Institutional Researchers and Graduation Rates: Assessing the Landscape
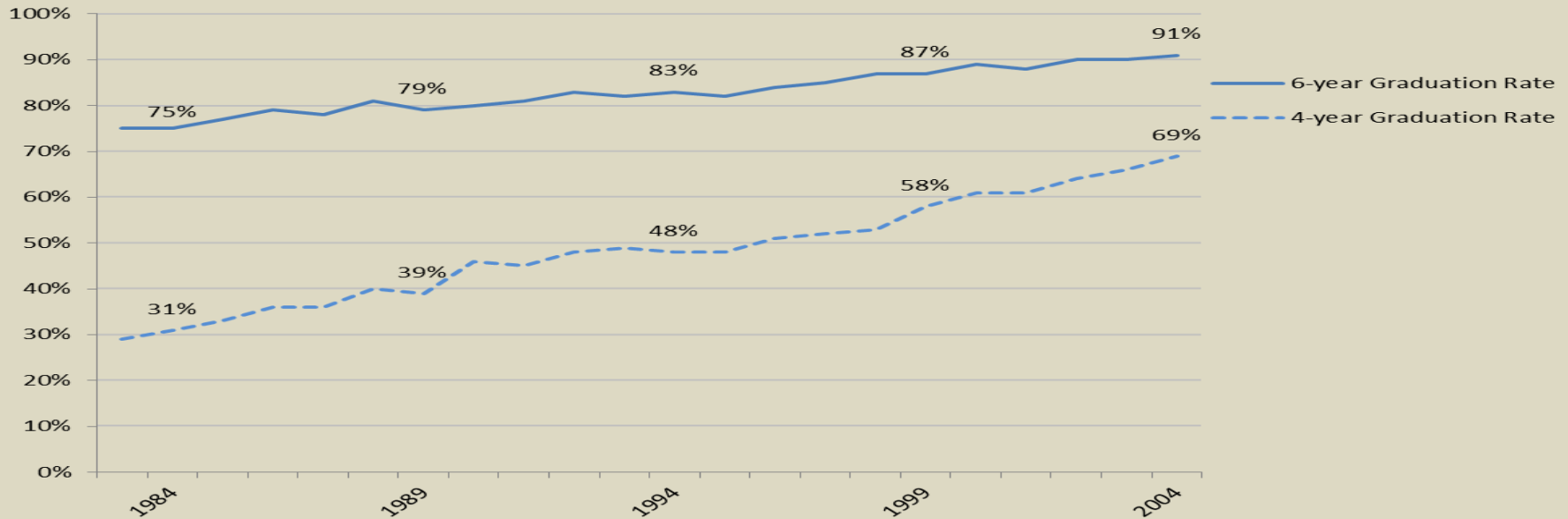
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Office of Student Research and Campus Surveys

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Trends in Academic Success: Graduation Rates

4- and 6-year Graduation Rates at UC Berkeley by Newly Entering Fall Freshmen Cohort Year (1983-2004)

Looking Back: IR and Grad Rates

- My first work at OSR
- The shocking 27% graduation rate
- Twenty + years of improving graduation rates
- How things have changed
- Data: Analyst Ratio
- Today's presentation

TRADITIONAL RESEARCH ROLES
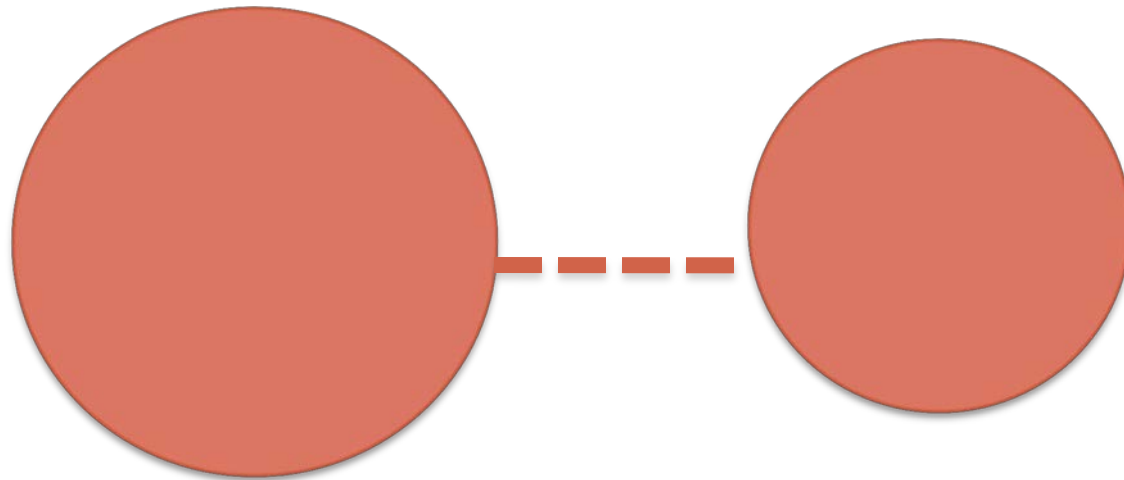
INSTITUTIONAL AUTHORITY

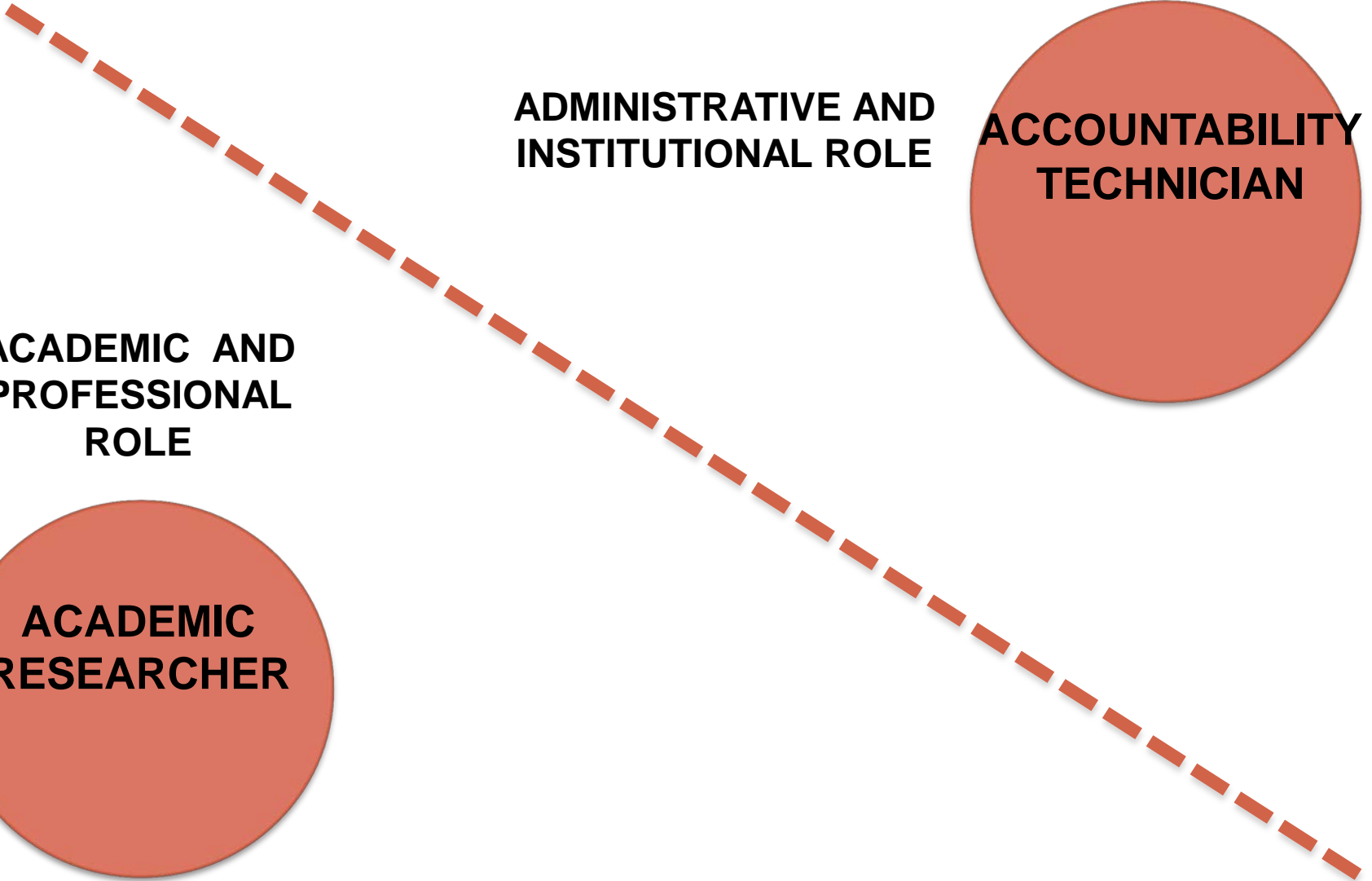**PROGRAM & POLICY EVALUATOR**

THE NEW REALITY FOR IR

ADMINISTRATIVE AND INSTITUTIONAL ROLE

ACCOUNTABILITY TECHNICIAN

ACADEMIC AND PROFESSIONAL ROLE

ACADEMIC RESEARCHER

Approaches of the Four Types

AUTHORITY

Authoritative resource, interpretation of data and its interconnections, discovery, debunking, reactive spin in defense of institution

TECHNICIAN

Visual display of data, precision, "error-free", consistency, no statistical controls; proactive spin in public representation

RESEARCHER

Testing of hypothesis, academic research design, rigorous statistical controls, no spin, i.e., research ethics

EVALUATOR

Unbiased evaluation of outcomes, effects, rigorous statistical controls, no spin in presentation of results

Role and Approach to Data

	ACADEMIC RESEARCHER	CAMPUS AUTHORITY	ACCOUNT. TECHNICIAN	PROGRAM EVALUATOR
WHO YOU ARE	AUTHOR	AUTHORITY	ANONYMOUS	EXPERT
REFERENCE GROUP	ACADEMIC DISCIPLINE	INSTITUTION	ADMIN-ISTRATION	APPLIED ACADEMIC
APROACH TO DATA	MULTIVARIATE CONTROLS	NEW CONNECTIONS	DISPLAYS, METRICS	MEASURING EFFECTS
PURPOSE	NEW KNOWLEDGE	INSTITUTIONAL AWARENESS	ACCOUNT-ABILITY	EVIDENCE

LOAM

Soil is composed of many particles of varying sizes. Soil scientists have classified soil particles into three major groups: sand, silt and clay. Sand particles are the largest and tend to hold little water but allow good aeration. Clay particles are very small in size and tend to pack down so that water does not drain well and little or no air can penetrate. Silt particles are medium sized and have properties in between those of sand and clay.

A loamy soil, then, is one that combines all three of these types of particles in relatively equal amounts. Loamy soil is ideal for most garden plants because it holds plenty of moisture but also drains well so that sufficient air can reach the roots.

And remember that soil improvement is a program, not just a one-shot deal. You'll need to continue applications at least once a year for several years to really change the nature of the existing soil.

Graduation Rate Orientation

CAMPUS AUTHORITY

Non-statistical use of LOAM (Landscape of Attrition Method) that focuses on actual numbers of non-graduates and relative sizes of subgroups and timing of leaving; telling the story

ACCOUNTABILITY TECHNICIAN

Focus on graduation rates as accountability (Gold & Albert, 2006), with **external** comparisons by benchmarking (peer comparisons) or actual versus predicted (regression-adjusted) graduation rates

ACADEMIC RESEARCHER

Multivariate statistical research that uses, for example, logistic regression to ascertain the effects of various factors, net of other

PROGRAM/POLICY EVALUATOR

Examining **internal** differences in graduation rates, especially identifying "at-risk" populations and assessing programs and

Graduation Rates and External Accountability

- Actual versus predicted graduation rates and peer comparisons: External determination of "winners and losers"?

- Concern that highly visible graduation data for accountability does not necessarily mean greater institutional self-understanding

- Technical issues and errors: examples

- Changing my tune & positive examples

- Archibald & Feldman (2006) - production frontier analysis

Example from CollegeResults

	6 - year grad rate	Black F	Black M	Asian F	Asian M	White F	White M
Berkeley	90	84	**55**	96	93	90	89
Michigan	89	85	69	95	92	**94**	**95**
UCLA	89	85	**75**	94	89	91	90
North Carolina	85	79	59	89	84	89	84
NYU	85	82	69	90	91	84	86

The Dilemma of "Good" Academic Research on Graduation Rates

- Impressive advances in statistical design and use of national data sets
- Hegenomy of academic researchers
- "Better" the research, the less useful for IR?
- Beta blockers
- Freshmen versus Transfer cohorts (Cal State Fullerton example)
- Institutional versus Academic Research(ers)

Institutional Researchers and the Challenges of Program/Policy Evaluation:

- Relationships and resource constraints
- Where's the evidence that it works
- Getting serious about program evaluation
- "Closing the gap" - UCB and CSU
- examples

- "Casting a Long Shadow: Freshman Year Academic Disruption and Minority Graduation Rates." (2000)

Trends in Academic Success: 1st-year Probation Rates

1st-Year Probation Rates:
UC Berkeley New fall Freshmen Cohort
(1983-2007)
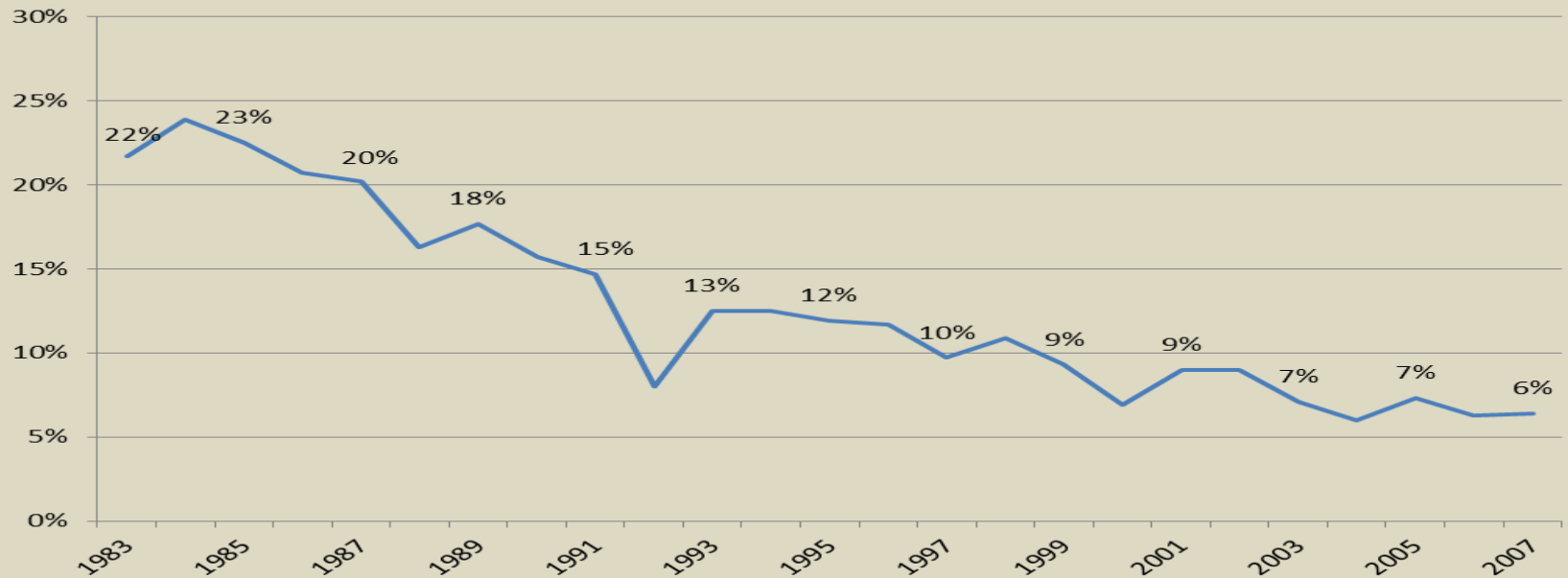
Campus Authority and the Use of LOAM

- Communicating the graduation landscape in terms that make sense to the institution
- Numbers and answering the basic questions about who doesn't graduate: Who, when, how, etc.
- Addressing misconceptions or traditional views
- Establishing "intersubjectivity"
- "Telling the story"

Students Who Do Not Graduate within Six Years: Fall 2004 Freshman Cohort

❖ How many students do not graduate and when do they leave?

❖ How well or how poorly are students doing academically when they leave?

❖ To what extent is academic preparation associated with not graduating?

❖ To what extent are family resources associated with not graduating?

❖ To what extent is choice of field of study associated with not graduating?

❖ To what extent is initial academic difficulty at Cal associated with not graduating?

"At-Risk" Groups and Non-Graduates: Preparation

❖ HS GPA: Lowest 10% (380) results in 71 non-graduates (22% of the 327 non-graduates)

❖ SAT Scores: Lowest 10% (360) results in 54 non-graduates (17% of the non-graduates)

"At-Risk" Groups and Non-Graduates: Background

❖ UREM: 12% (426) results in 62 non-graduates (19% of the non-graduates)

❖ First Generation College: 15% (554) results in 71 non-graduates (22% of the non-graduates)

❖ Low Income: Lowest 15% (556) results in 58 non-graduates (18% of the non-graduates)

Non-Graduates by Race/Ethnicity

Table 1. Distribution of Non-Graduates by Race/Ethnicity (excluding Athletes)		
	Number	Grad Rate
White	83	92%
Chicano	35	86%
Chinese	34	96%
No Data	18	92%
African American	16	80%
Filipino	14	90%
International	12	93%
Korean	11	94%
Latino	9	89%
South Asian	9	93%
Other Asian	9	90%
Japanese	6	90%
Vietnamese	6	95%
Other	4	92%
American Indian	2	93%
Pacific Islander	0	100%

"At-Risk" Groups and Non-Graduates: Academics

❖ Majors (intended) with lowest graduation rates: Lowest 11% (411) results in 43 non-graduates (13% of the non-graduates)

❖ Undecideds: 36% (1326) results in 110 non-graduates (34% of the non-graduates)

Non-Graduates by Intended Major

Table 2. Distribution of Non-Graduates by Selected Intended Major	Number	% of Group
Undecided	120	9%
MCB	22	6%
EECS	9	6%
Mathematics	9	15%
Mech Engineering	9	8%
Architecture	8	8%
Economics	8	11%
Chemistry	6	7%
Political Science	5	4%
Psychology	5	6%
Chem Engineering	4	6%
Civil Engineering	4	6%
Physics	4	9%
English	3	4%
History	2	4%
Applied Math	0	0%

Initial Finding: Recruited Student-Athletes

- ❖ Constitute 6% of freshman cohort (221 of 3671) but 16% (58 of 327) of those not graduating

- ❖ Six-year graduation rate is 78% for female athletes vs. 93% for non-athletes, 70% for male athletes vs. 90% for non-athletes

- ❖ Both relationship of background variables to graduation and patterns of leaving are different for student-athletes

- ❖ Therefore, student-athletes are bracketed from subsequent analysis

When Students Leave
(Fall 2004 Cohort)

Table 3. Non-Graduates by Timing of Leaving and Gender		
MALE	Number	% of Cohort
First Year	25	1.6%
Second Year	24	1.6%
Third Year	22	1.4%
Fourth Year	35	2.3%
Fifth Year*	36	2.3%
Total	**142**	**9.3%**
FEMALE	Number	% of Cohort
First Year	23	1.2%
Second Year	20	1.0%
Third Year	21	1.1%
Fourth Year	14	0.7%
Fifth Year*	46	2.4%
Total	**124**	**6.5%**
*Includes those still persisting		

Number of Non-Graduates by Gender, UC GPA and Timing of Leaving

Table 4. Percent of Cohort Not Graduating by Gender, UC GPA and Timing of Departure			
MALE	Early	Late	Total
3.0 & up	20	21	41
2.4-2.99	15	28	43
Under 2.4	34	25	59
Total	69	74	143
FEMALE	Early	Late	Total
3.0 & up	27	13	40
2.4-2.99	12	33	44
Under 2.4	29	13	42
Total	67	59	126

Role of Level of Parental Education

Table 5. Distribution of Non-Graduates by Gender and Parental Education		
MALE	Number	% of Group
No College	22	10.6%
Some College	17	12.3%
4-Yr Degree	30	9.1%
Graduate Study	88	11.5%
FEMALE	Number	% of Group
No College	34	10.2%
Some College	21	8.9%
4-Yr Degree	20	4.5%
Graduate Study	20	2.4%

Non-Graduates by Gender and First-Year GPA

Table 6	MEN			WOMEN		
	Number	Non-Grads	% Non-Grads	Number	Non-Grads	% Non-Grads
Athlete	124	37	30%	97	21	22%
Under 2.4	162	67	41%	125	47	38%
2.40-3.19	449	44	10%	611	44	7%
3.20-4.00	921	33	4%	1184	34	3%

The Landscape of Non-Graduates at Berkeley

1. Almost "random" - leaving occurs almost evenly across all years and with various GPA levels - personal troubles versus public issue

2. Traditional "at-risk" factors account for a small proportion of non-graduates; role of gender

3. However, student-athlete status and first-year GPA under 2.4 are associated with leaving: for women 11% accounting for 47% of non-graduates, for men 17% accounting for 57% of non-graduates

4. Largest group of non-graduates: 88 men with parents with graduate education

Conclusion

- Best of times, worst of times for Institutional Researchers working on retention and graduation?

- Do current conditions encourage or even permit authentic IR work to infuse an institution with an understanding of its retention and graduation rates and to actually improve these rates?

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