VIVA Technology program Presented to:

White House Initiative on Education Excellence for Hispanic Americans

El Paso, Texas April 23, 2007

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- 2000 introduced VIVA Technology for K- 12 Students An interactive program that involves the student, parent & teacher involving the engineer, and the technical college students in the awareness & motivation of technical careers.
- 2007 Introduce & integrate the “Value Chain” into the Viva Technology program

HENAAC Program Pipeline

K-12 & Adult School	College	Grad School	Professional Career
Viva Technology	HENAAC College Bowl	Viva Technology	Viva Technology
HENAAC Hall of Fame	Viva Technology	HENAAC Scholars Program	HENAAC Hall of Fame
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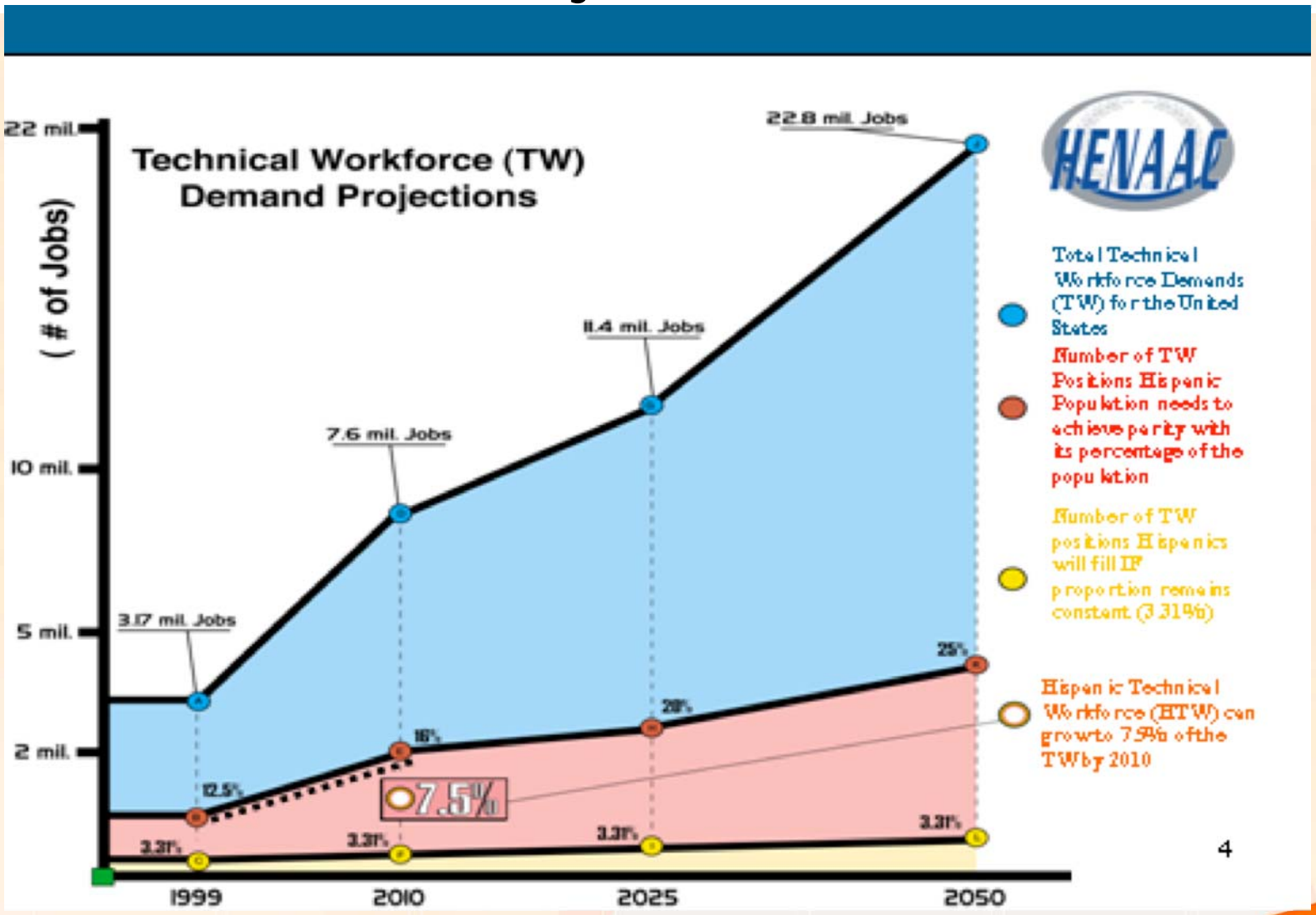
- We will Involve the Corporations and Governments that hire a technical work force directly in the Viva Technology program

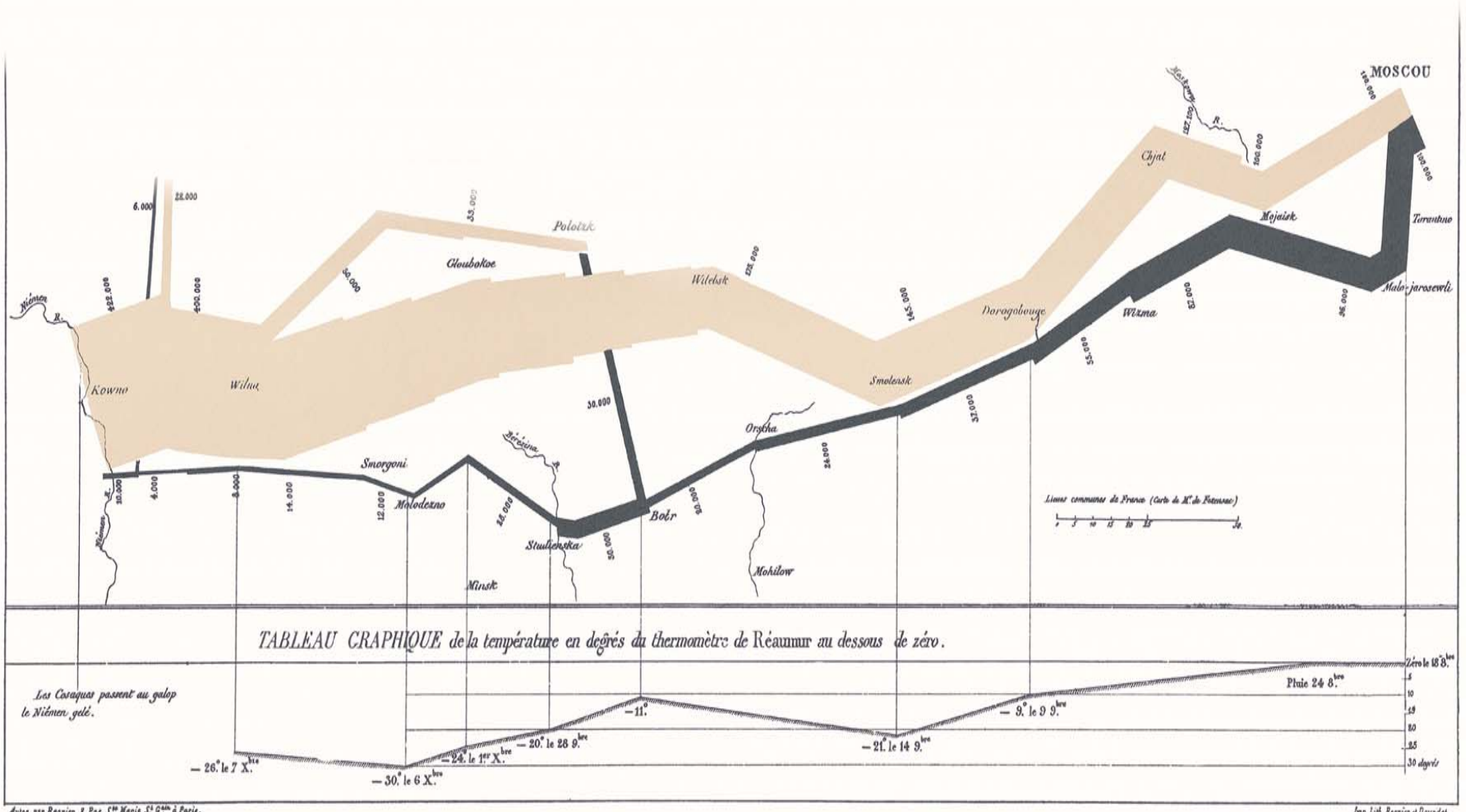
- We will help manage and sustain a “Value Chain” 4th – 12th grade and into college.

HENAAC is the interface between Technical Careers and the Hispanic Community

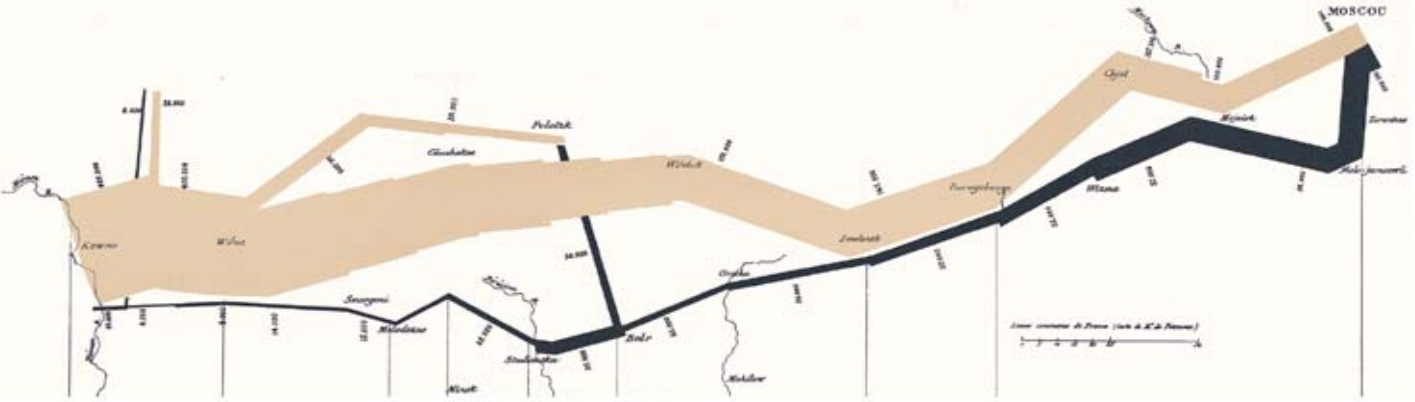
“Technical Workforce Projection”



Napoleon's March to Moscow, 1812



Source: Tufte, Edward R., The Visual Display of Quantitative Information, 2nd Ed., Graphics Press.



Napoleon's 1812 Invasion of Russia

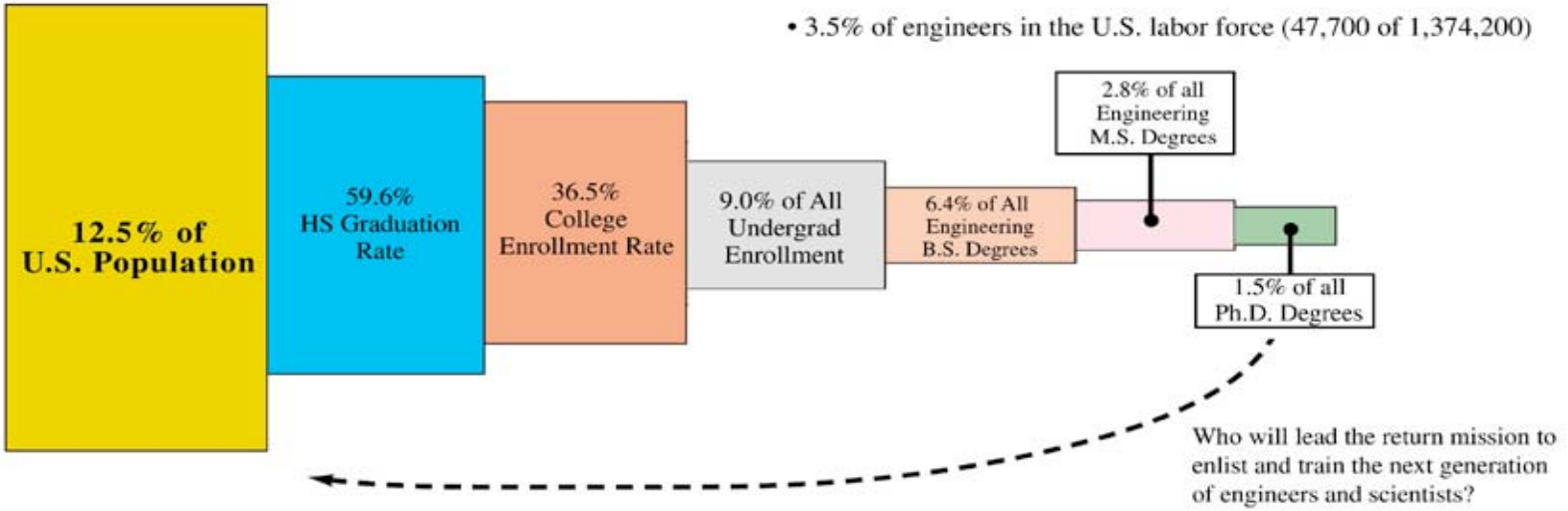
- 422,000 Men left poland to Russia
- 100,000 Men arrived in Russia
- 10,000 Men returned to Poland
- 1813 Fall of Napoleonic Empire

Hispanic Attrition

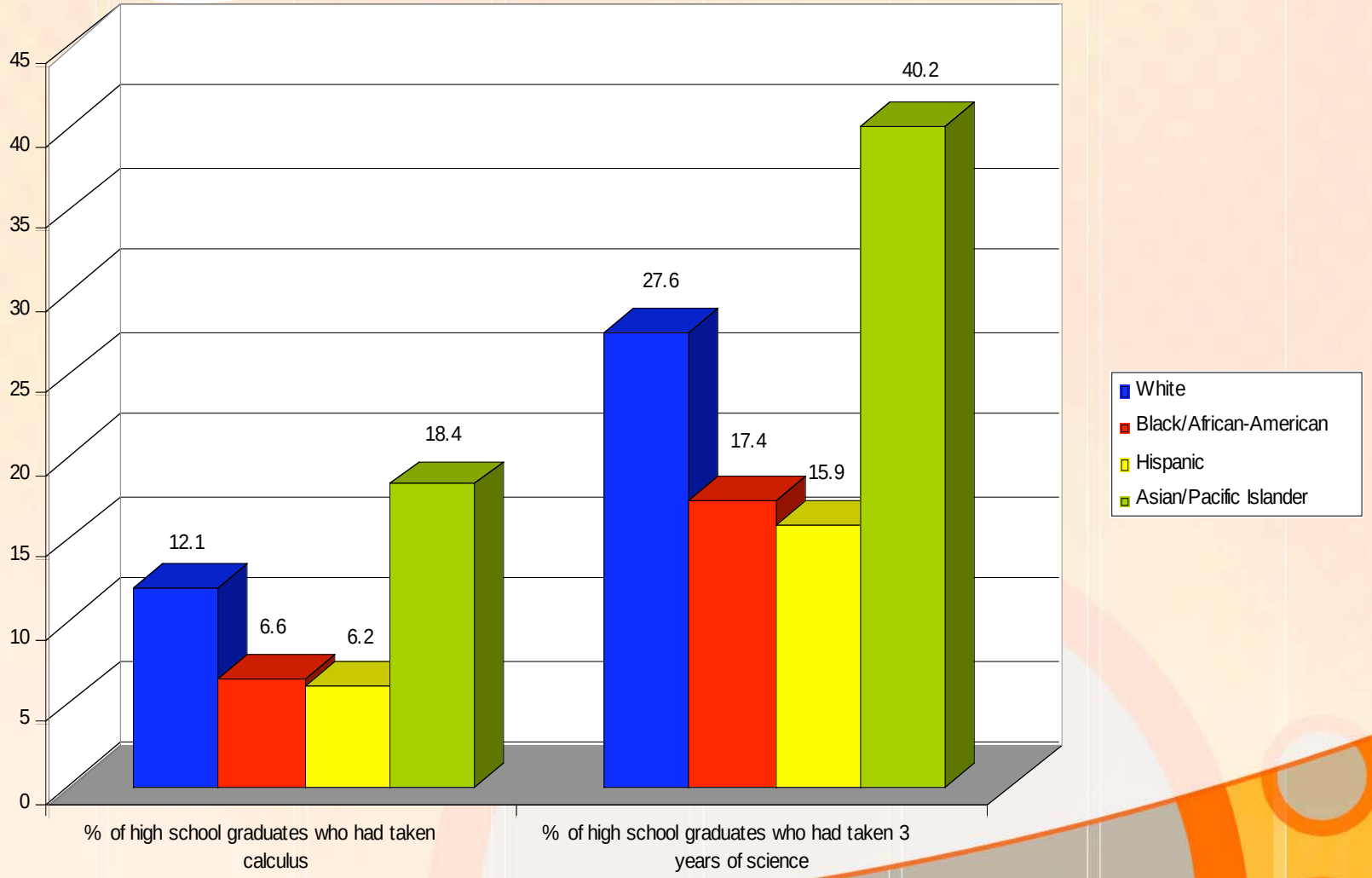
- 12.5% of total U.S. population (35.3 million of 281.4 million)

- 59.6% high school graduation rate among Hispanics 18- to 24-years of age
- 36.5% college enrollment rate among Hispanic high school graduates 18- to 24-years of age
- 9.0% of total college undergraduate enrollment (1,107,800 of 12,298,300)
- 6.7% of total undergraduate engineering enrollment (24.264 of 362,149)
- 6.4% of all engineering B.S. degrees awarded in the U.S. (4,101 of 63,635)
- 2.8% of all engineering M.S. degrees awarded in the U.S. (851 of 30,453)
- 1.5% of all engineering Ph.D. degrees awarded in the U.S. (82 of 5,336)

- 3.5% of engineers in the U.S. labor force (47,700 of 1,374,200)



Level of Preparedness in Math and Science in High School, By Race and Ethnicity (2001)



Source: National Academy of Engineering, Diversity by the Numbers, Oct. 2001; U.S. Department of Education, 2000

"Top 10 U S Universities Colleges of Engineering" Largest Enrollment

10.	U Mich. Ann Arbor	7757	315	4.0
9.	U. T. Austin	5031	709	14.1
8.	Cal Poly SLO	5426	434*	8.0
7.	U. Illinois Urban.	5434	209	3.8
6.	Virginia Poly Inst.	5466	120	2.2
5.	N C State Ral.	5599	161	2.8
4.	Penn State	5986	140	2.3
3.	Texas A&M	6096	722	11.8
2.	Purdue U	6358	138	2.1
1.	Georgia Inst. Tech	7757	315	4.0

“Top 10 U S Universities Colleges of Engineering” – Hispanic Enrollment

10.	*U Central Florida*	*4040*	*581*	*14.3*
9.	*U.T. Pan Am*	*743*	*604*	*84.0*
8.	*U.T.S.A.*	*1409*	*626*	*44.2*
7.	*CCNY*	*2338*	*640*	*27.3*
6.	*U.T. Austin*	*5031*	*709*	*14.1*
5.	*U. Florida*	*4741*	*711*	*15.0*
4.	*Texas A & M*	*6096*	*722*	*11.8*
3.	*Cal Poly Pomona*	*3735*	*990*	*26.5*
2.	*Florida Int. U*	*2118*	*1131*	*53.3*
1.	*UTEP*	*2116*	*1483*	*70.0*

"The Under-Tapped Minority Pool"

Approximately 690,000 minority students graduated from high school in 2002.

Only 28,300 (4%) were considered "engineering eligible" based on courses taken and grades.

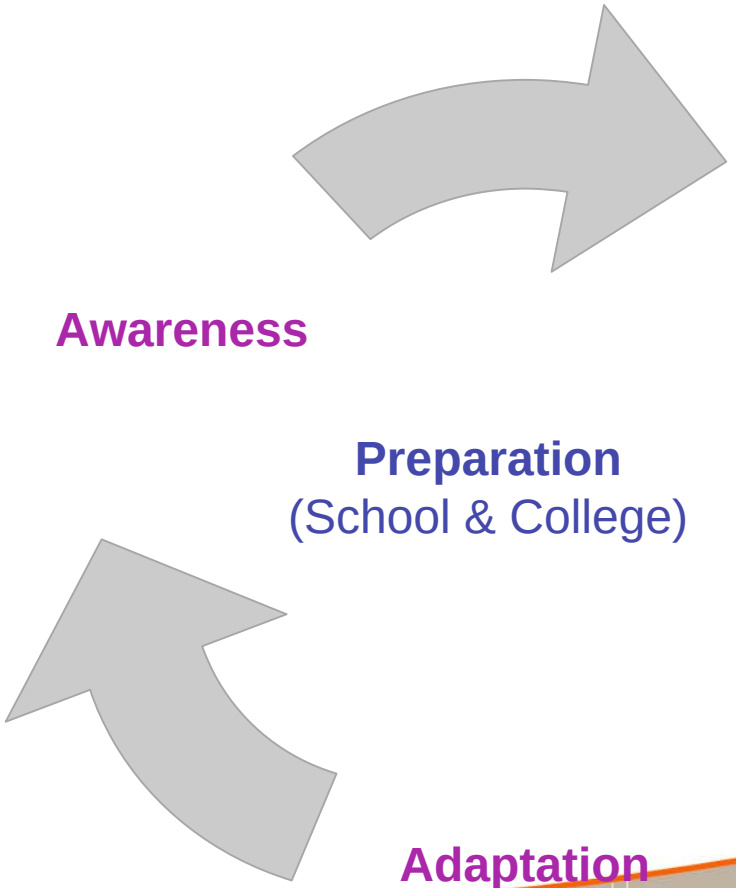
Of these, 16,800 (59%) enrolled as freshmen in engineering schools out of 107,000 total engineering admissions.

Source: NACME Symposium 2005- DATA BOOK - CPST, data derived from NCES and EWC, 2002

The Program & Mission

What do we Know?

- U S Technical Labor Shortage
- Inadequate University Hispanic Enrollment in Engineering & Science
- Inadequate Hispanic Completion of Calculus by the 12th grade
- Inadequate Hispanic Completion of Algebra by the 8th grade
- In the inner cities - Students, Parents/Child Care Providers & Teachers need Math help.
- The need for more math & Science teachers


Awareness
Motivation
Preparation
(School & College)
Adaptation

“An Experience in Engineering and Science”

- *Viva Program evolves around*
  - ► *The Student*
  - ► *The Teacher*
  - ► *The Parent*

The Program & Mission

- The Story

- “Jessica’s Story”