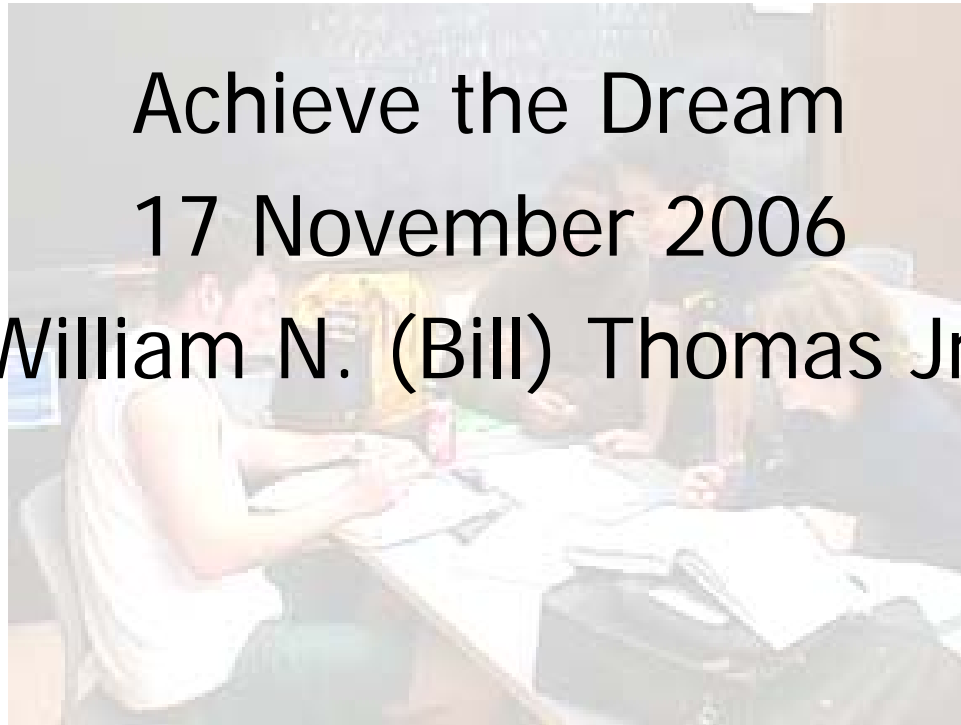


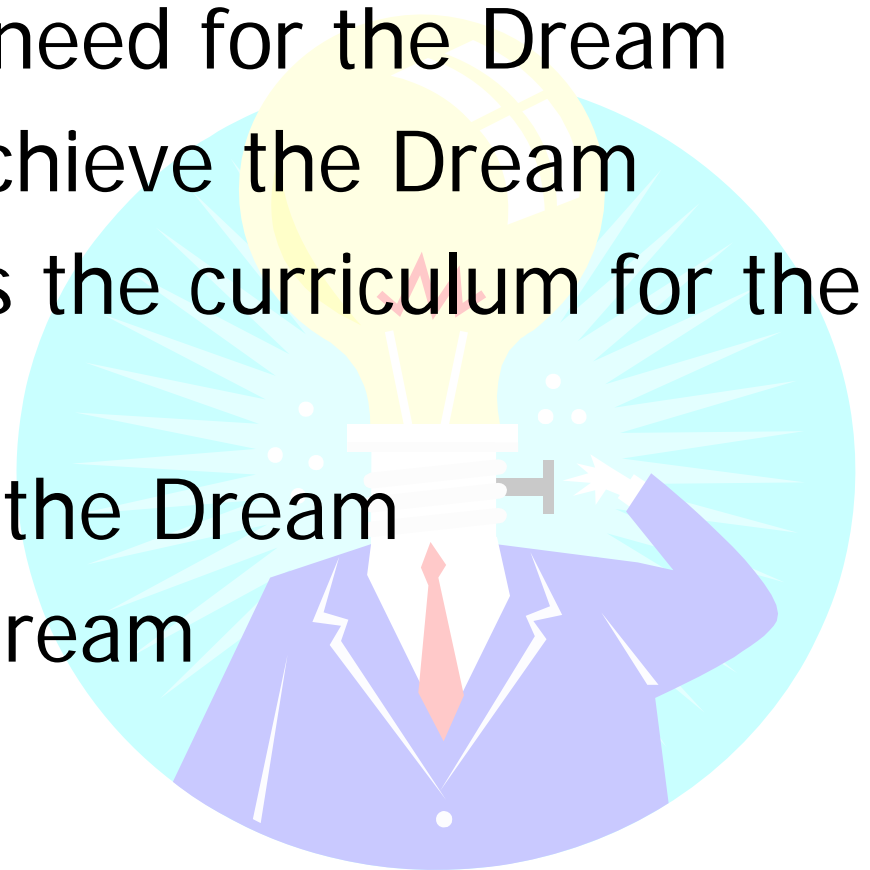
# Ensuring the Dream for All Students

Achieve the Dream  
17 November 2006  
William N. (Bill) Thomas Jr.



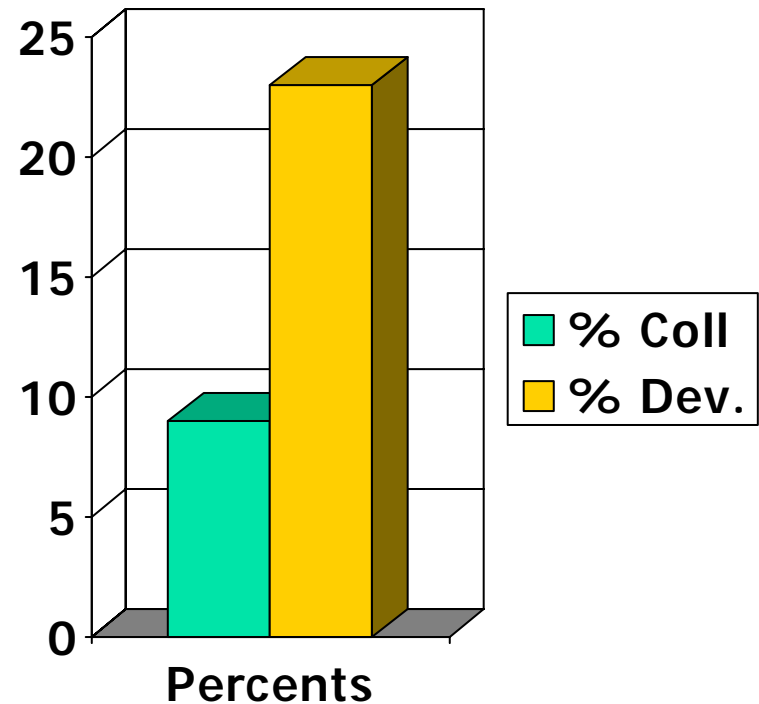
# Session Outcomes

- Understand the need for the Dream
- Help students Achieve the Dream
- Critically address the curriculum for the Dream
- Another view of the Dream
- Commit to the Dream



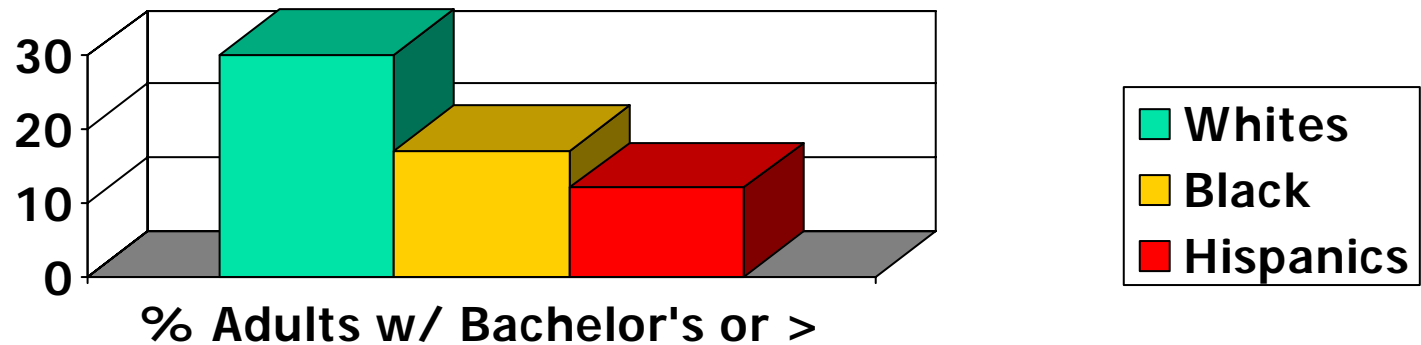
# The Need

Boylan, Bonham, & Bliss ("Who are the developmental students?" *Research in Developmental Education*, 11(2)) state minorities are 9% of college students, yet 23% of developmental ones.



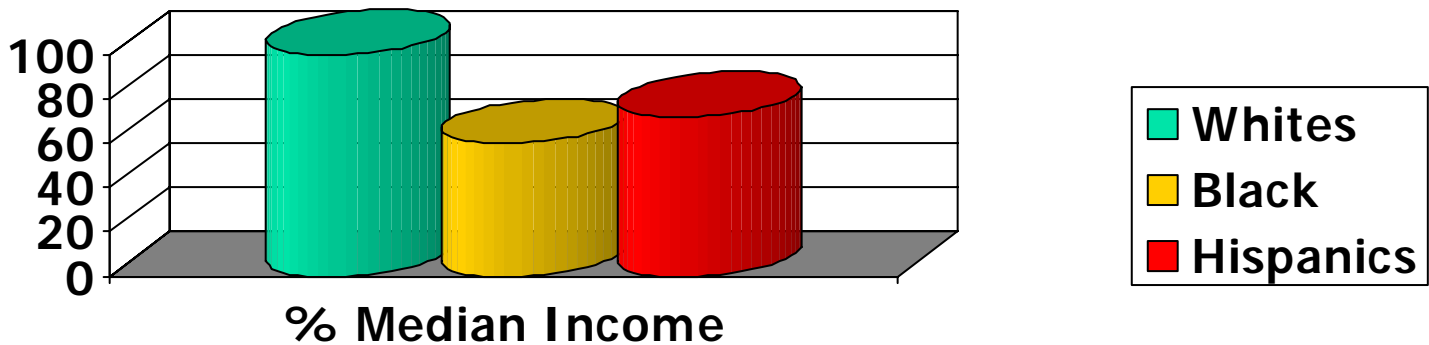
# The Need

- 30% of whites adults had at least a bachelor's degree
- 17% of black adults had at least a bachelor's degree
- 12% of Hispanics adults had at least a bachelor's degree

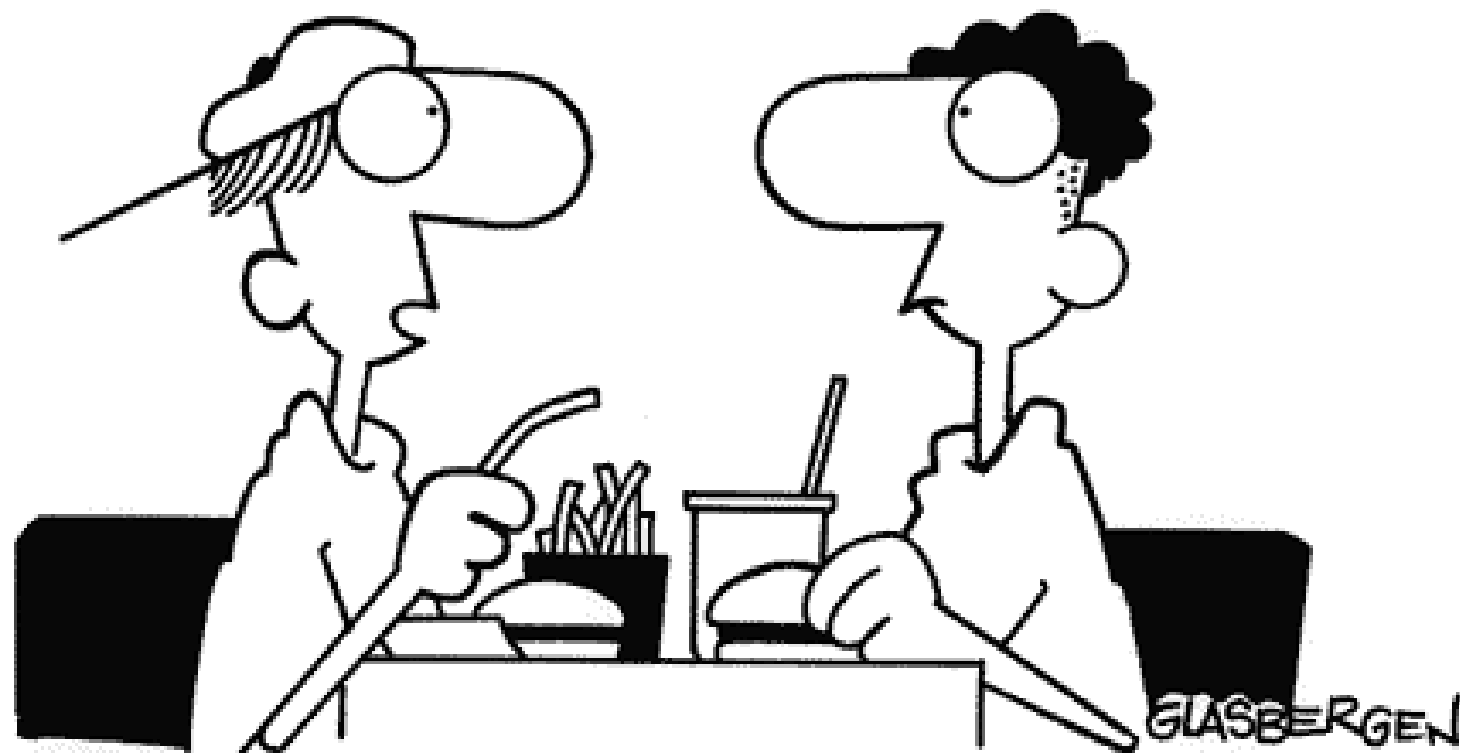


# The Need

- Black household median income is 60% of white households
- Hispanics household median income is 72% of white households



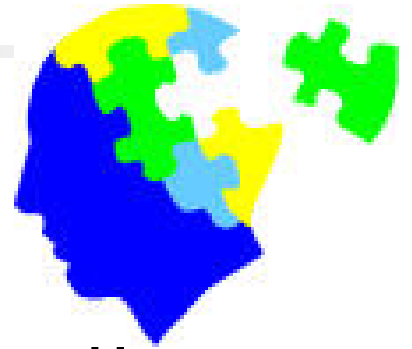
©1997 by Randy Glasbergen. E-mail: randyg@norwich.net  
<http://www.norwich.net/~randyg/toon.html>



**“I forgot to make a back-up copy of my brain,  
so everything I learned last semester was lost.”**

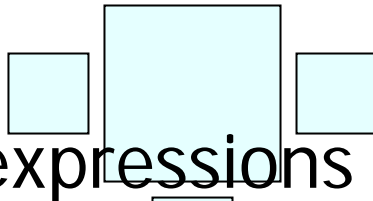
# Students as Mathematicians

- Engage them in worthwhile mathematical tasks
- Let them discover the mathematics
- Demand that they think
- Push for generalization
- Move from concrete to conceptual



# Algebra

A square table seats four people. Additional seating is made by putting tables together to form a rectangle which is always 1 table wide.



Find as many expressions for the number of seats as a function of the number of tables that have a physical action associated with them as you can.



# Algebra

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A student had the following equation:

$$4 + 4(t - 1) - 2(t - 1) = c$$

What physical arrangement did the student see?



HAIKY CONIC  
SENIOR

HAIKY CONIC  
JUNIOR

*Friends forever,  
Haiky Conic Jr.*

THE CONIC  
FAMILY

# Redesign the Curriculum

- What do students really need to know?
- What can technology do?
- What skills do students as future workers need?



# The Dream





# Some Sources

- McKeachie, W. J. (1999). *Teaching Tips: Strategies, Research, and Theory for College and University Teachers* Boston: Houghton Mifflin Company
- Cyrs, Thomas E. *Essential Skills for College Teaching: An Instructional Systems Approach*. Las Cruces, N.M.: New Mexico State University, 1994
- Teaching and Learning Laboratory at MIT  
<http://web.mit.edu/tll/index.html>



# William N. Thomas Jr.

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The University of Toledo  
Mathematics Department MS 942  
2801 W. Bancroft St.  
Toledo, OH 43606-3390

Voice: 419.530.2979, Fax: 419.530.4720

Email: [william.thomas@utoledo.edu](mailto:william.thomas@utoledo.edu)