Team Performance Measurement: Some observations

Eduardo Salas, Ph.D.
Department of Psychology &
Institute of Simulation & Training
University of Central Florida
esalas@ist.ucf.edu
Today...

- Offer some observations and insights on teamwork measurement...
  - Based on 30 years of research & practice
  - Military, aviation, healthcare, corporate, oil, financial, plus...
The Journey... ‘80’s, ‘90’s
Team Performance Measures...

Chapter 30

Teamwork and team performance measurement

Eduardo Salas, Heather A. Priest and C. Shawn Burke

Introduction

Seventy-three percent of all business organisations within the United States have employees that are members of teams (Carey, 1995). During the early 1980s organisations began to use teams to handle environmental complexity and competition from global markets. Initial assumptions were that the implementation of teams should automatically lead to better...
Teamwork and Collaboration is......

- Dynamic...
- Episodic...
- Multi-level...
- Elusive...
- Task dependent...
- Performed by individuals...
- Influenced by many factors...
Teamwork Is A Complex Phenomena...

Organization & Situational Characteristics
- Reward Systems
- Resource Scarcity
- Uncertainty
- Management Control
- Levels of Stress
- Organizational Climate
- Intergroup Relations
- Environment

Input
- Individual Characteristics
  - Task KSAs
  - General Abilities
  - Motivation
  - Attitudes
  - Personality
  - Mental Models
- Work Structure
  - Work Assignment
  - Team Norms
  - Communication Structure
- Team Characteristics
  - Power Distribution
  - Member Homogeneity
  - Team Resources
  - Climate - Team
  - Cohesiveness

Throughput
- Task Characteristics
  - Task Organization
  - Task Type
  - Task Complexity
- Team Processes
  - Coordination
  - Communication
  - Conflict Resolution
  - Decision Making
  - Problem Solving
  - Boundary Spanning
- Team Interventions
  - Individual Training
  - Team Training
  - Team Building

Output
- Team Changes
  - New Norms
  - New Roles
  - New Communications Patterns
  - New Processes
- Team Performance
  - Quality
  - Quantity
  - Time
  - Errors
  - Costs
- Individual Changes
  - Task KSAs
  - Attitudes
  - Motivation
  - Mental Models

Feedback
Observations
1. Content Matters -- No “Silver Bullet”…

- No perfect protocol, tool, technique, or format
- All need adjustments, modifications
- All teams not created equal
2. Best to triangulate...

- Self report, peer assessments, observation
- “Takes a team to evaluate a team”
- Multiple angles, facets, components
- Can’t escape observation
3. Size Matters!

- Size of team makes a difference
- How, who and what--key issues
4. SMEs can only assess 4 or 5 constructs...

- The more constructs, the more correlated they are
- Rater training helps
- Helps in debriefing, developmental
5. Best to capture attitudes, behaviors and cognitions

- Cognitions remain a challenge
- New unobtrusive approaches, promising
- “Low level” metrics, also promising
6. Behavioral Markers matter…

- Be specific!
- Define constructs of interest, precisely
- Take time, be systematic
- Contextualize them
7. It’s all about the constructs!

- Discipline to define them, lacking
- Lots of focus on the stats technique, necessary but not sufficient
- Obsession with methodological tool at the expense of the phenomena
8. Measurement of teamwork not a “one stop shopping”, dynamic phenomena!

- Teams do different things at different times,
- Measure often, but it’s a challenge
- Unobstrusive measures, needed
9. What is good for Science, is not necessarily for Practice…

- Practitioners – simple, ease of use, relevant and diagnostic (!)
- Research – we can afford (sometimes) to throw the “kitchen sink”
10. Don’t ignore the basics!

- There are guiding principles, often ignored
- New emerging, good news
- More is needed
- Propose – we go back to basics
Figure Critical considerations in performance measurement (adapted from Wildman et al., 2011)