

THE MATH OF LEAST RESISTANCE

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Mathematical Voice

versus

Student Retention

“Oh the thinks I’d be thinkin’
I could be another Lincoln
If I only had a brain.”

The Tin Man

UNM-Valencia Campus Fall 2002 headcount data

- Total = 1,710 (record high)
- Non-white = 1,050 (61%)
- First-generation > 50%
- Female = 1,208 (71%)
- Taking one or more class in developmental studies = 798 (47%)

Student Goals:

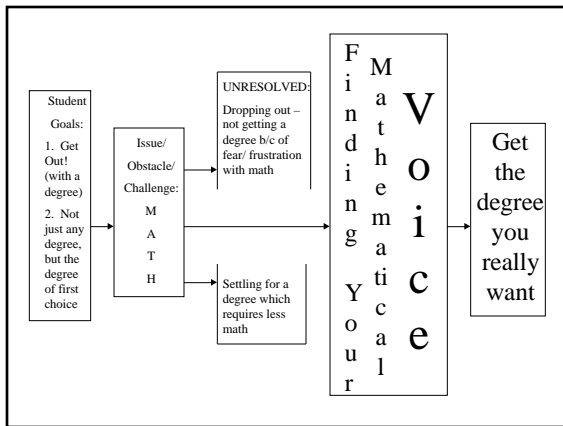
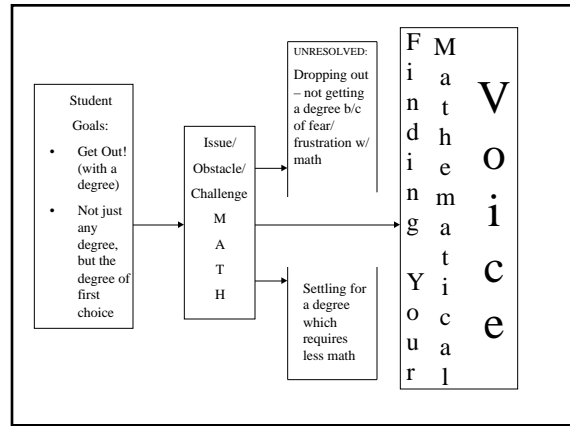
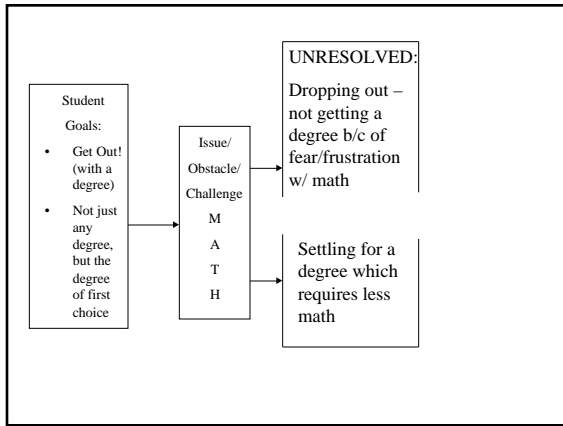
- Get Out!
(with a degree)
- Not just any degree,
but the degree of first choice

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Issue/ Obstacle/ Challenge:

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“Math anxiety [class] has opened the embarrassment path to begin the healing.”

Shari B.

“I feel now as though I may just get through my next two math courses.”

Charlie D.

- Issues/Obstacles/Challenges
- ✓Anxiety
 - ✓Skills
 - ✓Community
 - ✓Equity
 - ✓Successful Mathematical Experiences

VOICE and ANXIETY

- ✓Small group
- ✓Discussion format
- ✓Cause/effect
- ✓Myths
- ✓Behavioral mod.

VOICE and SKILLS

- ✓Study skills
- ✓Time management
- ✓Test taking
- ✓Text reading

VOICE and COMMUNITY

- ✓Small group
- ✓Discussion
- ✓Facilitators
- ✓Representation
- ✓Involvement

VOICE and EQUITY

“Increased participation by all students in mathematics and in careers using mathematics is a critical goal in our heterogeneous society.”

Crossroads in Mathematics, AMATYC, 1995, Introduction, p.5

VOICE and SUCCESSFUL EXPERIENCES IN MATHEMATICS

Math Vows:

- Attitude
- Encouragement
- Initiative
- Opportunity
- Understanding

Voice and Tech Prep: Helping High School Students Prepare for the Worldwide Workforce

- Mathematics is a critical filter in the workplace
- A strong mathematical voice can be heard through the filter
 - No anxiety
 - Strong skills



Voice and Culture

- Mathematical voice is at once cultureless, culture-specific, and culture-driven
 - Being math-skilled and anxiety-free is a goal across cultures
 - The process of finding your mathematical voice is culture-specific
 - Attention to culture, then, is the engine that drives the process

“I LEARNED!”

Monalisa D.

The Math of Least Resistance

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Slides available at:

<http://www.unm.edu/~rmowrer/>