Marie Johnson

Cal State Fullerton

2 November 2026



Life long east coaster

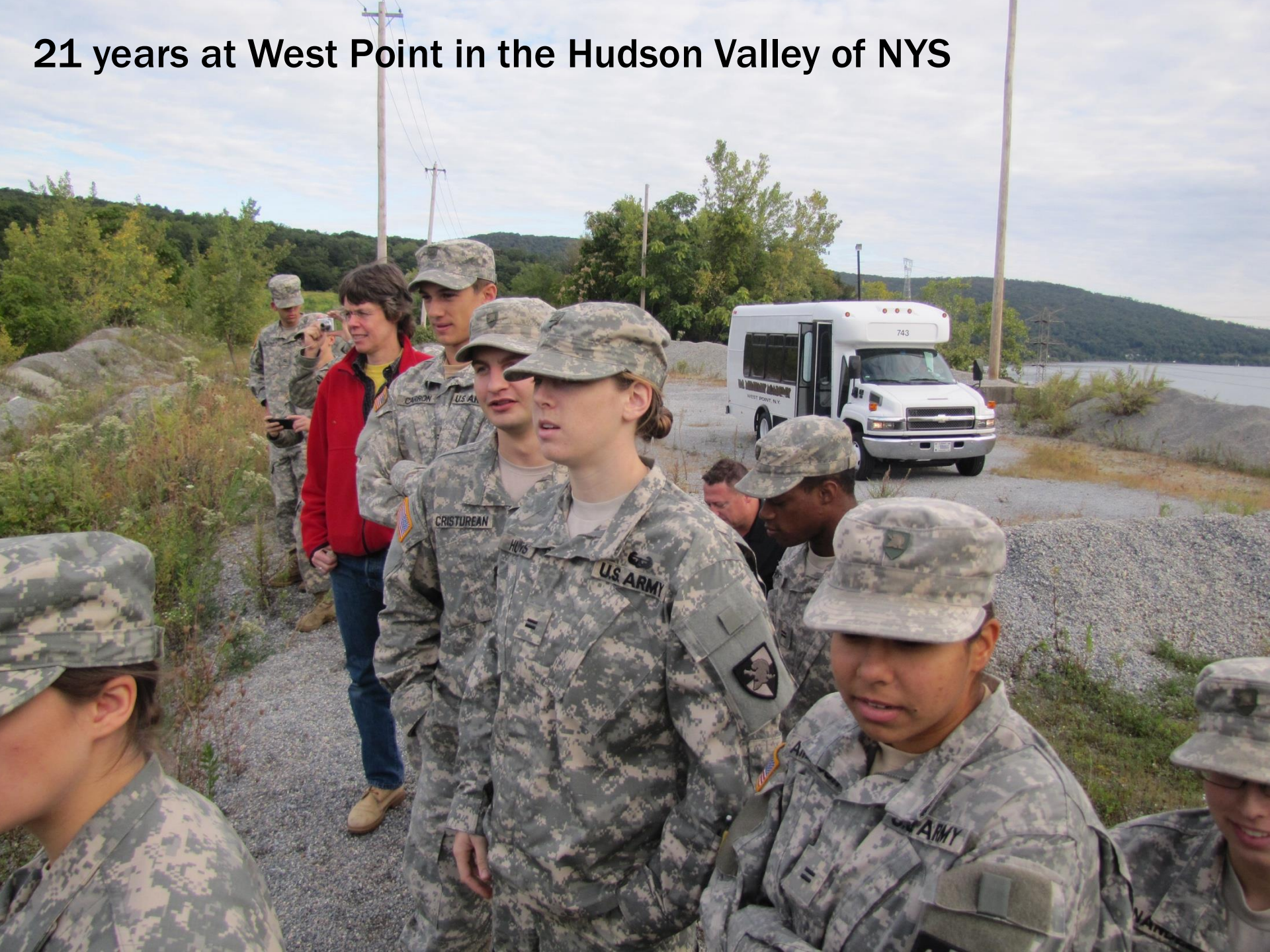


Source: geology.com/world/the-united-states-of-america-satellite-image.shtml

5 post doc years!



21 years at West Point in the Hudson Valley of NYS



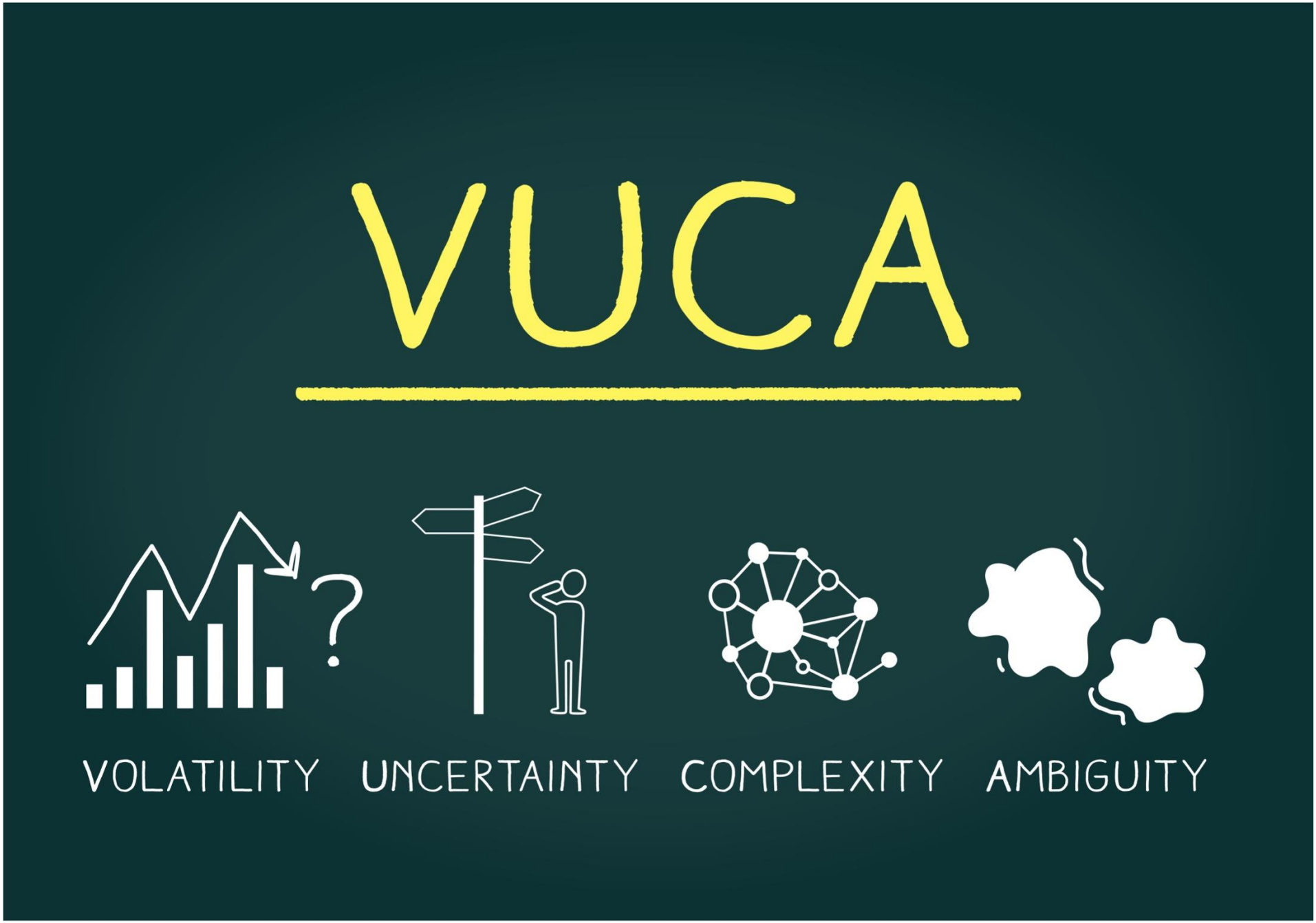


Taught me about

- human nature
- building teams,
  metaphorical & actual
- service & leadership

10 years a dean at Cal State Fullerton



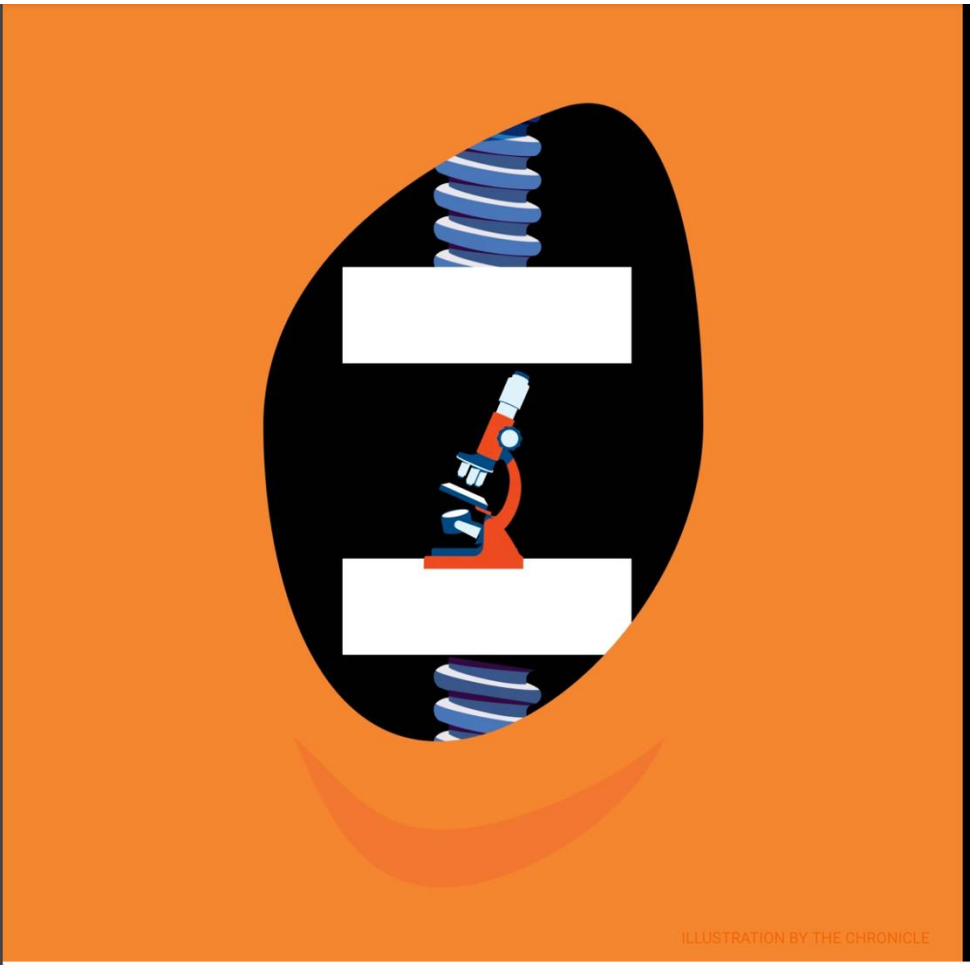


Source: corecatalysts.com/vuca/

Exhibit A(I)



Source: www.chronicle.com/article/the-university-after-ai?utm_source=Iterable&utm_medium=email&utm_campaign=campaign_19066963_nl_Academe-Today_date_20260722



Trump's Proposed Rules for Funding Would Destroy American Science

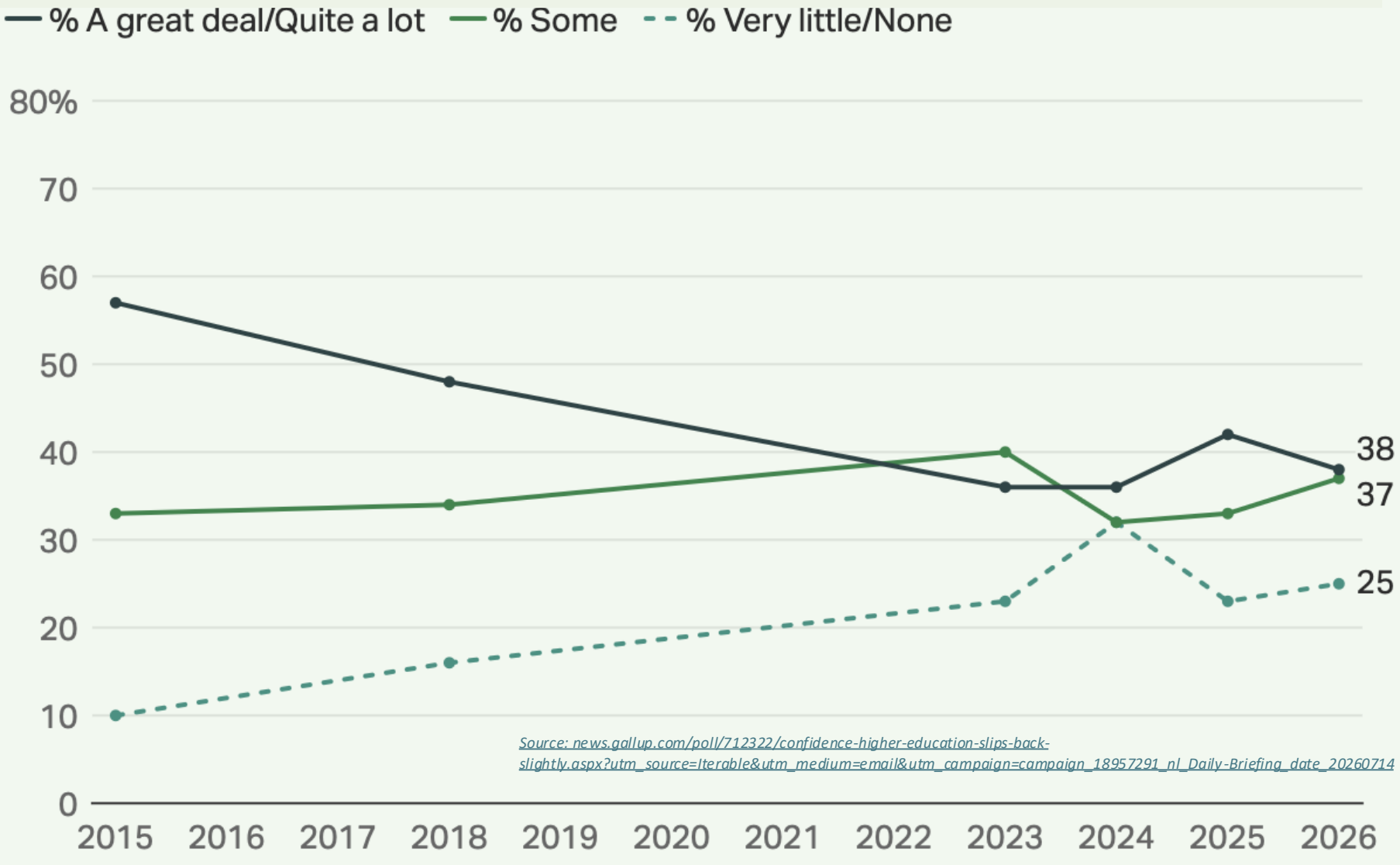
Political appointees, not scientists, may soon determine who gets grants.

Source: www.chronicle.com/article/trumps-proposed-rules-for-funding-would-destroy-american-science?utm_source=Iterable&utm_medium=email&utm_campaign=campaign_19216587_nl_Academe-Today_date_20260803

Confidence in U.S. Higher Education

C

Please tell me how much confidence you, yourself, have in higher education



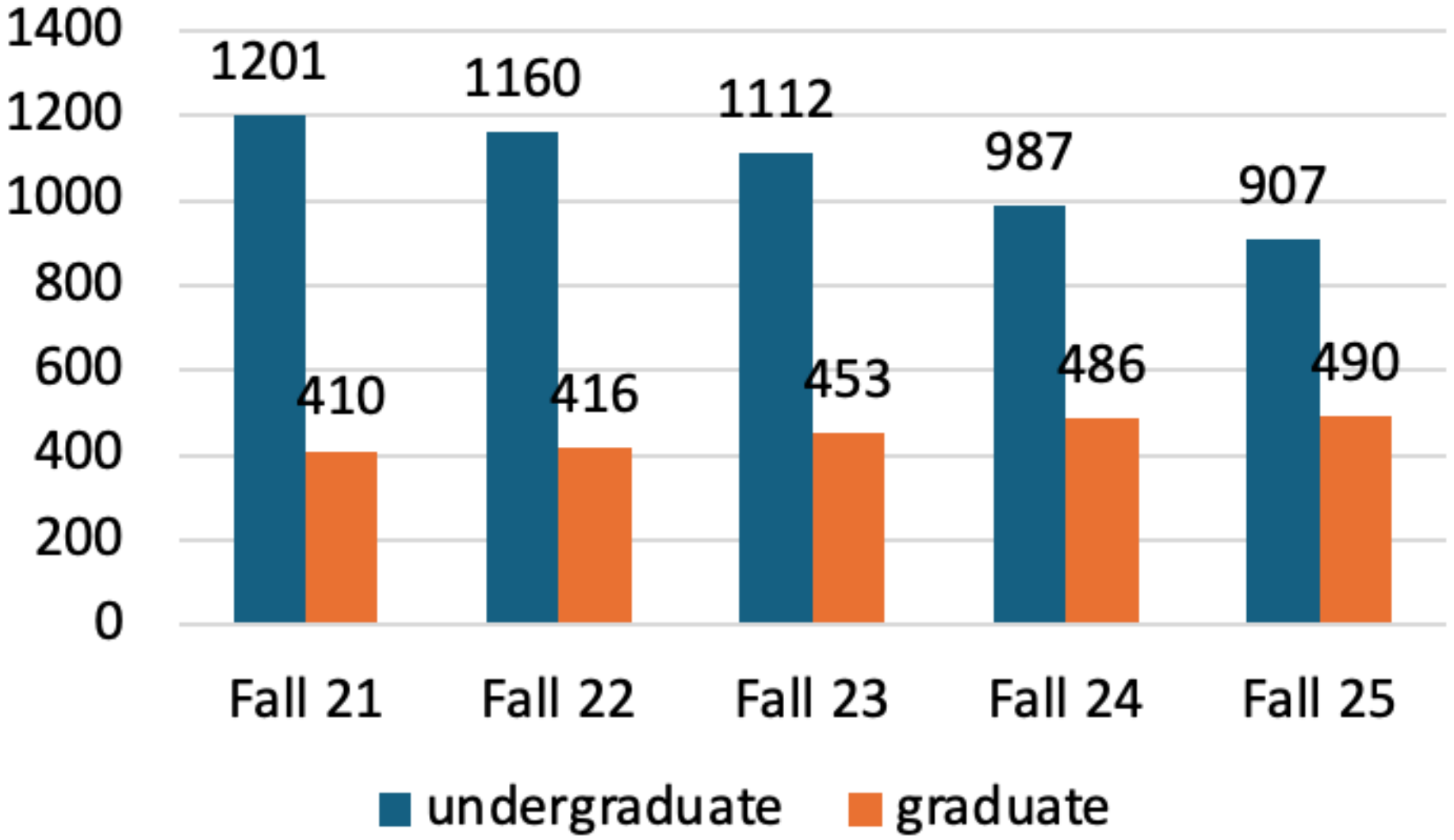
Source: news.gallup.com/poll/712322/confidence-higher-education-slips-back-slightly.aspx?utm_source=Iterable&utm_medium=email&utm_campaign=campaign_18957291_nl_Daily-Briefing_date_20260714

A

What is the purpose of a university?

- Cultivating thinkers?
- Certifying knowledge?
- Training workers?
- Producing discoveries?

Fall enrollment



Source: www.nmt.edu/academicaffairs/research/files/student_outcomes/GRSummarybyCOHORT_AY26.pdf

Recruitment is about messaging

New Mexico Tech Rankings in New Mexico



Best Colleges in New Mexico

#1 of 9



Colleges with the Best Academics in New Mexico

#1 of 9



Best Value Colleges in New Mexico

#1 of 8



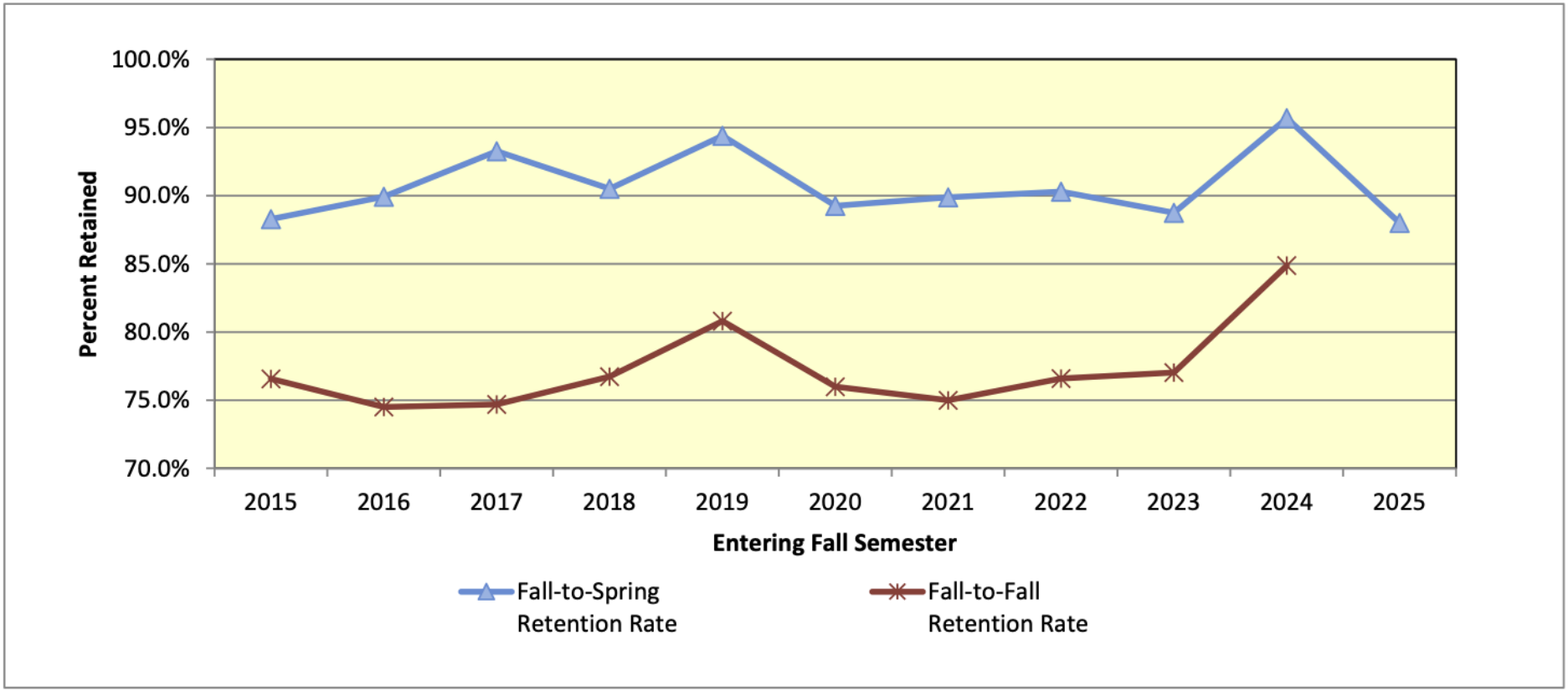
12:1

Colleges with the Best Professors in New Mexico

#1 of 8

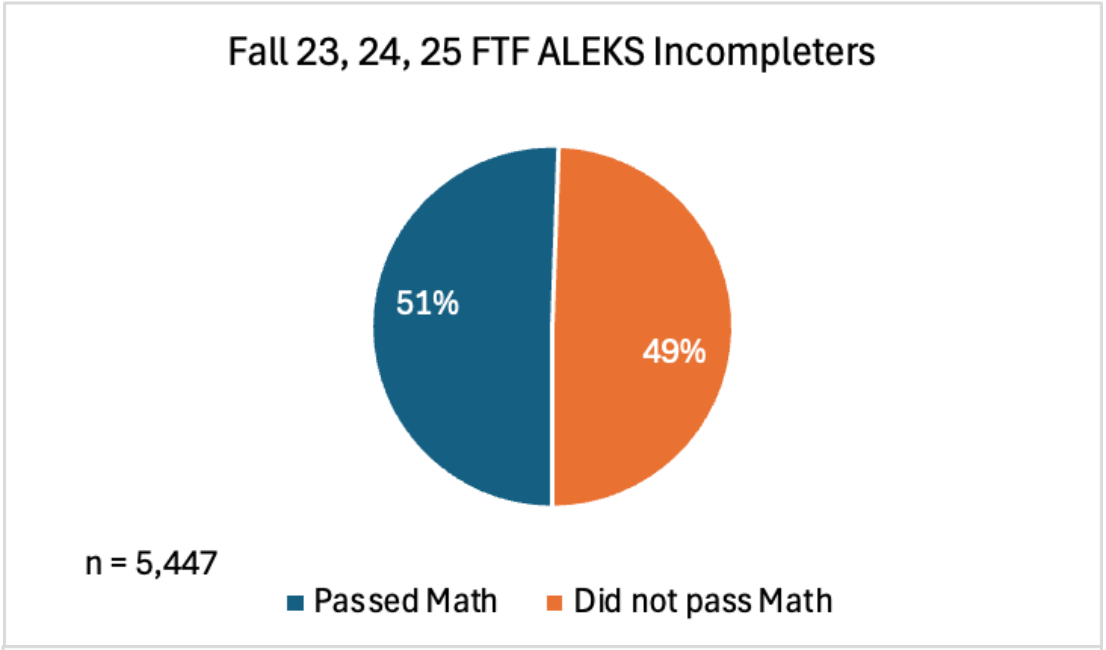
Source: www.niche.com/colleges/new-mexico-tech/#rankings

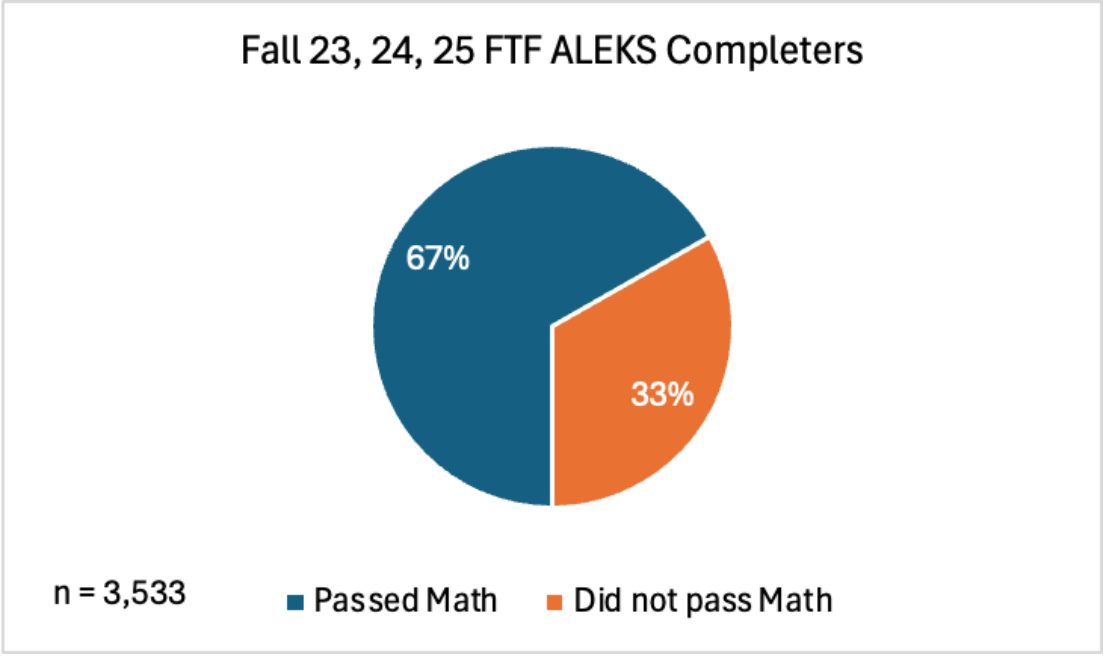
Once you have students, need to keep ‘em



Source: www.nmt.edu/academicaffairs/research/files/student_data/OfficialRetention_SUMMARY_SPR2026.pdf

Math skills


Fall 23, 24, 25 FTF ALEKS Incompleters
51%
49%
n = 5,447
Passed Math
Did not pass Math

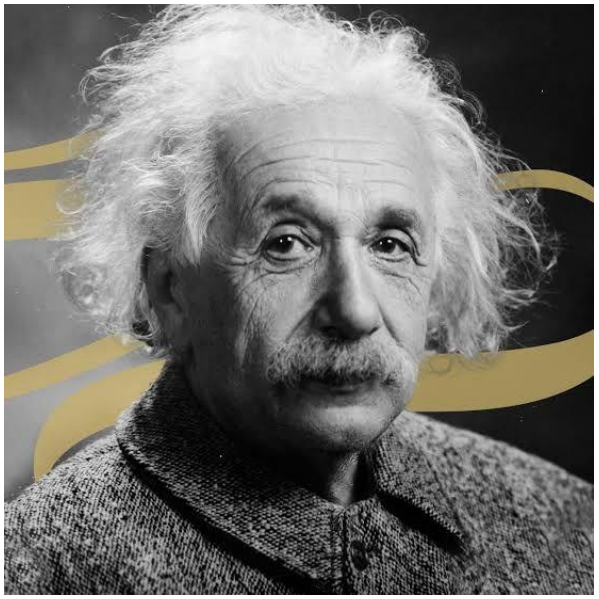

Fall 23, 24, 25 FTF ALEKS Completers
67%
33%
n = 3,533
Passed Math
Did not pass Math

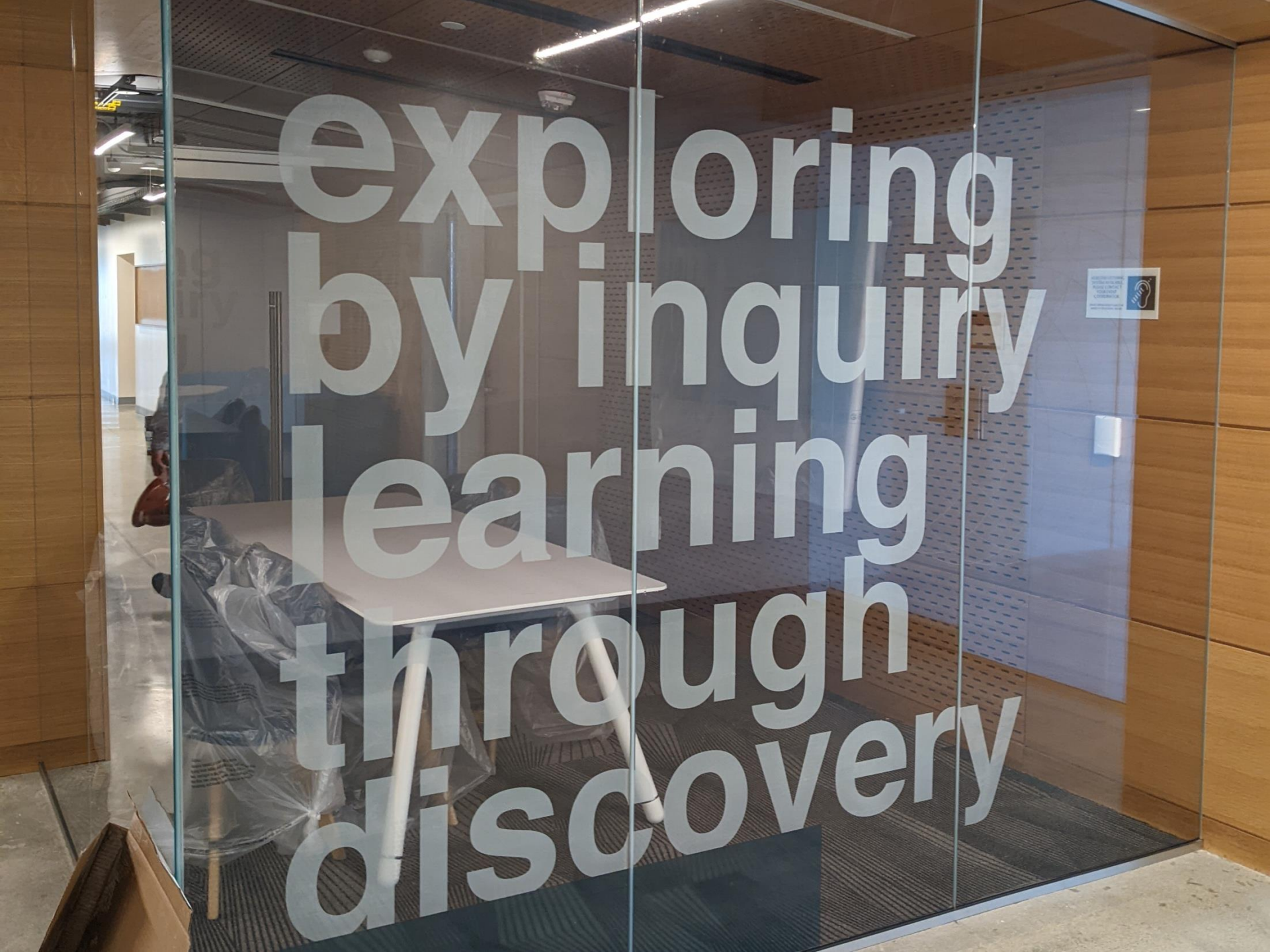
First year experience

CALIFORNIA STATE UNIVERSITY FULLERTON
COLLEGE OF NATURAL SCIENCES AND MATHEMATICS

CNSM 101

Think Like




exploring
by inquiry
learning
through
discovery

Learning through discovery

CALIFORNIA STATE UNIVERSITY FULLERTON
COLLEGE OF NATURAL SCIENCES AND MATHEMATICS

Why participate in Undergraduate Research?

Undergraduate research complements your formal classroom education by providing you the opportunity to learn and practice transferable skills; find a campus home; and experience the joy of discovery.

Learn transferable skills

The skills you learn doing research will benefit you whether you enter the workforce or continue to an advanced degree. Investigating unsolved problems develops critical, creative, and, often, quantitative thinking. Employers seek people who can think independently, work as part of a team, and communicate complex ideas simply and clearly. Your research experience will give you a story to tell illustrating how you have learned and practiced these transferable skills.

Find a campus home

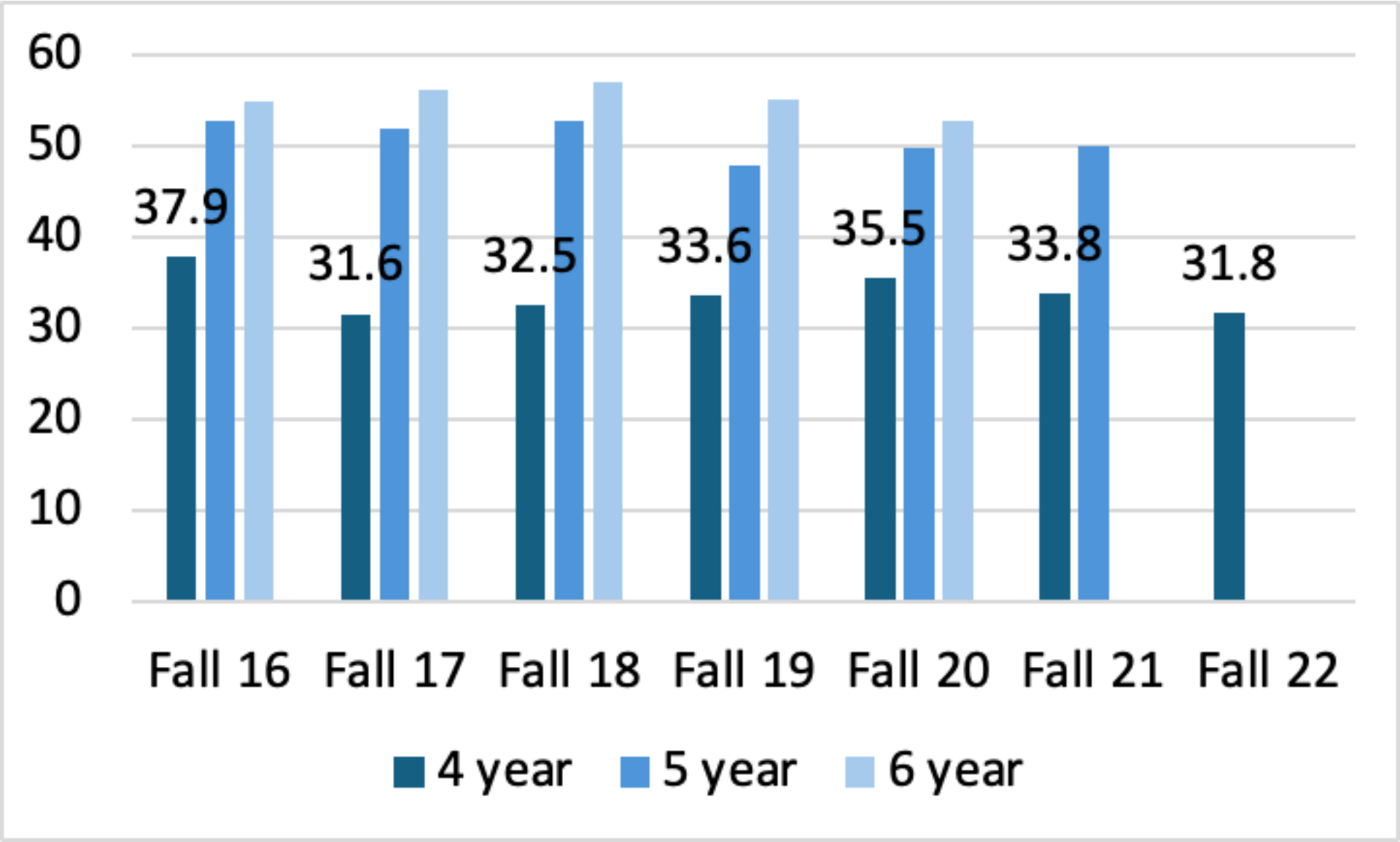
Cal State Fullerton has 40,000 students, many of your classes will have 50 or more students, but your research group will be smaller and feel like home. You will build a community with your peers and with your faculty mentor as you dive deeper into your subject. You will develop confidence in yourself as a scientist or mathematician by collaborating with your research group, sharing results, and listening closely to the shared experiences of those around you who are at different stages of this same journey.

Experience the joy of discovery

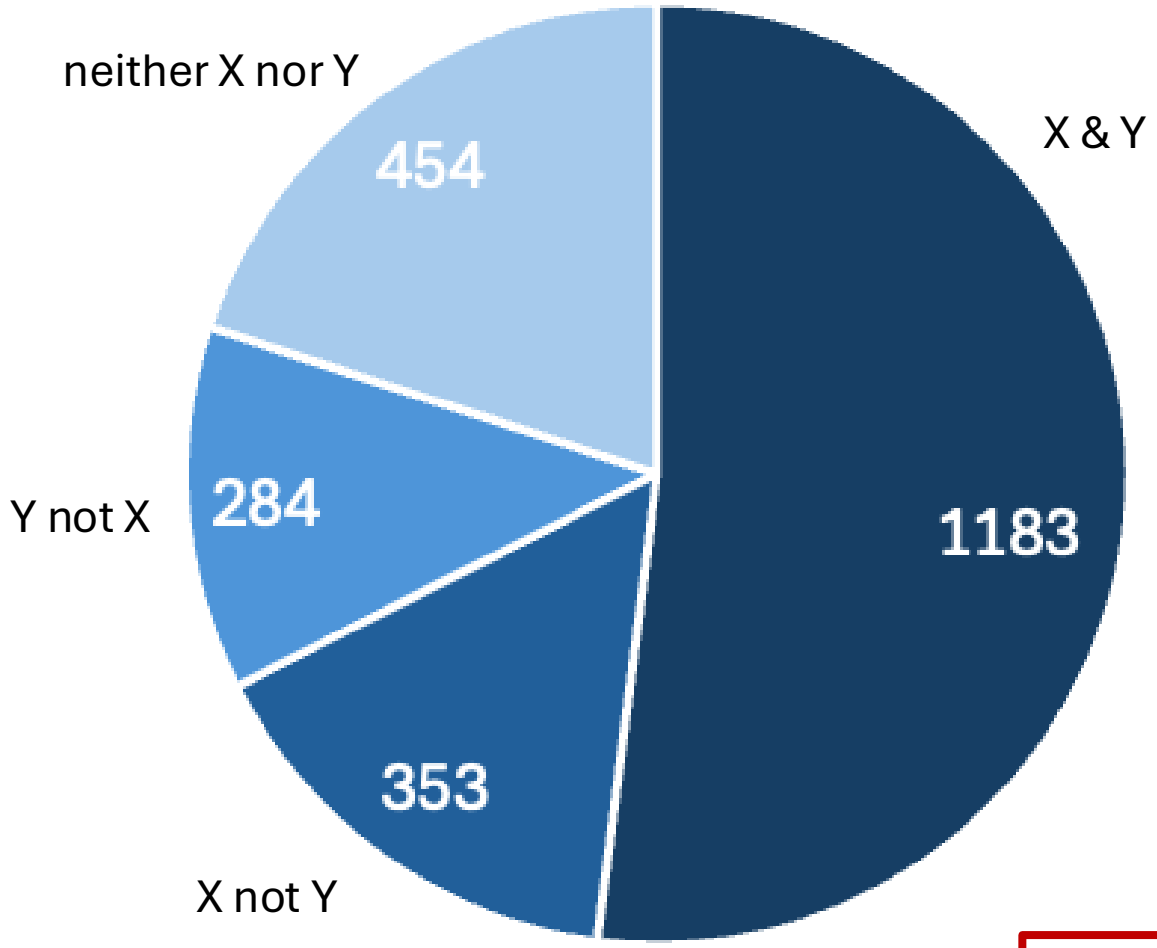
Unlike many of your other academic experiences, failure in research is expected and part of the process. We all must learn how to fail, recover, and use the lessons learned to refine the next iteration. Repeating this process changes your perspective on ignorance and failure. In research, no answer key exists; twists, turns, false starts, and unexpected findings are all part of the process. And, ultimately, will lead you to experience the joy of discovery as you contribute original knowledge to the greater mathematical and scientific communities.

Source: www.fullerton.edu/nsm/undergraduate-research/

4, 5, and 6 year graduation rate



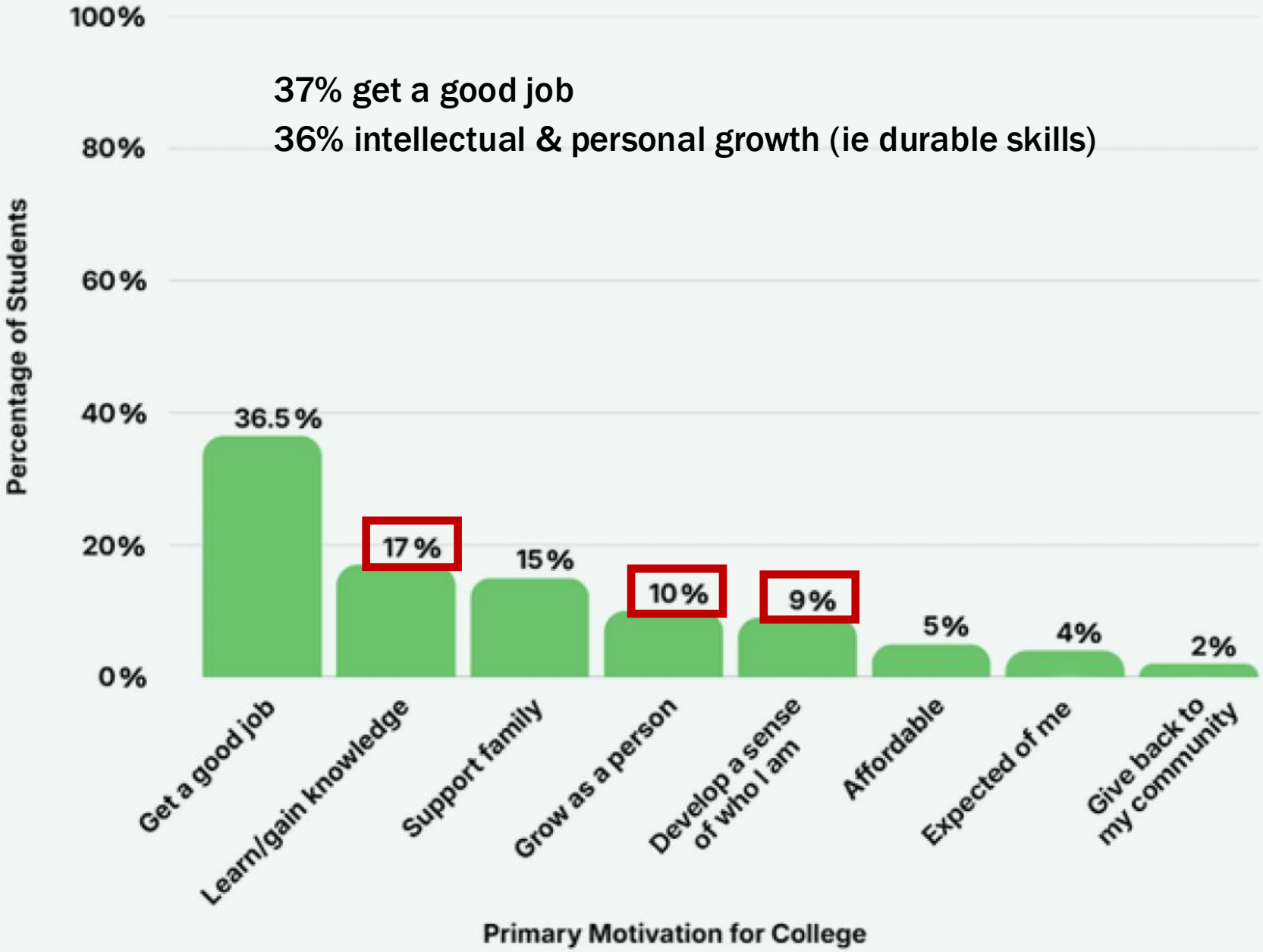
Biology time to degree effort



n = 2,274

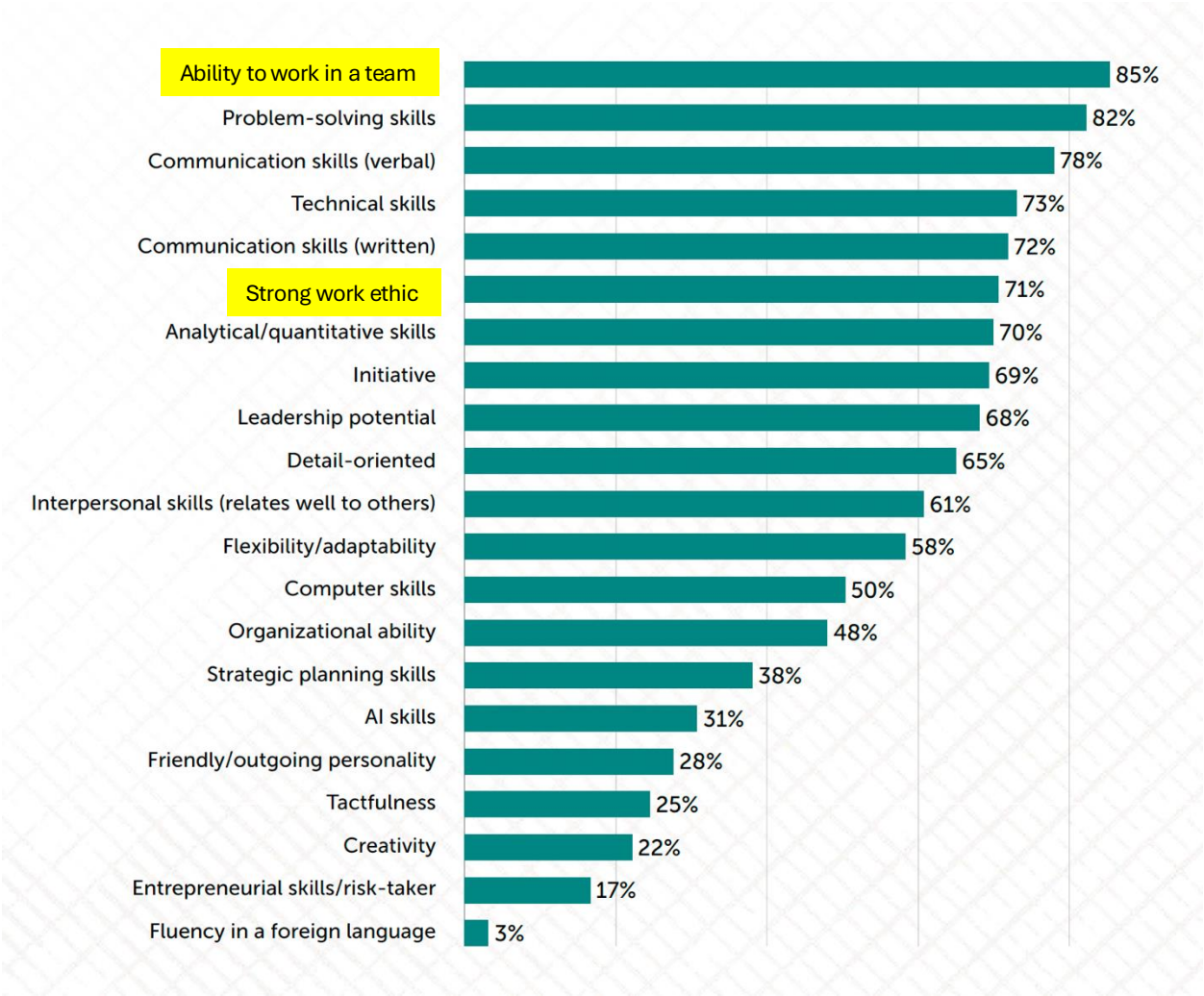
1. Forecast section demand
2. Increase # of seats
3. Tailor advising by pie slice

Top reasons students attend college



What students value in college. May 2026. Humphrey and Finley, AACU

Top skills employers look for

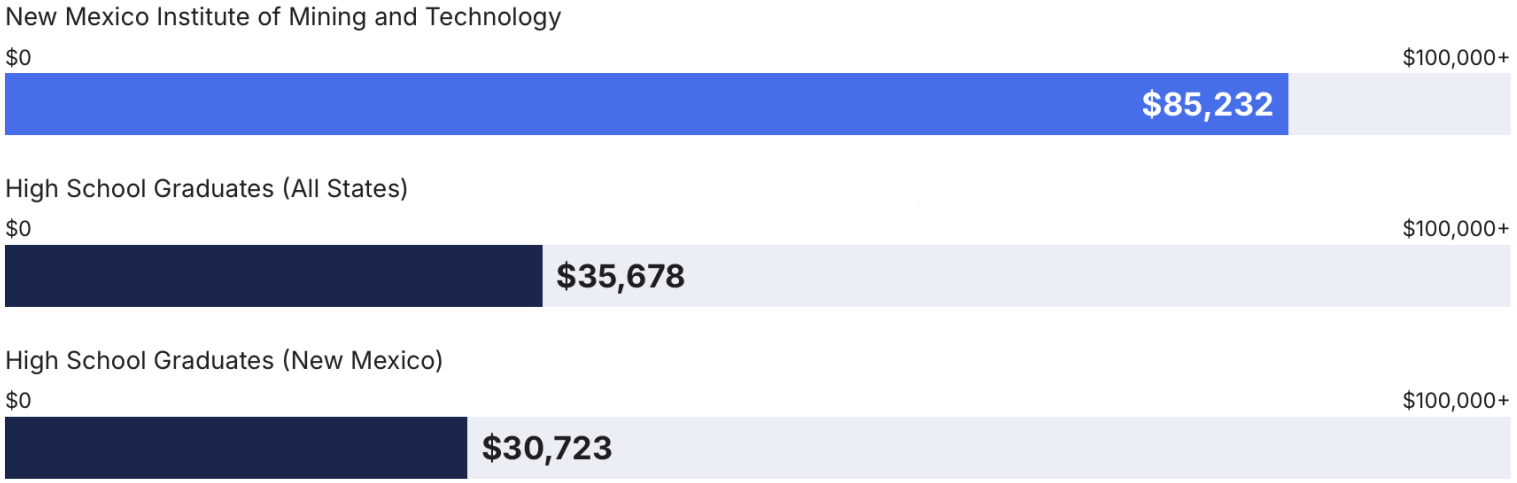


Source: 2026 Job Outlook, National Association of Colleges and Employers, p. 21

Get a good job

Median Earnings Compared to High School Graduates

The typical yearly earnings at this college compared to the typical yearly earnings of high school graduates nationally and from this state.

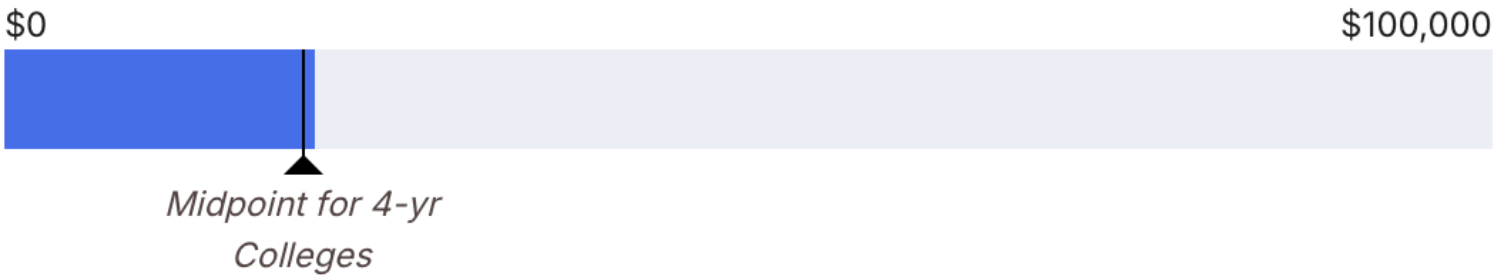


Source: collegescorecard.ed.gov/school/?187967-New-Mexico-Institute-of-Mining-and-Technology

Average Annual Cost

$20,862

Midpoint for 4-yr Colleges: $19,969



Median Earnings

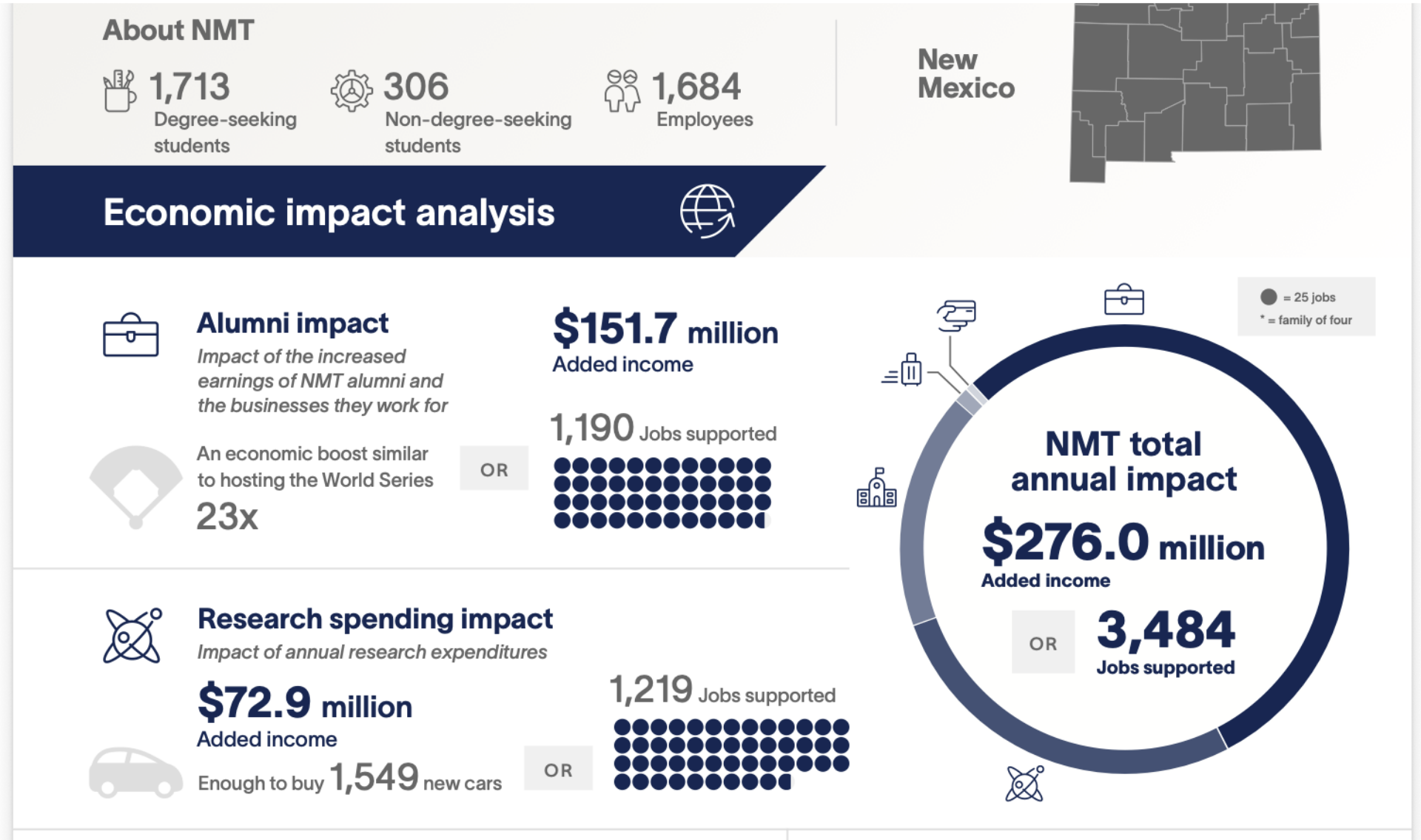
$85,232

Midpoint for 4-yr Colleges: $60,428



Source: collegescorecard.ed.gov/school/?187967-New-Mexico-Institute-of-Mining-and-Technology

NMT economic impact



Source: www.nmt.edu/news/2024/NMT_Infographic.pdf

Obtain R2 status

Metric	Minimum requirement
Annual research expenditures	$5 million
Doctoral degrees awarded	20 research doctorates

Fire!







Research infrastructure to support graduate students

Center for Computational & Applied Mathematics



Source: news.fullerton.edu/2022/02/universitys-second-supercomputer-to-welcome-new-era-of-research-in-science-and-mathematics/

Titan Supercomputing Center



We live in a

VUCA

world

