Institutional Transformation

Molly Carnes, MD, MS
Co-Director,
Women in Science and Engineering Leadership Institute
(WISELI)
Presentation to
the UW-Madison College of Engineering Diversity Forum
February 26, 2009

Institutional Transformation:

- Alters the culture of the institution by changing select underlying assumptions and institutional behaviors, processes, and products
- Is deep and pervasive, affecting the whole institution
- Is intentional
- Occurs over time

Eckel, Hill, & Green, 1998; American Council on Education

Other conceptualizations, terminologies, frameworks that get to the same end: Change in *attitudinal* and *behavioral* norms of an organization

- Innovation diffusion
- Knowledge translation
- Technology transfer
- Information or research utilization
- Organizational change

Using knowledge to solve human problems (Backer, 1993)

4-stage model of institutional and personal readiness for transferring research into practice – Simpson, 2002

- Exposure
- Adoption
- Implementation
- Practice

Incorporates theoretical and industrial research findings from the field of organizational behavior

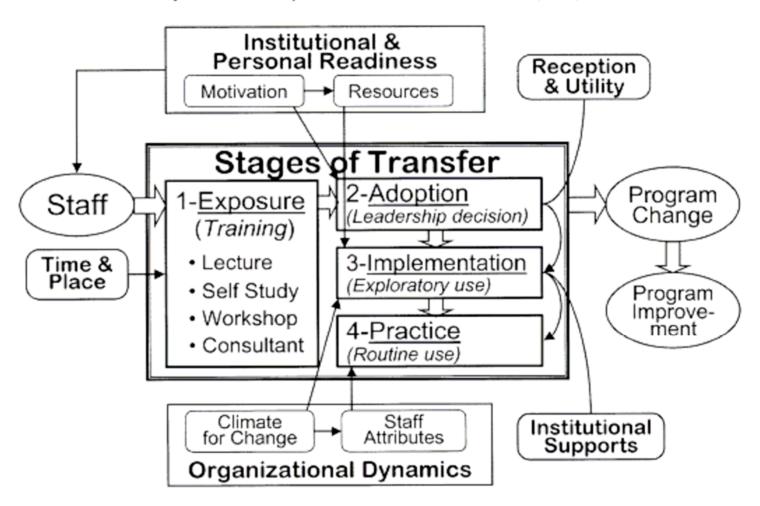


Fig. 1. Program change model for transferring research to practice.

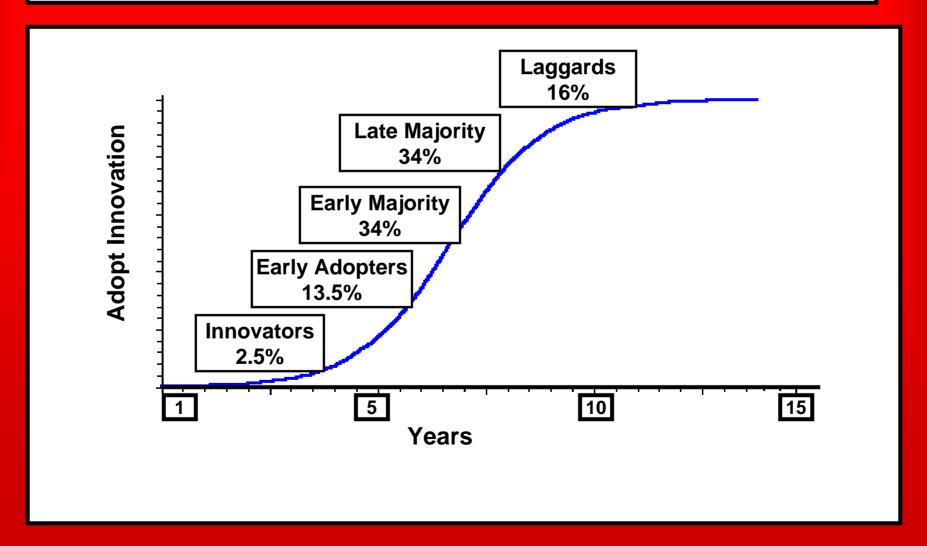
Planning Institutional Changes

Follow a proven process for change



Diffusion of Innovation

Most innovations have an S-shaped rate of adoption Gabriel Tarde, 1903; Ryan and Gross, 1940's; E.M Rogers, 1995

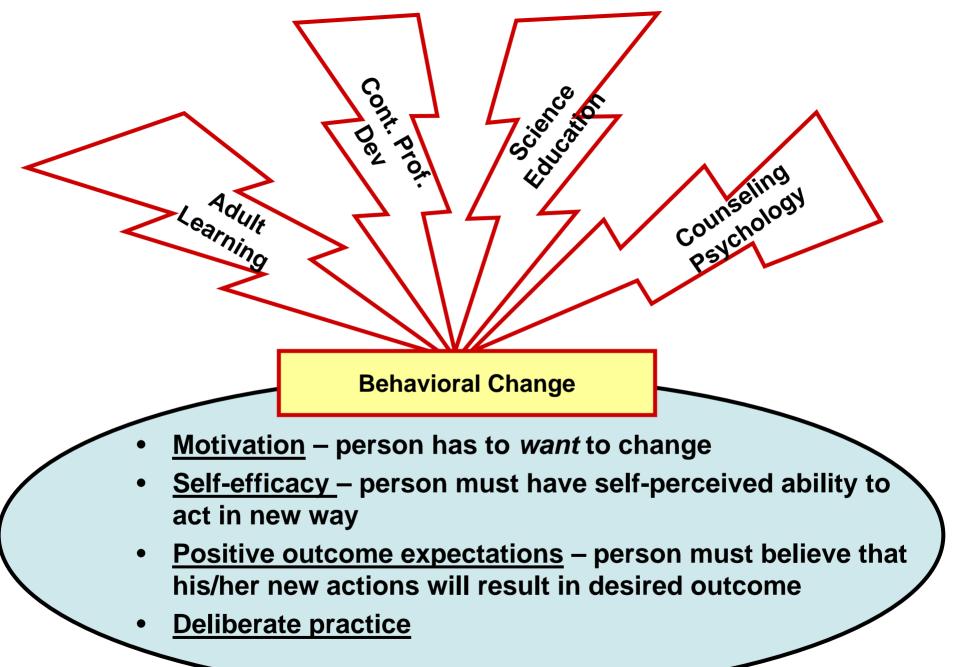


Stages of change for smoking cessation and diversity

Stage	Smoker	Diversity - Individual	Diversity- Institution
Pre- contemplation	"Smoking is not a problem and I enjoy it!"	"We've always done it this way, and it seems to work just fine."	No resources committed to solutions; no conversations about need to change
Contemplation	"I am worried that smoking is bad for my health and I want to quit."	"To maintain our global economic edge, we must figure out how to invest in our domestic workforce!"	Task force charged with reviewing local data
Preparation	"I am going to buy a nicotine patch and quit on my birthday."	"I am reading Why Are All the Black Kids Sitting Together in the Cafeteria by Beverly Tatum"	Strategic plan for diversity developed
Action	"I quit!"	"I have included some research on the ubiquity of unconscious bias in the curriculum"	URMS steadily increase and achieve academic excellence
Maintenance	"I enjoy being able to breathe more than smoking."	"I am proud of the advances our school has made recruiting and retaining URMS."	Institutional data is monitored and made public Carnes et al., 2005

Why talk about institutional change?

- NSF, NIH, Chancellor, Dean all want to increase diversity in the College of Engineering – so what's the problem?
- Institutional change occurs b/c of change in behavior of members of the organization
- Faculty are the drivers of change at UW-Madison and the maintainers of status quo





I can mentor DAO students

Self Efficacy

- I can meet with Dr.
 Romero in
 WiscAMP to help
 develop my NSF
 Broadening
 Participation Plan
- I will work hard to recognize when a stereotype is activated and try to replace this with an egalitarian thought or action

Positive Outcome Expectations

- If I devote time to recruiting and retaining URM students to the College, it will be recognized by my Dean as important
- If I remain in contact with my excellent DAO students, perhaps they could be recruited back as faculty

Deliberate Practice

- At each annual meeting of my professional society, I plan to attend the session on recruiting URMS
- I will email the URM student whose poster I liked and keep up communication with her
- I will participate in the DAO mentoring program each year

Motivation

- I want to be seen as egalitarian
- I want the U.S. to remain competitive in engineering
- I don't think we can be an excellent College of Engineering without diversity in today's world
- My Dean says this is important so I will engage in it

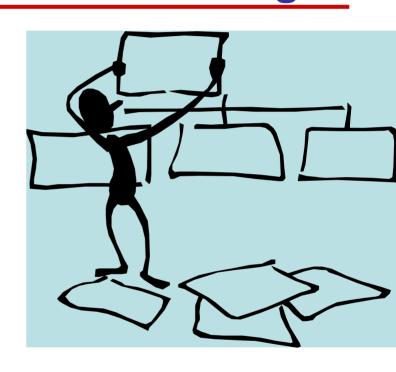
Some suggestions for change

- Leadership must visibly and relentlessly support diversity efforts and infuse diversity discussions into all CoE activities
- Increasing, retaining and mentoring URM students must be a community-wide effort – not solely the responsibility of DAO
- Focus on faculty the purveyors of academic culture start with the early adopters and move to the early majority
- Make teams that can engage in recursive problemsolving cycles (plan-do-study-act) – try something, evaluate it, improve it, move ahead, start over....

Questions?

Planning Institutional Changes Consider factors that influence change

- 1. Organizational Considerations
 - > History
 - Institutional readiness
 - Leadership attitudes
 - Climate
 - Resources



5 assumptions about adult learning Malcolm Knowles, 1984

- Adults are independent and self directing
- They have accumulated a great deal of experience, which is a rich resource for learning
- They value learning that integrates with the demands of their everyday life
- They are more interested in immediate, problem centered approaches than in subject centered ones
- They are more motivated to learn by internal drives than by external ones

Using knowledge to solve human problems (regardless of name) - Backer, 1993

- Making organizations aware of the innovation
- Providing evidence of effectiveness and feasibility
- Resources must be adequate
- Provide interventions that encourage individuals and organizations to change

Diffusion of Innovations E.M. Rogers, 1995

- Adoption Process = at the individual level (rejection may occur at any stage)
 - Awareness
 - Interest
 - Evaluation
 - Trial
 - Adoption
- Diffusion Process = at the group or societal level
 - Innovation
 - Communication channels
 - Social system
 - Time