Technology Enhanced Learning: Opportunities and Challenges for Higher Education

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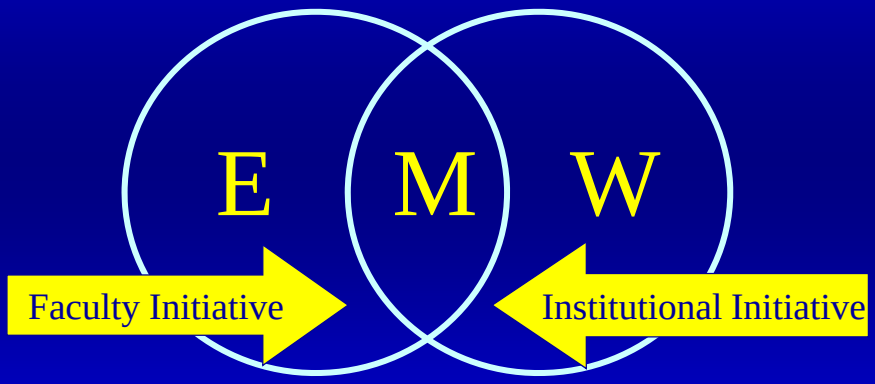
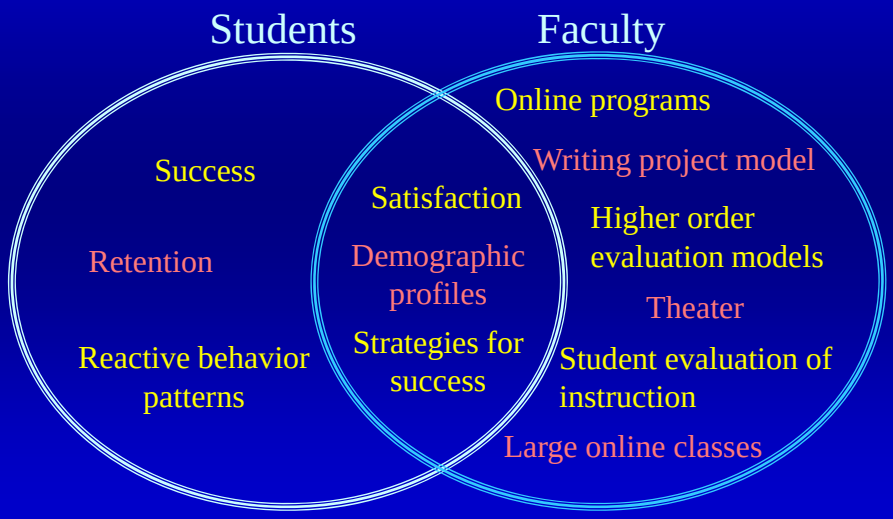
UCF's top down and bottom up approach

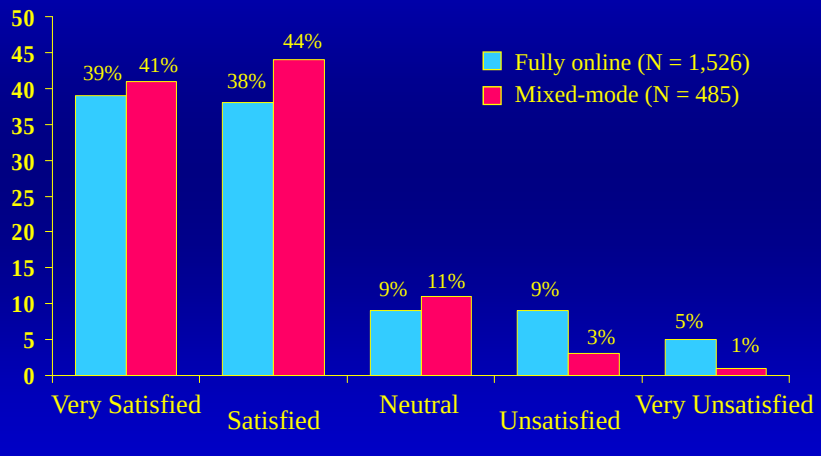


Distributed Learning Impact Evaluation



Student Results

Student satisfaction in fully online and mixed-mode courses



Students' positive perceptions about blended learning

- Convenience
- Reduced Logistic Demands
- Increased Learning Flexibility
- Technology Enhanced Learning

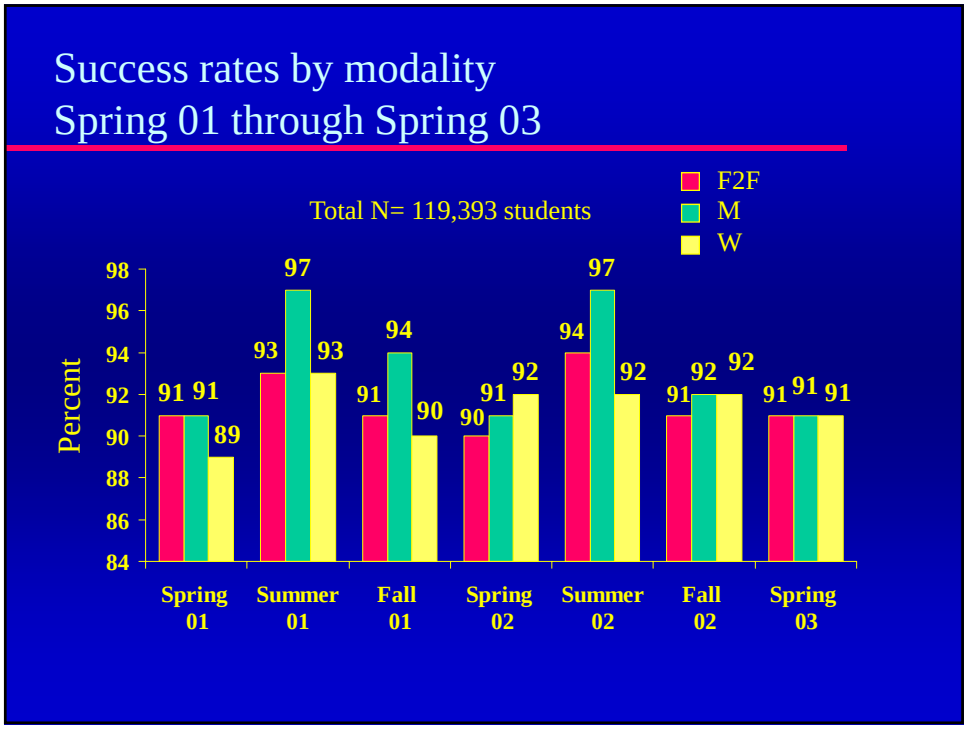
Reduced Opportunity Costs for Education

Students' less positive perceptions about blended learning

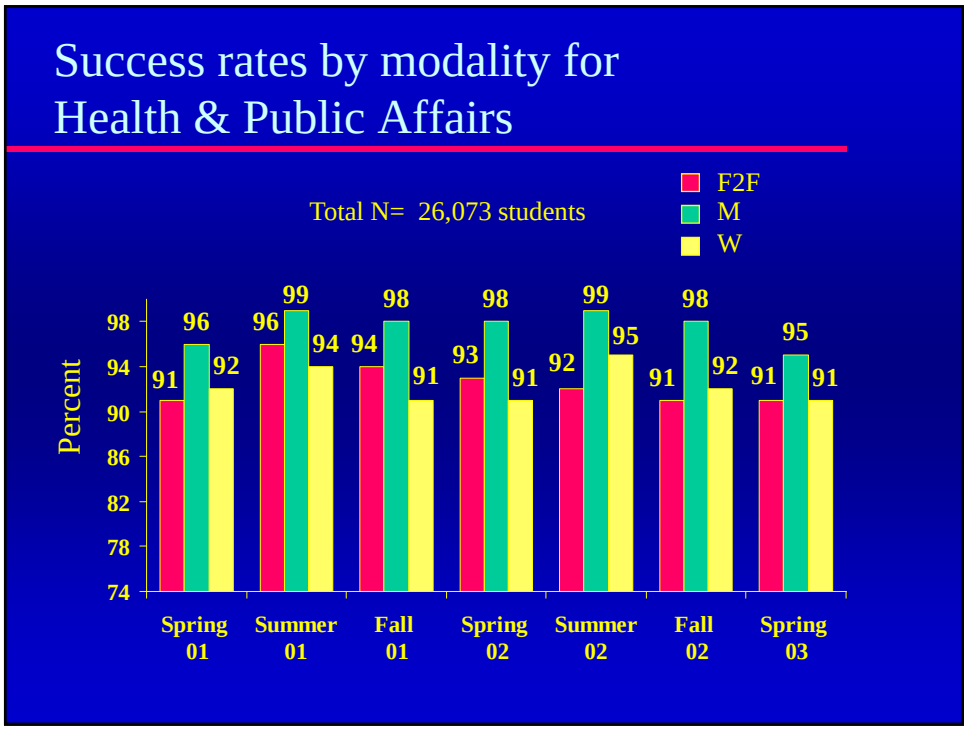
- Reduced Face-to-Face Time
- Technology Problems
- Reduced Instructor Assistance
- Overwhelming
- Increased Workload

Increased Opportunity Costs for Education

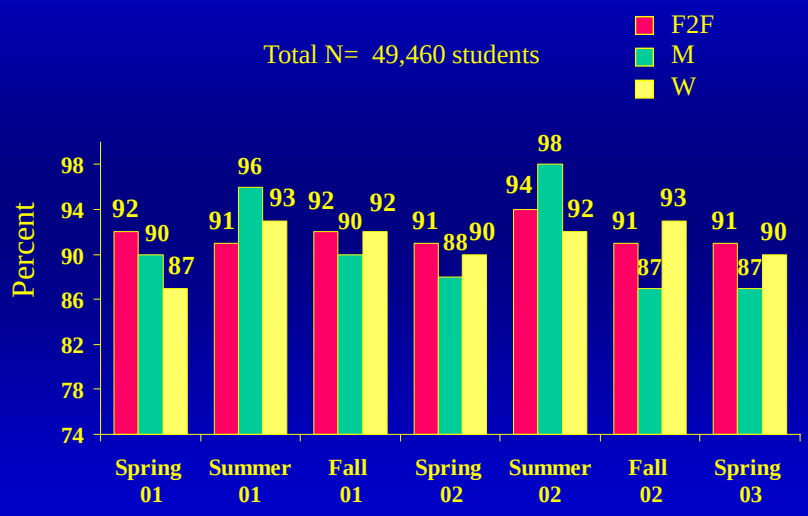
Success rates by modality
Spring 01 through Spring 03



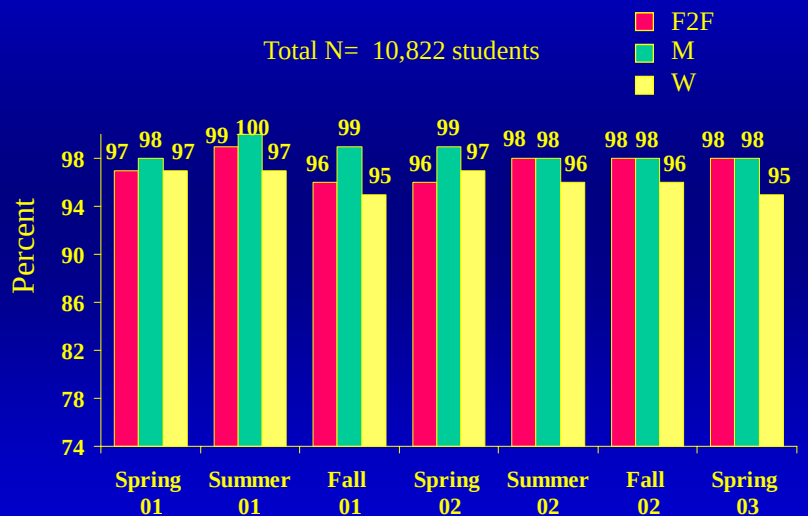
Success rates by modality for
Health & Public Affairs



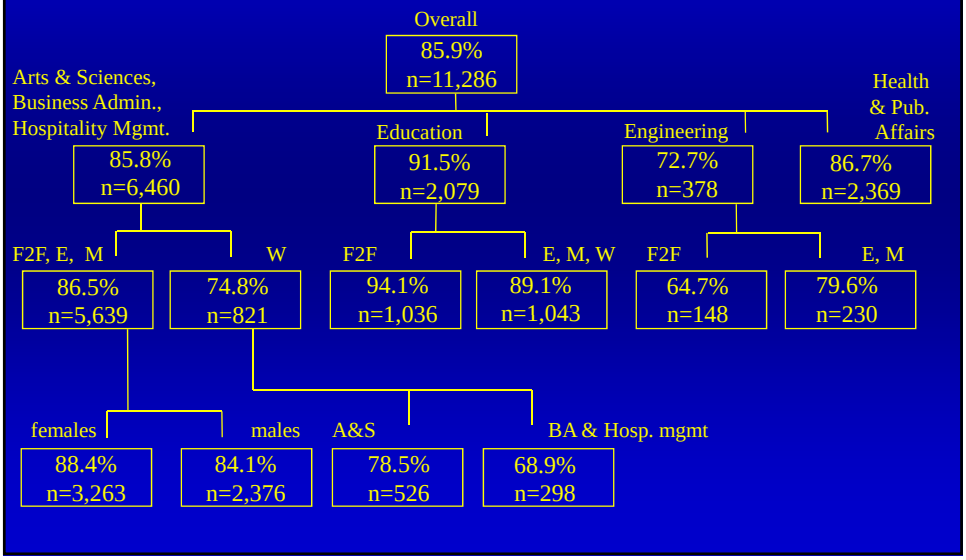
Success rates by modality for Arts & Sciences



Success rates by modality for Education



A segment model for success



Student Generations

Some characteristics of the generations

- **Matures (prior to 1946)**
  - Dedicated to a job they take on
  - Respectful of authority
  - Place duty before pleasure
- **Baby boomers (1946-1964)**
  - Live to work
  - Generally optimistic
  - Influence on policy & products
- **Generation X (1965-1980)**
  - Work to live
  - Clear & consistent expectations
  - Value contributing to the whole
- **Millennials (1981-1994)**
  - Live in the moment
  - Expect immediacy of technology
  - Earn money for immediate consumption

Technology is anything invented after you were born*

Boomers

- TV
- Mainframes
- Telephones
- Party lines
- LPs

Gen Xers

- Video games
- PCs
- Commands
- E-mail
- Mailing lists
- Cassettes

Millennials

- The Web
- Mobile devices
- IM, blogs
- Virtual communities
- CDs, MP3s

** Alan Kay*

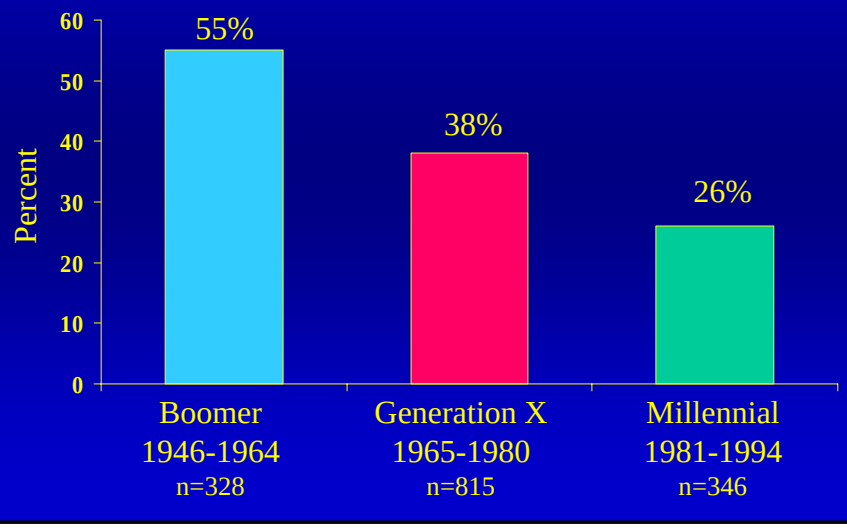
Students Gone Wild on Web Site Leaving College Officials in a Muddle, *Palm Beach Post*

- Social Networking
  - Facebook.com
  - Myspace.com
  - Ratemyprofessor.com

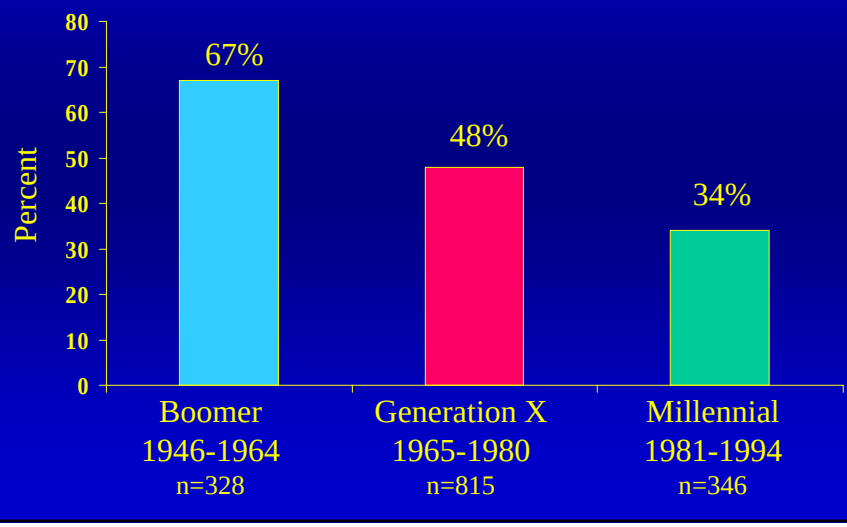
Searching for Dummies *New York Times*

- National Center for Education Statistics
  - Ability to interpret complex texts
    - 1992: 40%
    - 2006: 31%
- Times of London
  - Students more poorly prepared
  - Less teachable

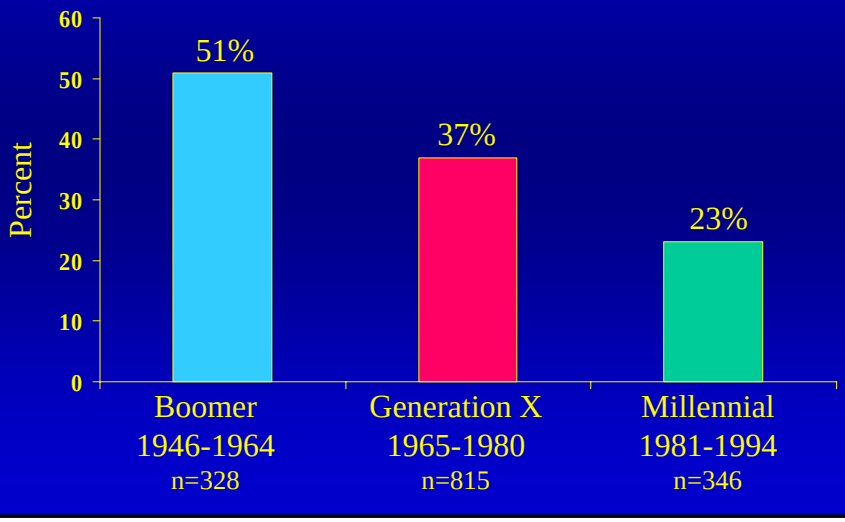
Students who were very satisfied by generation



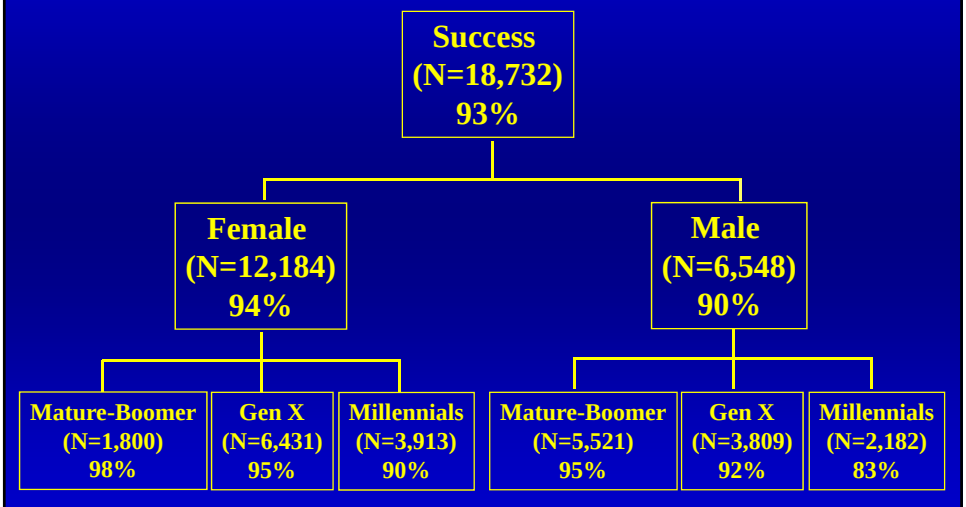
Better able to integrate technology into their learning



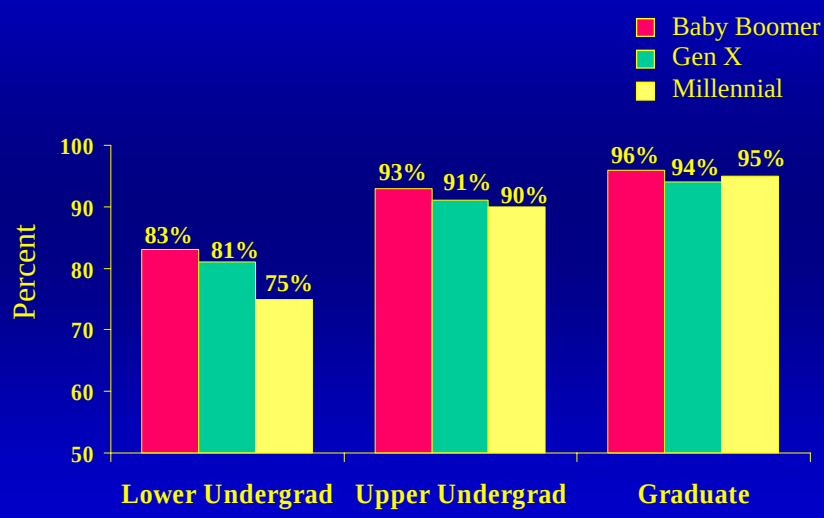
Because of the web I changed my approach to learning



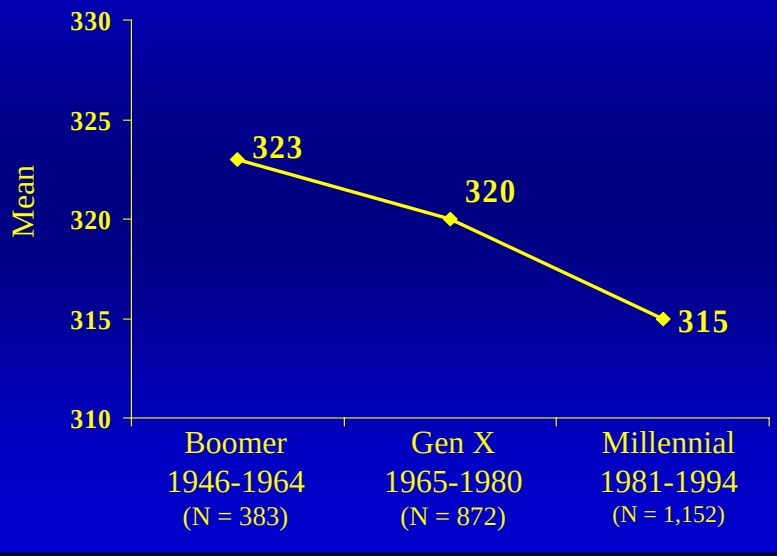
Success in Blended Courses by Gender and Generational Membership



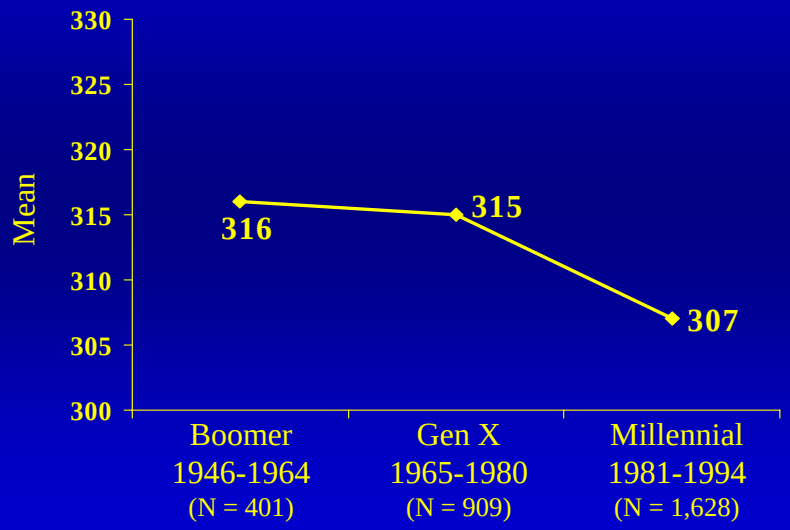
Success rates by generation and course level



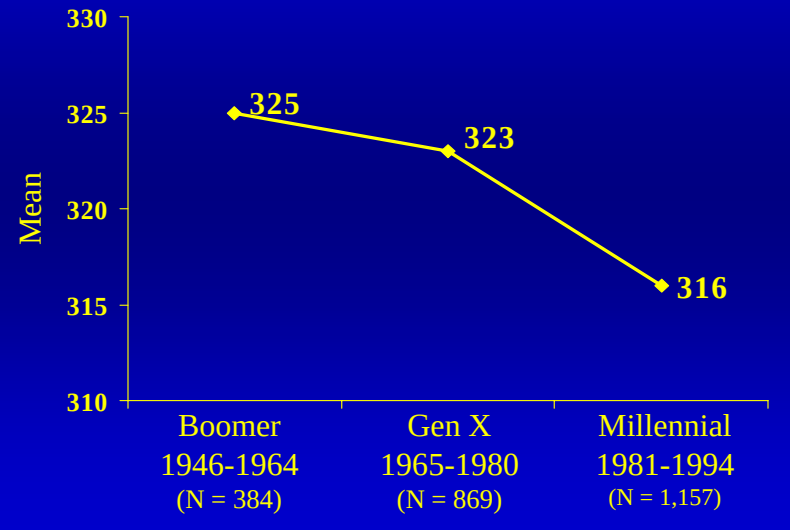
College Level Academic Skills Test (CLAST) English Scores by Generation



College Level Academic Skills Test (CLAST) Math Scores by Generation



College Level Academic Skills Test (CLAST) Reading Scores by Generation



Student Behavior Types

Research on reactive behavior patterns

- Theory of William A. Long, University of Mississippi
- Ambivalence brings out behavior patterns
- Provides a lens for how “types” react to different teaching styles

Resources

- Personality
- Emotional maturity
- Sophistication level
- Level of intellect
- Educational level
- Character development

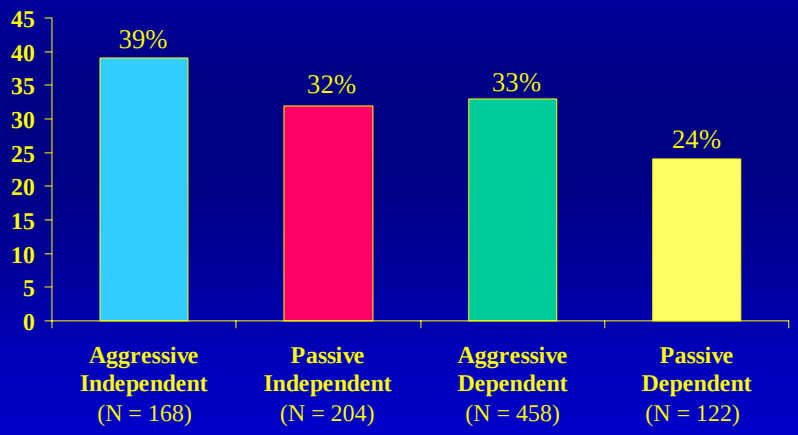
A description of Long behavior types

- **Aggressive Independent**
  - high energy
  - action-oriented
  - not concerned with approval
  - speaks out freely
  - gets into confrontational situations
- **Passive Independent**
  - low energy
  - not concerned with approval
  - prefers to work alone
  - resists pressure from authority
- **Aggressive Dependent**
  - high energy
  - action-oriented
  - concerned with approval
  - rarely expresses negative feelings
  - performs at or above ability
- **Passive Dependent**
  - low energy
  - concerned with approval
  - highly sensitive to the feelings of others
  - very compliant

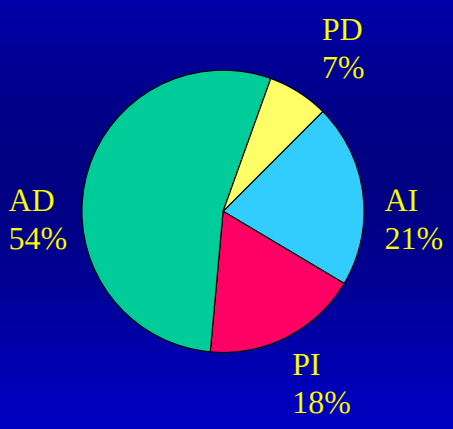
A description of Long behavior traits

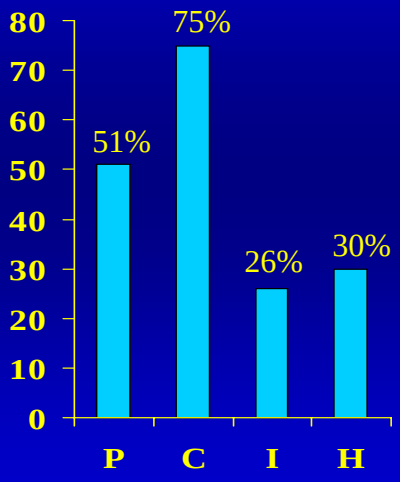
- **Phobic**
  - exaggerated fears of things
  - often feels anxious
  - often sees the negative side
  - doesn't take risks
- **Compulsive**
  - highly organized
  - neat, methodical worker
  - perfectionist
  - strongly motivated to finish tasks
- **Impulsive**
  - explosive
  - quick-tempered
  - acts without thinking
  - frank
  - short attention span
- **Hysteric**
  - dramatic and emotional
  - more social than academic
  - artistic or creative
  - tends to overreact

Students who were very satisfied with blended learning Long type



Distribution of Long types and traits for fully online students

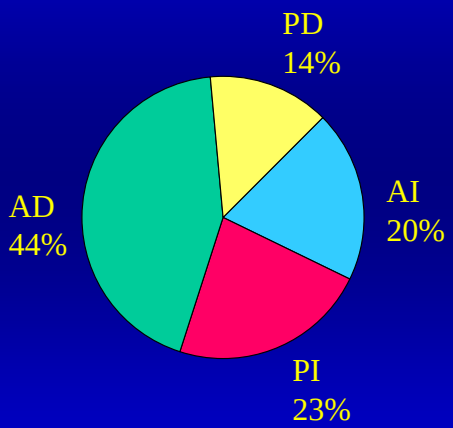


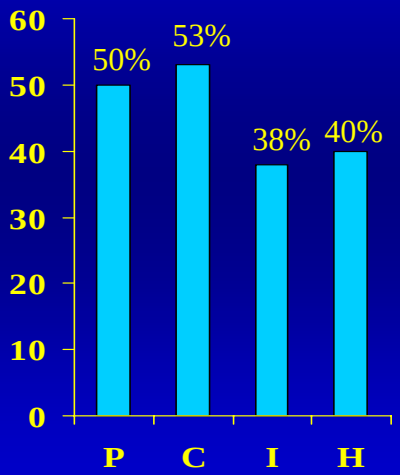


(N=1,437)

(N=1,520)

Distribution of Long Types and Traits for Composition I Students

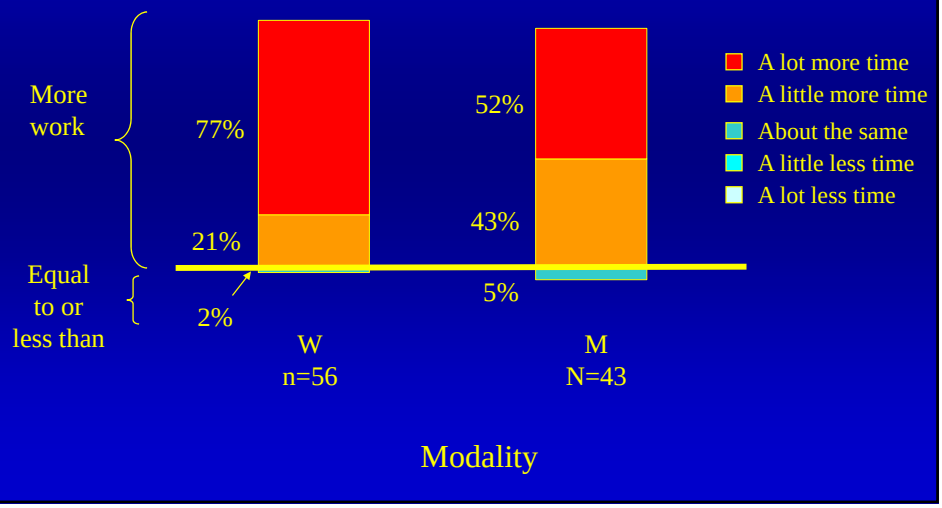




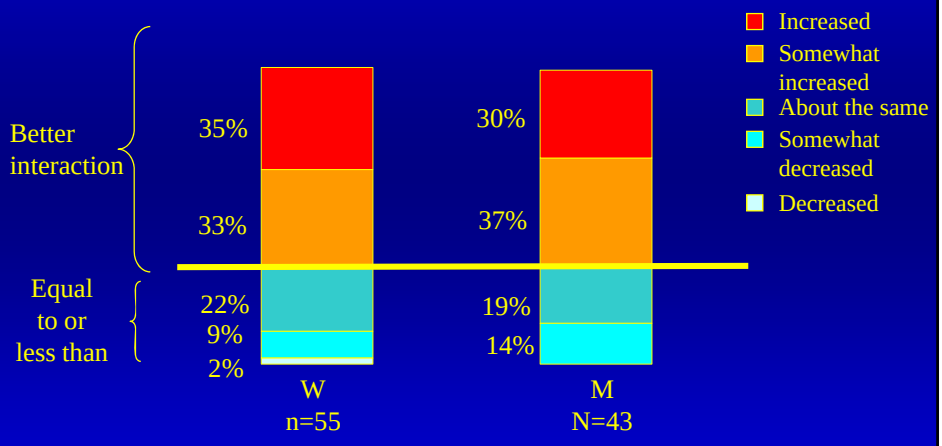
(N=1,054)

Faculty Results

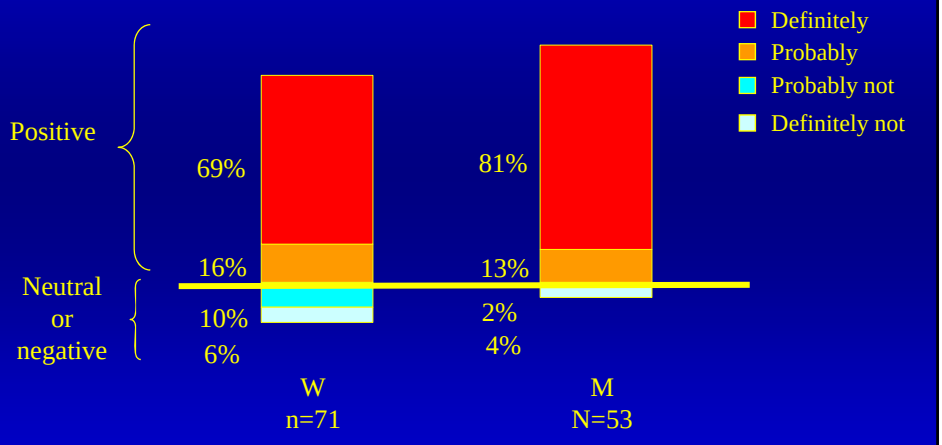
Time to develop course as compared with a comparable face-to-face section



Quality of interaction in Web classes compared to comparable F2F sections



Faculty willingness to teach Web courses in the future



Student Ratings

A decision rule based on student evaluation responses and the probability of faculty receiving an overall rating of *Excellent*

If...

	Excellent	Very Good	Good	Fair	Poor
Facilitation of learning	●	○	○	○	○
Communication of ideas	●	●	○	○	○

Then...

The probability of an overall rating of *Excellent* = **.93** **&**

The probability of an overall rating of *Fair* or *Poor* =**.00**

A comparison of excellent ratings by college unadjusted and adjusted for instructors satisfying Rule 1

College	Unadjusted %	Adjusted %
Arts & Sciences	41.6	92.4
Business	34.9	90.9
Education	56.8	94.8
Engineering	36.2	91.3
H&PA	46.1	93.9
	(N=441,758)	(N=147,544)

A comparison of excellent ratings by course modality--unadjusted and adjusted for instructors satisfying Rule 1

Course Modality	**Unadjusted %**	**Adjusted %**
F2F	42.0	92.2
E	44.0	92.3
M	40.6	92.0
W	55.4	92.7
ITV	20.9	86.7
	N=709,285	N=235,745

Research Initiative for Teaching Effectiveness

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