longer we worked together, the better we got along with each other.

Scoring: Add the scores for the odd-numbered questions to obtain the score for how you view the task aspects of teamwork. Add the scores for the even-numbered questions to obtain the score for how you view the social aspects of teamwork.

(Continued)

(Continued)

Discussion: What does this survey tell you about your attitudes toward the task and social aspects of teamwork? How should you deal with team members who have a negative attitude toward teamwork? What is the relationship between social and task aspects of teamwork?

Source: Adapted from Levi, D., & Slem, C. (1995). Team work in research and development organizations: The characteristics of successful teams. *International Journal of Industrial Ergonomics*, *16*, 29–42.

Activity: Working in Teams

Objective: Reflect upon your previous team experiences to identify the characteristics of effective and ineffective teamwork.

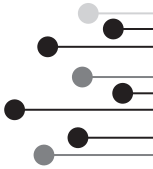
Activity: Think about your most recent positive team experience, where work was completed and members finished feeling closer to each other. Note the specific behaviors, interactions, and planning that produced this outcome. Next, repeat this exercise for your most recent negative team experience. Note the specific behaviors, interactions, and planning that produced this outcome. Meet with other class members, and create a list of the things that produce positive and negative team experiences.

Analysis: Once your group creates lists of the positive and negative things about team experiences, review the items and classify them as *task* or *social aspects* of teamwork. Task issues concern the team's competition of tasks, while social issues are the social and emotional aspects of working in teams. How does this task or social analysis relate to what you like and dislike about teams? You may also want to compare this analysis with the results of the Attitudes Toward Teamwork survey.

Discussion: There are benefits and problems with working in teams. What can be done to make teams more effective and more enjoyable? What team characteristics are important for you to have a positive experience?

CHAPTER

2 Defining Team Success



A successful team completes its task, maintains good social relations, and promotes its members' personal and professional development. All three of these factors are important for defining team success. To perform effectively, a team requires the right types of people, a task that is suitable for teamwork, good internal group processes, and a supportive organizational context. Team members need both an appropriate set of task skills and the interpersonal skills to work as a team. Although teams can perform a wide variety of tasks, appropriate team tasks require that the work of all members is integrated into the final products. The group process should maintain good social relations while, at the same time, organizing members to perform the task. Finally, the organizational context needs to support the team by promoting cooperation, providing resources, and rewarding success.

Successful teams have clear goals, good leadership, organizational support, appropriate task characteristics, and mutual accountability with rewards. However, the characteristics that predict team success vary depending on the type of team studied. Teams are increasingly used in the workplace. Teamwork provides many benefits to organizations and their employees, but it is a challenge for organizations to use teams successfully.

Learning Objectives

1. Understand three criteria for defining team success.
2. Explain how team composition, team tasks, team processes, and organizational context influence team success.
3. Describe effective teamwork processes.
4. Describe the characteristics of successful teams.
5. Examine how positive psychology contributes to team success.
6. Understand the implications of teams becoming a fad.

2.1 Nature of Team Success

One of the prerequisites to studying and understanding teamwork is defining the nature of team success. Scholars use surveys, interviews, and observations to study the functioning of teams. Often, this research investigates team structures (e.g., Hackman, 1987), behaviors (e.g., Marks et al., 2001), and emergent states (e.g., Kozlowski & Chao, 2018; Waller, Okhuysen, & Saghafian, 2016) and tries to relate them to external measures of team success.

Measuring the success of teamwork can be difficult. The characteristics that team members and leaders believe are important for success might not be the same characteristics that managers believe are important (Levi & Slem, 1995). Team members focus on the internal operations of the team; they look at the contributions that each member brings to the team and how well members work together. Managers focus on the team's impact on the organization; they are concerned with results, not with how the team operates. There is a danger in using too simplistic a view of success because it may focus on the wrong factors when trying to evaluate and improve a team.

According to Hackman (1987), there are three primary definitions of team success, relating to task performance, social relations, and the individual. First, a successful team meets or exceeds performance expectations. Second, team members develop social relationships that help them work together and maintain the team. Finally, participation in teamwork is personally rewarding for the individual because of the social support, the learning of new skills, or the rewards given by the organization for participation.

This definition of team success can be seen in action teams, such as firefighter crews. Obviously, completing the task of putting out the fire is a crucial criterion of success. However, it is also important that the crew members maintain a good working relationship with each other—it can diminish the cohesion of the team if individuals, for example, take unnecessary risks, distract others, or are afraid to voice concerns. It is likewise important that crew members do not get injured in the process. Extinguishing the fire is important but so is preserving the ability and desire of the team to continue fighting fires with each other in the future.

Completing the Task

From a management perspective, the definition of team success predominantly relates to its effectiveness at meeting or exceeding expectations on a task. For example, software engineering projects are often evaluated on target cost and time, while placing less emphasis on customer satisfaction or happiness (Agarwal & Rathod, 2006). A successful team should also perform the task better when compared to other ways of organizing people to perform the same task. Although this definition may seem simple, measuring the performance of teams can be difficult. For certain complex tasks, there may be no alternatives to teamwork, making it impossible to compare team and individual outcomes. For professional tasks requiring creativity or value judgments, there may be no clear ways

to determine which solutions are best (Orsburn, Moran, Musselwhite, & Zenger, 1990). One approach to such measurement problems is to determine whether the products or outputs of the team are acceptable to the owners, customers, and team members. However, these three perspectives may not agree with each other (Spreitzer, Cohen, & Ledford, 1999).

Completing a task as a team is a measure of success, but *project* success is not a demonstration of *team* success. Could the task have been completed without a team? What was the benefit of using a team for performing the task? For a particular task, there is sometimes little advantage to using a team. In fact, there are disadvantages. *Process losses* result from time dedicated to developing and coordinating the team, rather than focusing on completing the task. This can lead to the perception of "wasted" time (Hill, 1982; Steiner, 1972). Rather, the advantages of using a team emerge when they are wisely implemented and interdependent collaboration is necessary (Kozlowski & Ilgen, 2006).

If a project runs smoothly, people working individually under supervision often can perform the necessary task. If a project encounters difficulty, however, the value of a team is demonstrated by the ability of team members to integrate multiple perspectives to solve problems and motivate one another during the difficult period. Although a team takes time to develop, as people learn to work together, they are better able to handle future projects. Many benefits of creating a team occur over the long run rather than during the first project the team performs.

Developing Social Relations

Measuring task performance does not wholly capture the definition of team success. A successful team performs its task in such a way that it sustains or enhances the social relationships between members. Members should want to continue working together as a team in the future. Several interpersonal processes (e.g., conflict management, motivation, confidence) contribute to maintaining social relationships (Marks et al., 2001).

Cohesion is among the oldest and most studied variables in group dynamics (Greer, 2012). It broadly encompasses the degree to which members are attracted to the group and the work that it does. More cohesive teams exhibit higher levels of performance, effectiveness, cooperation, job satisfaction, social support, interdependence, and communication (Carless & De Paola, 2000; Gully, Devine, & Whitney, 1995). Cohesion comes from the emotional ties that team members develop during interactions with each other, such as goal setting, managing conflict, and giving feedback. Team members fail to develop good social relations when they do not communicate well, have interpersonal problems that interfere with task performance, and are unable to reward and motivate one another. Poor social relations limit the ability of a team to operate effectively.

A good example of the problem created when there is too much focus on task performance and too little on social relations is in the computer development team described by Kidder (1981). This team successfully developed a new computer system. However, in the stress of competition and time pressure,

the team members burned themselves out. At the end of the project, everyone was happy about the success, but the team members no longer wanted to work together. Was the team a success? Yes, it completed its task, but it failed to develop social relations that encouraged successful teamwork in the future. However, the capabilities of the team were lost at the end of the project due to exclusively focusing on the task. The organization benefited by getting a new computer system, but it did not improve its ability to use teams to successfully design computer systems in the future. This type of project burnout is all too common in many companies.

Benefiting the Individual

The third aspect of team success concerns the individual benefiting from their participation. People join groups for different reasons, and these reasons impact the cohesiveness and productivity of the group (Wax, DeChurch, & Contractor, 2017). People might enjoy working in teams because it offers a source of social belonging, emotional support, and identity (Baumeister & Leary, 1995; Hogg, Hohman, & Rivera, 2008). Teamwork may improve an individual's social or interpersonal skills (Katzenbach & Smith, 2015). Other members could be attracted to the people, goals, or activities of the group (Hogg & Turner, 1985). Some people join groups to meet an unrelated individual goal, such as professional networking, résumé building, or status attainment.

Dysfunctional group dynamics can stem from tensions between individual and group goals. Team members who perceive an alignment between individual and group goals exhibit higher levels of performance and cooperation (Crown & Rosse, 1995). Framing the goals of individual members in a way that aligns with team goals can be an effective strategy for enhancing team performance (Fairhurst, 2010). For example, if a member is strongly motivated by feelings of belonging, a team leader might emphasize the bonding and team building that will occur in a team. Also, the social and learning benefits from teamwork primarily come from successful teams. Working in dysfunctional teams may only teach members to avoid teamwork in the future.

In addition to personal benefits, participating in a team should help an employee's career in the organization. Successful contributions to a team should be reflected in the employee's performance evaluations (DeMatteo, Eby, & Sundstrom, 1998). Unfortunately, this often is not the case. Many organizations still focus on managing and rewarding individuals rather than teams. This can impede the success of teams, as feedback directed toward individuals refocuses attention toward individual performance to the detriment of team performance (DeShon, Kozlowski, Schmidt, Milner, & Wiechmann, 2004). Even when most of an employee's time is spent collaborating in a team, the typical performance evaluation system focuses on what an individual produces, rather than on the success of the team. Being a good team player or a social facilitator may go unrecognized, while people who distinguish themselves and stand out are rewarded. Individuals may also avoid joining a team if its goal has limited visibility or prestige within an organization, or if it does not produce easily measurable results

that lead to recognition and promotion. This conflict between individual and team performance is a major unresolved problem for teamwork in many organizations. (Approaches for dealing with this conflict are discussed in Chapter 16.)

2.2 Conditions for Team Success

The success of a team depends on four conditions. First, the team must have the right people to perform the task. Second, the task must be suitable for teamwork. Third, the team must combine its resources effectively to complete the task. Fourth, the organization must provide a supportive context for the team.

Team Composition

Team composition research examines how team member attributes tend to influence team success (Bell et al., 2018; Salas, Rosen, Burke, & Goodwin, 2009). This knowledge can inform who to put on a team, anticipate incompatibilities between members, or determine what training is needed. For example, Mathieu, Tannenbaum, Donsbach, and Alliger (2014) developed algorithms that predict the impact on performance of different combinations of team members over time. These algorithms are being used to select team members in space exploration (e.g., Mission to Mars) and other business contexts. Although team composition is important, team leaders rarely have the information, time, or ability to select an optimal team.

Team success is influenced by both surface- and deep-level attributes of team members (Bell et al., 2018). *Surface-level attributes* refer to visible demographic traits—such as age, sex, race, organizational tenure, and functional role—that shape how members interact with each other. For example, team members may draw upon stereotypes based on these attributes to make assumptions about other members, such as their competence, status, or reputation. As these assumptions play out in the interactions between members, it can impede team success by decreasing trust and information sharing. For example, a nurse may not bring up important information about how a patient is responding to a treatment because they defer to a physician's judgment, someone who is typically regarded as an expert on treatments (Mayo & Woolley, 2016). Alternatively, members who perceive themselves as dissimilar from the team can lead to decreased cooperation and performance (Shemla, Meyer, Greer, & Jehn, 2016).

Deep-level attributes include underlying personality traits, knowledge, skills, opinions, and values that become apparent as members interact over time. These attributes tend to have a greater impact on team performance than surface-level attributes (Bell, Villado, Lukasik, Belau, & Briggs, 2011). Of course, team success depends heavily on having team members with knowledge, skills, and abilities that match the task requirements. All teams—but particularly virtual teams—benefit from members with strong communication skills, high emotional intelligence, and resilience (Ferrazzi, 2014). Diversity of knowledge, opinions,

and background usually benefits teams. For example, teams whose members have differences of opinion can be more creative than like-minded teams. Management teams whose members have different functional or professional backgrounds are more innovative than are homogeneous teams (Guzzo & Dickson, 1996). However, diversity alone is not always a benefit to teams. The advantages of diversity emerge when members critically integrate their knowledge and are committed to their team's goals. (See Chapter 13 for a discussion of diversity and inclusion in teams.)

There are several ways in which individual attributes can impact the team (Mathieu et al., 2014). Attributes of powerful members can exert an inordinate influence on the team. For example, a leader's positive mood can spread throughout the team and enhance cooperation (Sy, Côté, & Saavedra, 2005). Sometimes, the attribute of the weakest or strongest member is most important. Having a single very negative team member can lead to dysfunctional group processes, hurt team morale and cohesion, and create conflict within the team (Kelly & Barsade, 2001). Alternatively, sometimes it is the aggregation (e.g., team average) of an attribute that best predicts team outcomes.

The composition of personality traits on a team is associated with team performance (Bell et al., 2018; McCrae & Costa, 1987; Morgeson, Reider, & Campion, 2005). *Conscientious* individuals are task and goal focused, exert more effort, and are more likely to regulate teamwork and engage in cooperative team behavior (Courtright, McCormick, Mistry, & Wang, 2017). *Agreeable* individuals are trusting, warm, and cooperative. Teams with members high on this trait have less conflict and increased trust, communication, and cohesion (Bradley, Baur, Banford, & Postlethwaite, 2013; Ferguson & Peterson, 2015). Student teams high on both average conscientiousness and agreeableness tend to compensate for social loafing and maintain levels of performance (Schippers, 2014). *Extraverted* team members are more social, gregarious, assertive, and talkative. Barry and Stewart (1997) found that extraverted members facilitate positive social relationships and contribute to team performance. *Emotional stability* relates to an individual's ability to handle stress, maintain a positive perspective, and be resilient. Teams high in emotional stability tend to have higher performance and cohesion (Barrick, Stewart, Neubert, & Mount, 1998). Finally, *openness to experience* relates to approaching tasks with freedom, flexibility, and creativity. While there is a positive relationship between openness to experience and team creativity, one study found that the highest team creativity emerged from teams that had at least one individual low in openness to experience (Schilpzand, Herold, & Shalley, 2011).

There is no guarantee that having many highly talented team members will lead to a high-performing team (Swaab, Schaerer, Anicich, Ronay, & Galinsky, 2014). For example, in studies of basketball and other sports teams, having many high performers can lead to conflict and coordination problems that reduce performance compared to teams with fewer high performers. Particularly in interdependent sports, such as soccer and basketball, performance can decrease when there are too many high-performing athletes. By contrast, in more independent sports, like baseball, performance increases with more high-performing athletes. This is why team member selection should consider both task-related and teamwork-related skills.