Science of Team Science

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Science of Team Science

- Given the mission of VTCAR to promote multidisciplinary research...
- How to turn “experts” into an expert team?

- Emerging “science of team science” reflects insights to facilitate
- multi-, inter-, and transdisciplinary scientific progress
The Drivers of Team Performance

Effective Team Performance

Cognitions
- Knowledge
- “Think”

Behaviors
- Skills
- “Do”

Attitudes
- Affect
- “Feel”
What effective teams do...

- **Knowledge**
  - Shared mental models about strategies
  - …anticipate of what other team members’ need
  - …**understand each others’ roles** and how they fit together

- **Skills**
  - self-correct and back up each other
  - …**manage conflict** well—team members confront each other effectively

- **Attitudes**
  - …**trust** other team members’ “intentions”
  - …open to new ideas and are team oriented

Current Relationships

- NSF IGERT: Profs. Hochella, Winkle, Filz, Little
- NSF IGERT: Profs. Stremler, Davalos, Vlachos, Kuhn, Ross
- VT Graduate School: IGEP, Dean DePauw, Prof. McDowell
- UVA: Prof. Lois Myers
Collaborations and Resources Needed

- Have developed measures of key constructs
  - paradigmatic values
  - attitudes toward interdisciplinary research
  - personal/behavioral characteristics
  - team processes like trust
  - shared knowledge
- Evaluation of team science and its impacts
- Measuring effectiveness of team science on multiple levels: individual, team, and organization
- Organizational policies that foster team science
- The relationship between productivity and the composition of teams