EXPANDING PARTICIPATION THROUGH THE UNDERGRADUATE RESEARCH EXPERIENCE

AFFINITY RESEARCH GROUPS

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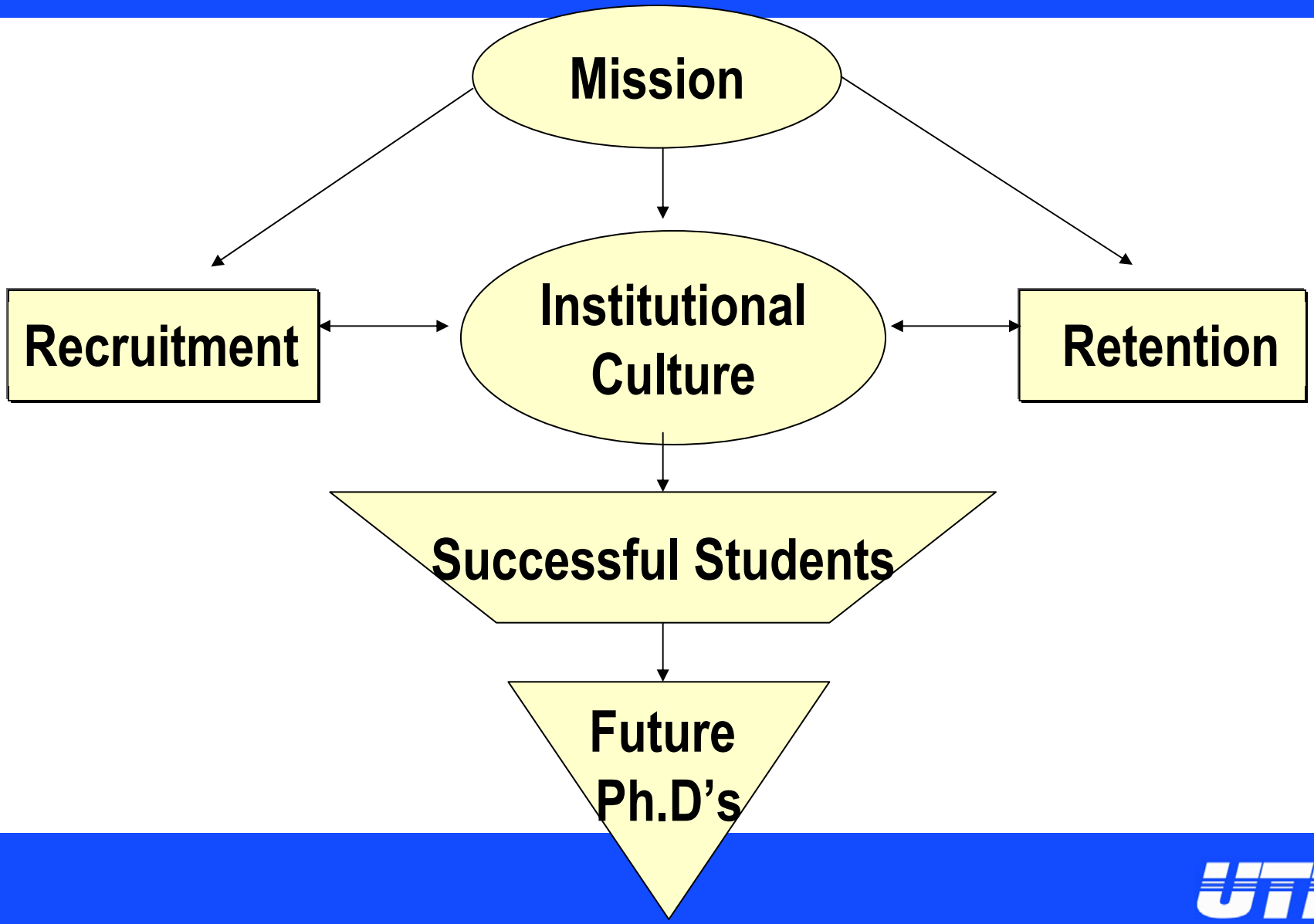
UTEP

Model of Exemplary Practices

(Quintana Baker 2000)



Critical Cultural Elements-1
(Quintana Baker 2000)

Faculty

- Display initiative and leadership
- Create supportive environments
- Share values and help define department culture

Creating Community

- Encourages the individual student to remain and participate.
- Fosters collaborative work
- Creates opportunities for leadership

Mentoring

- Nourishes the continuum of master-journeyman-apprentice
- Facilitates access to career opportunities through shared academic and research experiences

Critical Cultural Elements-2

(Quintana Baker 2000)

Service Learning

- Places science and engineering in a "people" context
- Encourages student to apply knowledge acquired and understand the discipline within a larger context

Leadership from top

- Furnishes guidance that affects policies, programs, and attitudes
- Validates efforts of those who invest time
- Generates growth of human, academic, and financial capital

AFFINITY RESEARCH GROUP MODEL

- Recruitment of competent but not confident student
- Integrated model
- Cooperative group interaction
- Support structure
- Skills development
- Best practices

MODEL COMPONENTS

- Orientation
- Research project framework
- Defined deliverables
- Regular meetings

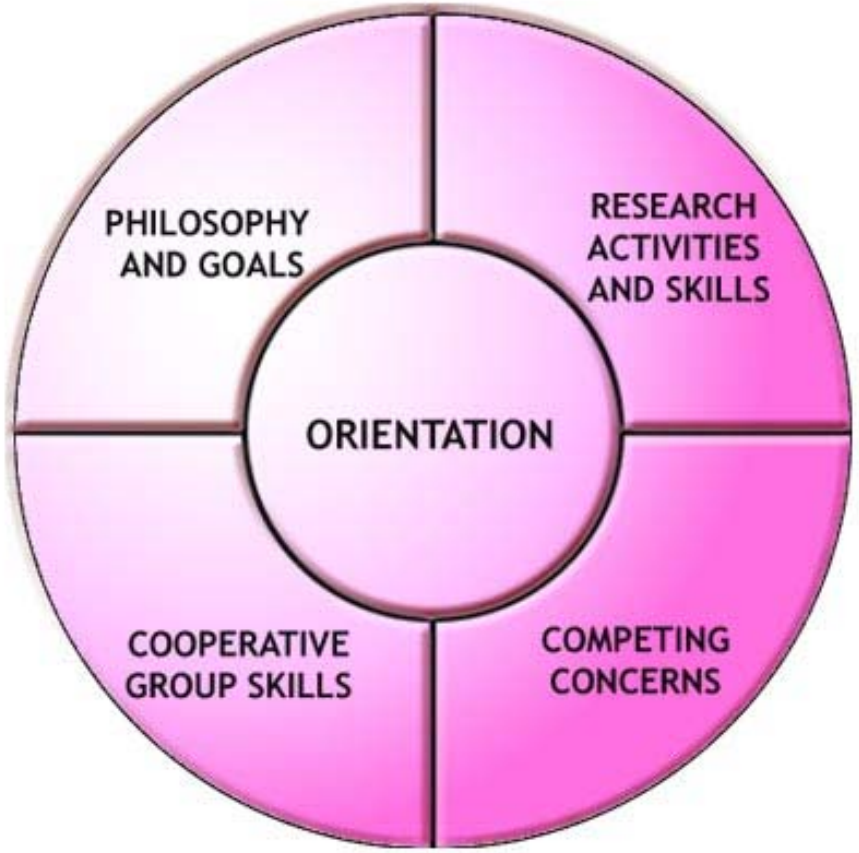
ORIENTATION

Purpose:

- Facilitate assimilation of new students
- Increase ownership of model

Benefits:

- Understand basic group/research skills
- Reevaluate model



RESEARCH PROJECT FRAMEWORK

Provide a framework in which students can realize the relevance of their assignments

Description

- Define mission and goals
- Map tasks to goals
- Define activities and timeline
- Promote project and time management

Benefits

- Understand importance of work
- Understand steps toward completing tasks
- Facilitate setting goals and balancing time

DEFINED DELIVERABLES

Define milestones for the project

Description

- Associate deliverable with assigned task
- Provide constructive criticism of deliverable
- Examples: presentation, critical review, summary, literature review

Benefits

- Develop domain expertise
- Hone technical and communication skills
- Contribute tangibly to project
- Structures individual accountability
- Track progress

REGULAR MEETINGS

Report progress, refine goals, solve problems, and discuss research

Description

- Structured meetings
- Status and problem reporting
- Discussion/presentations
- Teach concepts
- Constructive criticism

Benefits

- Promote positive interaction
- Structure individual accountability
- Practice group and communication skills
- Develop domain expertise development
- Evaluate goals, tasks, and methodology

STRATEGIES

SUMMARY

Adaptable model

Enhanced mentoring

Benefits

- Become lifelong learners
- Develop technical and communication skills
- Learn lessons on managing failure
- Understand methods and process of research
- Communicate and work in teams
- Make informed judgments about technical matters

Thread of commitment

Handbook and workshops

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