

# STEM Engagement and Retention Strategies

ASCCC Academic Academy

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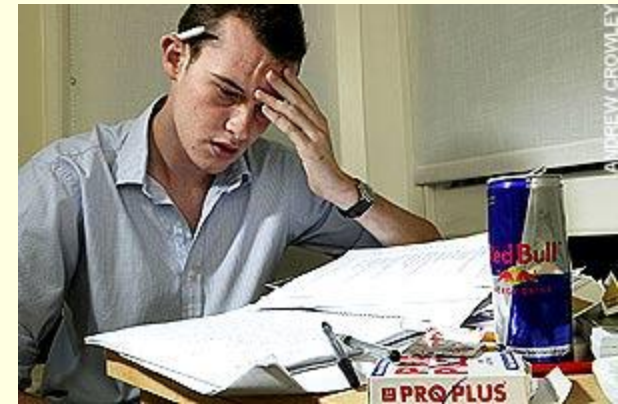


ACADEMIC SENATE  
for CALIFORNIA COMMUNITY COLLEGES

# Why Would Anyone Become a STEM Student?

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- Difficult Course Load
- Pre-Requisites (High unit major)
- Lecture and Two-Three-Hour Labs
- Independent/Collaborative Research Projects
- Lab Reports
- Plenty of Homework
- Need a High GPA For Professional/Grad School
  - Point Junkies
- Probably Miss a Few Parties



# Why Would a STEM Student Remain a STEM a Student?

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- Opportunities for Employment
- Enjoy Science and Math
- Innovation and Advancement
- Extremely Rewarding
- Feeling of 'Brotherhood'
  - We are all in this together



# Who Had an Impact on My Life?

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- Stephen Rodemeyer, Ph D.
  - Chemistry



# Who Had an Impact on My Life?

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- Stephen Ervin, Ph. D.
  - Ecology



# Who Had an Impact on My Life?

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- Richard Haas, Ph. D.
  - Evolutionary Biology



# Who Had an Impact on My Life?

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- Howard Ono, Ph. D.
  - Biochemistry



NOW IT'S  
YOUR TURN.

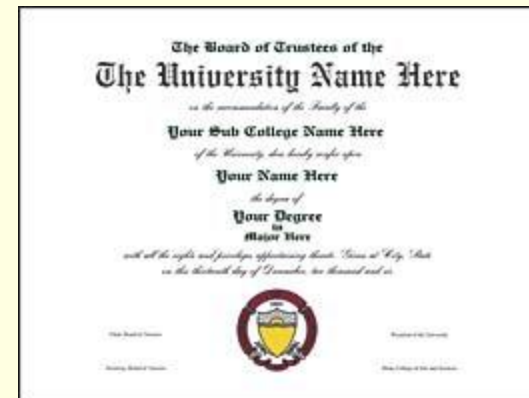
The image features the text "NOW IT'S YOUR TURN." rendered in a playful, 3D style. Each letter is constructed from multiple colored blocks (red, blue, yellow, green) and is positioned on a white surface. The letters are arranged in two rows: "NOW IT'S" on top and "YOUR TURN." on the bottom. The letters are thick and have a slight shadow beneath them, giving them a three-dimensional appearance. The colors used are bright and primary. The background is a plain white surface with a soft shadow cast by the letters.



# You Made It Through College...

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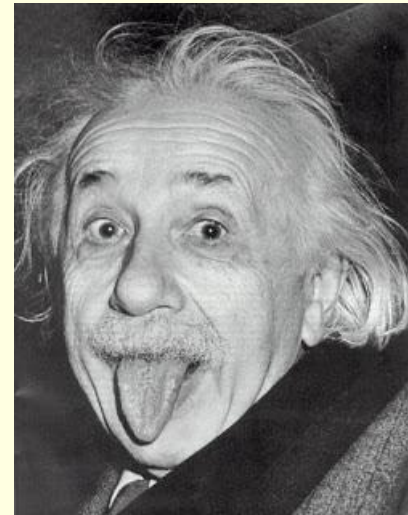
- Let's go back to your college days
- Who had an impact on your life while you were in college?
  - Name(s)
  - When?
    - What year in school?
  - How?
    - Specific experience(s)



# What Did They Have in Common?

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- Knew my name
- Approachable
- Available
- Empathetic and Realistic
  - Academic
  - Personal
- Discussions not related to course content
  - Field trips, lunch, walks on campus, in the hallway, during office hours...



# Show Me The Research!

## The RP Group

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- The Research and Planning Group for CCC
  - Study that identifies and highlights students' perspectives on what they find particularly supportive of their academic success
  - Underscore the critical role student support plays in the **completion** of certificates, degrees and transfer



# Show Me The Research!

## The RP Group

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- The RP Group surveyed 887 students (Current, Leavers and Completers) from 13 California community colleges
- What do they think supports their educational success
- Shift the conversation away from how to replicate entire programs
- What are student success factors?



# Results of the Study...

## Six Keys To Student Success

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1. Clear Course Pathway
  - Students have an academic path for transfer
2. Focus on Long Term Goal
  - Keeping their eyes on the prize
3. Nurture
  - Someone wants to help them succeed



# Results of the Study...

## Six Keys To Student Success

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### 4. Engagement

- Students actively participate in class and extracurricular activities

### 5. Connection

- Students feel part of the college community

### 6. Valued

- Students are given the opportunity to contribute their knowledge/talents and appreciated for their contributions



# Results of the Study...

## Where do Faculty Fit In?

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- Staff and counselors provide important guidance to navigating the “system”
- “**Faculty** are at the center of every student’s educational experience”.
- “**Faculty** have a significant opportunity and ability to influence their students’ success not just in, but beyond their own classroom.”



# Herm Edwards

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“A goal without a plan is just a dream”.





# What Are the STEM Students' Goals?

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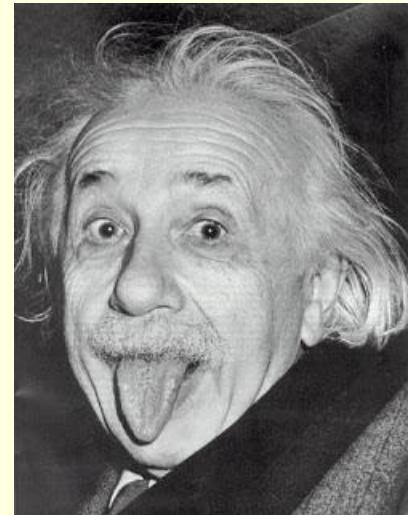
- Result for an assignment or exam
- Grade for a course
- Semester GPA
- Transfer
- Degree Completion
- Professional/Graduate School
- Are Goals Realistic?
- Other Options?



# How Did My Professors Have An Impact on My Success?

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- Knew my name
- Approachable
- Available
- Empathetic and Realistic
  - Academic
  - Personal
- Discussions not related to course content
  - Field trips, lunch, walks on campus, in the hallway, during office hours...



# Where Can We Find the Time To Speak With Students?

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- Lab
- Office Hours
- Lunch time
- In the hallway
- Field Trips



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“Faculty are at the center of every student’s educational experience”.

“A goal without a plan is just a dream”.

# The RP Group

## Student Support (Re)defined

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- An RP Group study that aims to understand how, in an environment of extreme scarcity, community colleges can deliver support both inside and outside the classroom to improve success for *all* students.
- <http://www.rpgroup.org/projects/student-support>

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