Academic-Practitioner Collaborative Forum
21st Annual SIOP Conference

Dallas, TX
April 2006

LEADERSHIP AND PRACTICAL SCIENCE

Advancing Knowledge, Improving Organizations

Robert B. Kaiser
KAPLAN DEVRIES INC.

Identifying and Developing Engaging Leader Behaviors at Granite

Presented at the 21st Annual SIOP Conference
Dallas, TX
April 2006

Rob Kaiser KAPLAN DEVRIES INC.
Pam Mayer GRANITE Construction Incorporated

Handout available at
www.kaplandevries.com

"Close cooperation between theoretical and applied psychology… can be accomplished … if the theorist does not look at applied problems with highbrow aversion… and if the applied psychologist realizes there is nothing so practical as a good theory."

***— Kurt Lewin* (1951)**

Page 169, *Field Theory in Social Science*. New York: Harper & Row.

LEADERSHIP AND PRACTICAL SCIENCE

KAPLAN DEVRIES INC. / GRANITE Construction Incorporated — **Identifying and Developing Engaging Leader Behaviors at Granite Construction**
Robert B. Kaiser & Pam Mayer

George Mason University / West Point — **Assessing and Developing Small-Unit Adaptive Leadership**
An Example of a Research-Practice Symbiosis
Stephen J. Zaccaro, Major Eric Weiss, & Michael Matthews

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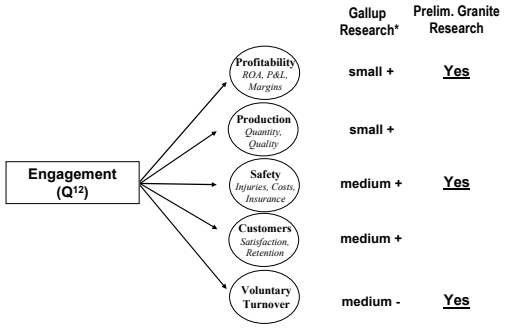
Context

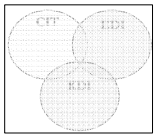
- About Granite Construction
- CEOs Big Hairy Audacious Goal
  "*To have the most engaged workforce in the industry by 2008."*
- History with Engagement/Q12

The business case



* Harter, Schmidt, & Hayes (2002). Business-Unit-Level Relationships Between Employee Satisfaction, Employee Engagement, and Business Outcomes: A Meta-Analysis. *Journal of Applied Psychology*.

Process

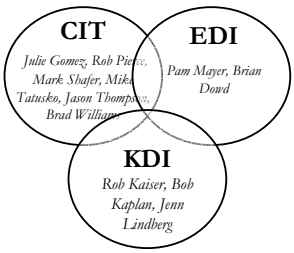


- Real virtual team
- Regular teleconferences
- A lot of work synching up

Crash course on leadership theory/methods

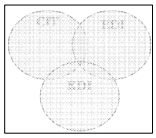
Crash course on Granite

The partnership



Getting on the same page

- Aligning interests
- Creating a shared mental map



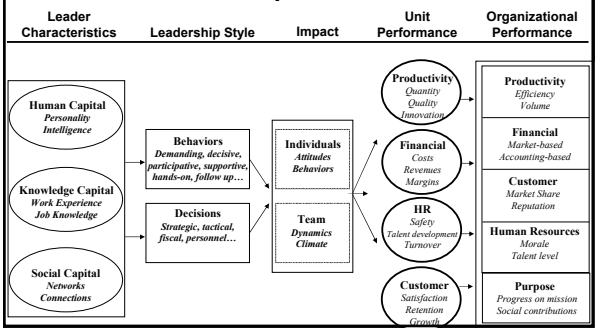
Designing the Study

Research questions

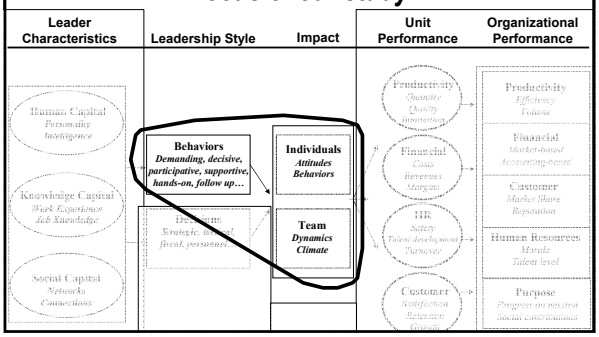
- What does engagement mean?
- Is leadership related to engagement?
- If so, then how—specifically?
- Does this vary by organizational level?

The Big Picture

Leadership Value Chain



Focus of our study



Structured interviews

10 Questions to elicit specific information

- What it is like to be on this team
- What it is like to work for this manager
- Impact of manager on you and team
- How your manager helps you and team
- How your manager hinders you and team
- Your manager's overall effectiveness as a leader (10 pt. rating)
- Contextual factors impacting performance

Design

Practical Science: A balancing act

- Sample size: *more the merrier vs realistic*
- Multiple methods: *qualitative/quantitative*
- Design: *longitudinal vs cross-sectional*
- Geographic diversity: *travel vs convenience*

The practical design

Five professional interviewers

- Trained
- "Double-blind"
- Great care in conveying confidentiality
  Two memos from sr mgt, team leader support, in interview
- Provide interviewee "script"
- JIT: conducted 96 interviews in two weeks!

Design

- Interview study of extreme groups – most and least engaged (Gallup Q^{12})

	Craft Level *Foremen, superintendents*	**Middle Mgt** *Project, plant, business manager, chief estimator*	**General Mgt** *Branch or area manager, function heads, executives*
Highest Q^{12}	**Top 10**	**Top 10**	**Top 5**
Lowest Q^{12}	**Bottom 10**	**Bottom 10**	**Bottom 5**

Interviewed 2 members per team

Final sample

	Craft Level *Foremen, superintendents*	**Middle Mgt** *Project, plant, business manager, chief estimator*	**General Mgt** *Branch or area manager, function heads, executives*
Highest Q^{12}	**5 teams**	**10 teams**	**5 teams**
Lowest Q^{12}	**5 teams**	**10 teams**	**5 teams**

Interviewed 2 members per team

80 interviews/40 teams in total

Content Analysis

- Kaplan DeVries team: Rob and Jenn
- "Double Blind" coding for behavior & impact
  "Right Stuff/Wrong Stuff" behaviors
  impact on individuals and team
- Read 5 interviews together, one at a time
  Discussed themes, emerging patterns
- Read 15 more interviews together
  Revised themes, definitions, coding rules
- Calibration with CIT
  Read sample interviews, revised coding scheme, *Granitized*

Coding rubric

Theme	Definition	Examples
Recognition	Providing positive reinforcement; acknowledges effort and accomplishment by expressing appreciation and/or rewarding people for doing a good job	-1: "You never hear it when things go well, only when they don't" +1: "I know he appreciates my efforts;" "lets you know when you do good work" +2: "Sometimes he lays it on a little thick"

Themes

- Impact of Leader
  - on individual (8 themes)
    on team (12 themes)
  - Coded: Mentioned absent (-1)/Not mentioned (0)/Mentioned present (+1)
- Leader Behaviors
  - "Right stuff" (42 themes)
    "Wrong stuff" (9 themes)
  - Coded: Mentioned absent (-1)/Not mentioned (0)/Mentioned present (+1)/Mentioned *overdo* (+2)

Rater agreement

- Separately coded all 80 interviews
- Rater agreement: 82%
- Identified 20 transcripts with most disagreement
  Re-read each together and reached consensus
- Final Rater agreement: 89%
  After all, shouldn't we use a higher standard?

Sample Leader Beh's

"Right Stuff"	"Wrong Stuff"
1. Providing resources	1. Demeaning
6. Accountability	2. Cussing people out
7. Listening	3. Intimidating
9. Delegates	4. Volatility
12. Emotional support	5. Talking behind your back
19. Coaching/Dev't	6. Playing favorites
29. Follow up	7. Political
34. Positive outlook	8. By-passing hierarchy
41. Fairness	9. Disengaged

Results

- What does engagement mean?
- Is leadership related to engagement?
- What behaviors distinguish leaders of highly engaged teams (from least engaged)?
- Does this change across levels?

χ^2 and Càmer's V

- Non-parametric
- Rigor to subjective content analysis
- Relaxed alpha ($p < .10$)

11. Trusts Employees

		Low Q^{12}	High Q^{12}	*Càmer's V*	*p*
GM	*No*	**40%**	0%	.629	**(.001)**
	No mention	50%	10%		
	Yes	10%	**90%**		
	Overused	0%	0%		
MM	*No*	5%	10%	.105	(.801)
	No mention	70%	70%		
	Yes	25%	20%		
	Overused	0%	0%		
CL	*No*	0%	0%	.000	-
	No mention	60%	60%		
	Yes	40%	40%		
	Overused	0%	0%		

How?

Specifically, what is it that highly engaging leaders do that disengaging leaders don't?

What is it that disengaging leaders do that highly engaging leaders don't?

What is Engagement?

Individual-level and team-level themes that distinguish high/low Q^{12} teams:

Individuals more likely to report:
Feeling valued/respected
Satisfaction w/supervisor
Org'l commitment
Extra effort

Teams described with more:
Morale
Mutual respect

Keys

Perceived treatment and reciprocal fairness
Identify with the company and give your best
Creates a positive, respectful team climate

High *vs* Low Q^{12} Teams

Behavioral differences among leaders

- Engaging leaders do more "Right Stuff"
- …and slightly less "Wrong Stuff"

	Craft		Middle Mgt		General Mgt	
	Right Stuff	Wrong Stuff	Right Stuff	Wrong Stuff	Right Stuff	Wrong Stuff
High Q^{12}	**10.7**	**1.0**	**10.9**	**0.9**	**11.4**	**0.3**
Low Q^{12}	**8.0**	**1.6**	**5.5**	**1.0**	**5.8**	**0.6**

Avg. Number of Behaviors Mentioned/ Interview

MANOVA for Hi/Lo Q^{12}: Wilk's λ (2, 73) = 10.19***, ε^2 = .22.

Leadership Leverage?

Is engagement related to leadership?
Yes. Overall ratings of leader effectiveness are related to team Q^{12} scores.
r = .34 ($p < .05$), N = 40 teams

	Craft Level *Foremen, superintendents*	**Middle Mgt** *Project, plant, business manager, chief estimator*	**General Mgt** *Branch or area manager, function heads, executives*
Correlation (*r*)	**.39**	**.45**	**.36**
% of Engagement related to leadership	**15%**	**20%**	**13%**

Leader Effect-Q^{12} relationship within levels

High *vs* Low Q^{12} Teams

Behavioral differences among leaders

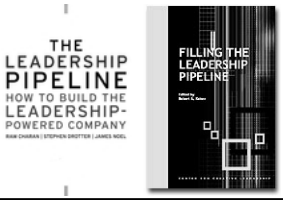
- Analyzed differences between Hi/Lo Q^{12} leaders on all 51 behaviors
- Separately for CL, MM, GM – 153 tests in all
- Identified "statistically significant" relationships
  - Reviewed each for practical significance
  - Determined which most distinguished hi/lo Q^{12} leaders
  - Analyzed the predictive power of each set of behaviors

Craft Level	Middle Management	General Management
4. Directive	2. Providing resources	7. Accountability
28. Planning/ organization	4. Directive	11. Trusts employees
1. Demeaning	6. Playing favorites	30. Follow up
13. Emotional support	17. Available	35. Positive outlook
35. Positive outlook	3. Taking stands	6. Demanding
	9. Disengaged	13. Emotional support
	14. Task support	18. Considerate
	16. Compassionate	20. Coaching/Dev't
	20. Coaching/Dev't	
	23. Visibility	
	32. Resolves problems	
	42. Fairness	

Positive
Negative

Consistent with Literature

- Changes in engaging beh's consistent with empirical work on level differences in success formula
  (Kaiser & Craig, 2006; Zaccaro, 2001)
- Consistent with applied work as well



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	23. Visibility	
	32. Resolves problems	
	42. Fairness	

Positive
Negative

95% **85%** **95%**

Classification Rates (Predictability)

Can correctly distinguish 72 of 80 interviews

Advancing science, enhancing organizations

Engaging Leadership across the Hierarchy

Craft Level	Middle Management	General Management
Uplifting	*Assertive*	*Empowering*
13. Emotional support	3. Taking stands	11. Trusts employees
35. Positive outlook	4. Directive	18. Considerate
	Accessible	20. Coaching/Dev't
1. Demeaning	17. Available	30. Follow up
4. Directive	23. Visibility)	
	9. Disengaged	*Controlling*
28. Planning/organization		7. Accountability
	2. Providing resources	6. Demanding
	14. Task support	*Uplifting*
	32. Resolves problems	13. Emotional support
	Care about people	35. Positive outlook
	16. Compassionate	
	20. Coaching/Dev't	
	Fair	
	42. Fairness	
	6. Playing favorites	

Implications for Science

- Engagement occurs when employees feel treated fairly, identify with the organization, and are motivated to contribute. This makes for happier, respectful teams.
- Leadership is indeed related to engagement.
- In general, positive, respectful person-oriented and task-oriented behaviors were engaging. But the form varied with org'l level.
- More empirical work on Leadership Pipeline concept—from follower perspective.

Implications for Practice

Strategic: *Where to focus investments in leadership to get a return on engagement.*

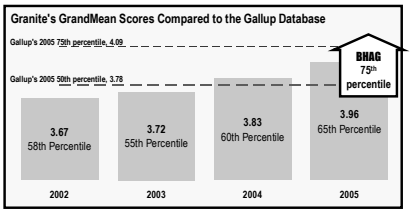
Operational: *Raise awareness, reinforce in culture, target in T&D.*

Tactical: *Awards dinner, Engaging leaders video, for example.*

Honor Our People
Engaged teams win!

Goal:

Achieve a GrandMean score in the 75th percentile of Gallup's database.



Engagement BHAG	Have the most engaged work force in the industry.

Epilogue

Results: How is Granite doing against the CEOs Big Hairy Audacious Goal?

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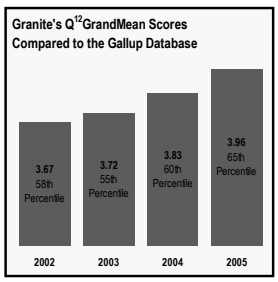
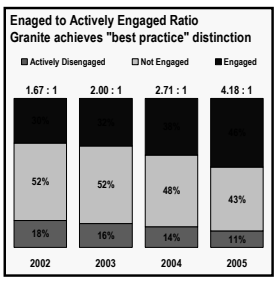
The Engagement BHAG
A home run!





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Assessing and Developing Small Unit Adaptive Leadership: An Example of a Research-Practice Symbiosis

Stephen Zaccaro
George Mason University

Major Eric Weis
Command and General Staff College

Michael Matthew
United States Military Academy

Presented at the 21st annual meeting of the Society for Personality and Social Psychology, May 5, 2006, Dallas, TX

George Mason University

Our Approach

- To approach this problem, we sought to create a theory-practice ***symbiosis*** (Zaccaro & Horn, 2003; Zaccaro 2005)
- While we began with a guiding theoretical framework, we sought a close collaboration between leadership researchers and practitioners, to inform both theory and application.
- We followed a model of this collaboration suggested by Blair & Hunt (1985); Hunt & Ropo, (1998), and Zaccaro & Horn (2003),

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The Orthogonality of Research and Practice…An Old Problem

- *The greatest handicap of applied psychology has been the fact that, without proper theoretical help, it had to follow the costly, inefficient, and limited method of trial and error. Many psychologists working today in an applied field are keenly aware of the need for close cooperation between theoretical and applied psychology. This can be accomplished in psychology, as it has been accomplished in physics, if the theorist does not look toward applied problems with highbrow aversion or with a fear of social problems, and if the applied psychologist realizes there is nothing so practical as a good theory* (Lewin, 1951, p. 169).

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The Problem in Leadership Research

- The field of leadership is littered with many examples of theories and models that have failed utterly when put to the test of solving leadership-related problems
- Other theories have been developed without regard for the problems of leadership posed in many organizations

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The Leadership Problem

- The U.S. Army is interested in developing adaptive soldiers
- There are limited tools for assessing adaptation, especially in small units
- Current training models are inadequate for developing adaptability as a performance skill

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Limitations of Past Leadership Research

- A primary focus on interpersonal aspects of leadership
- A limited set of explanatory variables,
- Nonprogrammatic
- A lack of policy relevance.
- Little attention given to the conceptual dynamics of applied questions

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The Problem in Leadership Practice

- The leadership practice literature is in turn riddled with trial and error applications that are grounded more in the anecdotes of key policymakers, sponsoring stakeholders, and targeted constituencies than in scientific data and models
- Organizational managers and leadership practitioners tend to place greater weight on popular offerings than on scientifically grounded and appropriately tested principles.

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Fostering an Effective Leadership Theory-Practice Symbiosis

- Use "action research" and "grounded theory"
  - o Action research: "theory and practice develop together in a series of evolutionary steps designed to lead to improvements in practice during the life of the research project" (Peters and Robinson, 1984, p. 122)
  - o The practitioner is to be closely involved in the research from its earliest stages, and that the values of all parties to the research process are to be considered in the design, and implementation of the research effort, as well as in the distribution of research results

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Limitations of Past Applications

- Short temporal horizons,
- Parochial focus
- Fad-driven thinking,
- Practitioner mistrust for the process and outcomes of basic research.

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Some Principles of Action Research

- A cyclical process of planning, action, and evaluation;
- A continuous feedback of the research results to all parties involved, including clients;
- Cooperation between researchers, practitioners, and clients from the start and throughout the entire process;
- Taking into account differences in value systems and power structures of all of the parties involved in the research;
- Using action research concurrently to solve a problem and to generate new knowledge.

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Fostering an Effective Leadership Theory-Practice Symbiosis

- Place greater focus in theories on context of leadership practice
  - o "Organizational contexts influence and mediate the :fundamental nature of leadership work, including those forces that animate or retard leadership initiatives or behaviors (Zaccaro & Klimoski, 2001, -. 13)
  - o Leadership performance imperatives are heavily shaped by contextual factors

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Grounded Theory

- Researchers utilize the grounded theory method to develop a conceptual framework of a phenomenon from descriptive data gathered using several qualitative methods
- Theory emerges inductively from, and is "grounded" in data
- Theory is derived and refined through the "constant comparative method of analysis" (Glaser & Strauss, 1967, Parry, 1998
  - o This process involves collecting data, deriving theoretical relationships among observed variables, comparing emerging findings to prior analyses, and then gathering additional data to clarify/verify inducted models

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Fostering an Effective Leadership Theory-Practice Symbiosis

- An effective LTPS incorporates aspects or topics along three dimensions:
  - o leadership problems,
  - o leadership tools,
  - o leadership theories and concepts.

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Conceptual Model: A Definition of Adaptation

- A functional change in response to altered environmental and situational contingencies *(Zaccaro, Banks, & Bader, 2004)*
- The process by which an individual achieves some degree of fit between his or her behaviors and the new work demands created by the novel and often ill-defined problems resulting from changing and uncertain work situations. (*Chan, 2000)*
- Similar definitions offered by LePine, 2003; Ployhart & Bliese, 2006; Pulakos, et al., 2000

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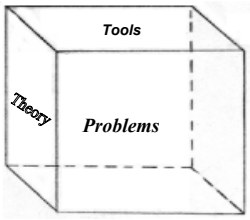
A Framework for an Effective Leadership Theory-Practice Symbiosis



Adapted From Zaccaro & Horn, 2003

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Conceptual model

Adaptive Performance Dimensions

(from Pulakos, et al., 2000)

- Solving problems creatively
- Dealing with uncertain or unpredictable work situations
- Learning new tasks, technologies, and procedures
- Demonstrating interpersonal adaptability
- Demonstrating cultural adaptability
- Demonstrating physically oriented adaptability
- Handling work stress
- Handling crisis or emergency situations

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The Leadership ***Problem***

- What is the nature of the adaptive soldier?
- How does one assess adaptability?
- How does one train and develop adaptability skills

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Conceptual model

Adaptive Decision-making in Small Units

- Small unit leaders use their own cognitive and social resources, *in combination with their unit's resources,* to
  - o Make accurate appraisals of their operating environment,
  - o Develop applicable decision alternatives
  - o Select and implement the most appropriate decision choices

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Conceptual Model

Adaptive Decision-making in Small Units

- Leading small units entails
  - Developing the team as an effective aide to leader decision making
  - Utilizing the unit staff (noncommissioned officers) as decision aides during operation planning and action phases

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Conceptual Model

Adaptive Decision-making Processes in Small Units

- Formulation and Evaluation of Solutions
  - Solicit information about unit status and resources
  - Consider status of human capital within unit
  - Solicit input on potential solutions from unit members
  - Translate decision choices into highly specified unit action plan
  - Evaluate likely enemy responses to selected action choices
  - Derive and evaluate possible contingent responses to enemy reactions and other potential obstacles

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Conceptual Model

Adaptive Decision-making Processes in Small Units

- Environmental Monitoring and Scanning
  - Solicit the environment perspective of other unit members
  - Enhance information networks within the team
  - Develop unit norms/procedures for information management and communication

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Conceptual Model

Adaptive Decision-making Processes in Small Units

- Implementation of Problem Solution
  - Change unit objectives and mission
  - Change unit member roles and tasks
  - Define new roles
- Motivating Change
  - Create a "learning environment" within the unit
  - Acknowledge the loss of change (from business simulation)
  - Be realistically optimistic

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Conceptual Model

Adaptive Decision-making Processes in Small Units

- Situational Awareness and Sense Making
  - Solicit interpretation of key squad leaders
  - Weigh the contributions of unit members in overall sense-making
  - Develop a frame or mental model of the changing environment – *situational awareness*

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Conceptual Model

Adaptive Decision-making Processes in Small Units

- Affirming Realignment of Unit and Operating Environment
  - Solicit the environment perspective of other unit members
  - Create information networks within the team
  - Develop communication norms within the team

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Tools: Assessment Strategies

- The conceptual model that emerged from an integration of theoretical models and practitioner feedback served as the basis for assessment tools (and training content)
- Product: An assessment tool kit that can be used to measure cognitive skills contributing to effective small unit leadership
  - o For use by researchers, trainers, instructors
  - o Contains 6 different measurement formats

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Tools: Assessment Features

- Computer-based and internet compatible
  - o Several measures can be placed on a PDA (e.g., Behavior-focused scales)
  - o Descriptions of decision-making dimensions
  - o Descriptions of, and links to, measure formats
  - o Electronic manual for each measure that presents
    - o Instructions for use of measure
    - o Sample uses of measure
    - o Most appropriate contexts for each measure
  - o Automated scoring and feedback
  - o Stored data base to gather psychometric data

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Tools: Assessment Features

- Measurement approaches
  - o Behavior-focused rating scales
    - BARS, BOS
    - Most effective in field exercises and simulations
    - Basis for more effective AARs
  - o Computer simulation
    - Platoon level contexts
    - Simulates team-based decision making processes
    - Behavior-based assessment
    - Most effective in schoolhouse settings
  - o Commanding Officer or OC rating scale
    - Reflects multiple performance contexts over longer time periods
    - Useful in formal courses and field settings

Samsung SPH-i700

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Tools: Assessment Features

- Measurement approaches
  - o Situational Judgment Tests
    - Presents multiple hypothetical scenarios for decision making
    - Greater scenario variety than most of the other measures
    - Most suited for classroom settings, self-development Computer simulation
  - o Biodata instrument
    - Assesses past experiences reflecting high or low small unit leadership skills
    - Most suited for self-development, classroom settings

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Tools: Training Strategies

- PDA-based measures
  - o Provide behavior summaries for AARs
  - o Camera and video features allow capture of critical incidents
  - o Allowed internet connection to Army doctrine
- SJTs and computer-based simulation
  - o Provide case studies for training analysis in a "hip-pocket" training notebook
  - o Computer simulation responded to stated training need in writing OPORDs and FRAGOs

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Tools: Training Strategies

- Performance scenario variability as a training design feature
  - o A key feature in most training center exercises
  - o Critical parameter of such variability not well known – how much variability is necessary?
- Intent is to train "adaptive expertise" (Holyoak, 1991)
- This principle is embedded in SJT items and computer simulation.
- A focus on current collaborative research with U.S. Army

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Summary

- Leader research and practice would benefit from greater integration and symbiosis
- The collaborations among the leadership researchers and practitioners in the academic community, applied research firm, and units of the U.S. Army (USMA, ARI) has produced a growing foundation for:
  - o Understanding adaptability (Banks, et al., 2001; Pulakos, et al., 2000, 2002; Zaccaro, 2006)
  - o Assessing adaptability (Ployhart & Bliese, 2006; Pulakos, et al., 2000, 2002; Zaccaro, 2006; Zaccaro, et al., 2005
  - o Training and developing adaptability (research by Klein & Kozlowksi – in Gade, 2003, 2004; Zaccaro & Banks, 2004, Zaccaro, 2006)

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- The views represented in this presentation are those of the authors and should not be construed as official Department of the Army policies.