



# Basics of Data Visualization and Analysis:

## Data Visualization & Analysis in Program Reviews

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**UCLA**

# Program reviews: supporting a culture of continuous improvement

Quality & diversity of students and faculty

Quality and value of academic programs [[@UCLA ~140](#)]

Student outcomes

- Degree attainment
- Time to degree
- Student satisfaction
- Career progression

Research productivity

Impact on region and society

Stature of institution

Other qualities related to institutional mission



# Useful data for graduate program reviews

## Student demographics

(admissions, retention)

outreach

# applicants

admissions selectivity

yield

quality

diversity

range of institutions

socioeconomic

ethnic/racial

domestic/international

trends

## Curriculum

scope and timeliness

appropriateness

evidence of effectiveness

learning outcomes

core competencies

co-curricular programming

innovation & renewal plans

non-degree programs

## Student & postdoctoral support

financial (fellowships, TA, research asst.)

advising

mentoring

professional & career development

dep't and campus support services

## Student outcomes

student satisfaction

honors, recognition

extramural fellowships

pub's, presentations, performances

timely progress to degree

degree completion

employment, career progression



# Data sources for UCLA grad dashboards

Admissions & new enrollments: **Grad Division**

Total enrollments: **Acad. Planning & Budget**

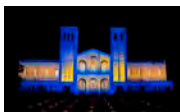
Student status (enrollment, degrees): **Student Records System**

## Funding

**Grad Division:** Fellowships, Traineeships, Fee Remissions

**Financial Aid:** Loans, need-based scholarships

**Employee Database:** work



# Funding dashboard 1: Overall support trends



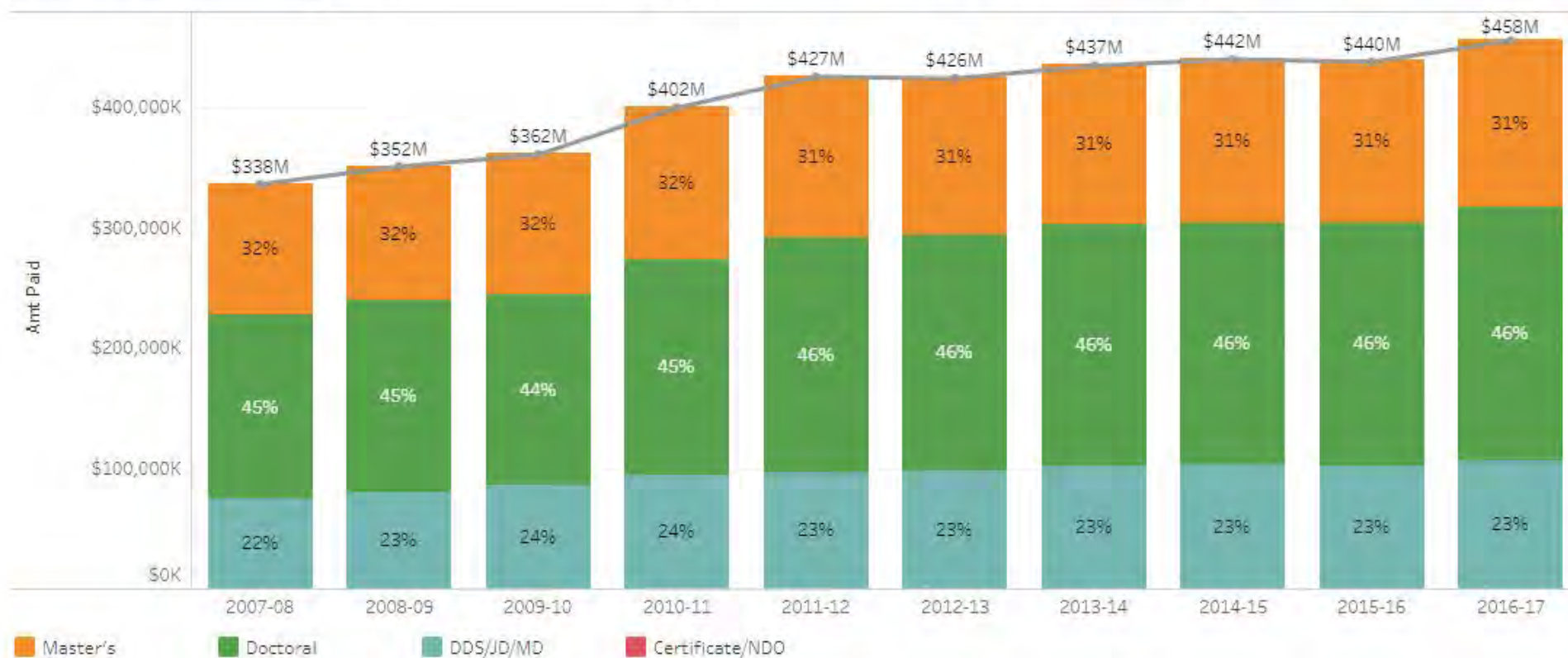
Overall Support Trends | Field Per Capita Support | Major Per Capita Support | Merit Support Dashboard | Per Capita Trends | About

## Graduate Student Support Trends

**UCLA** GRADUATE DIVISION

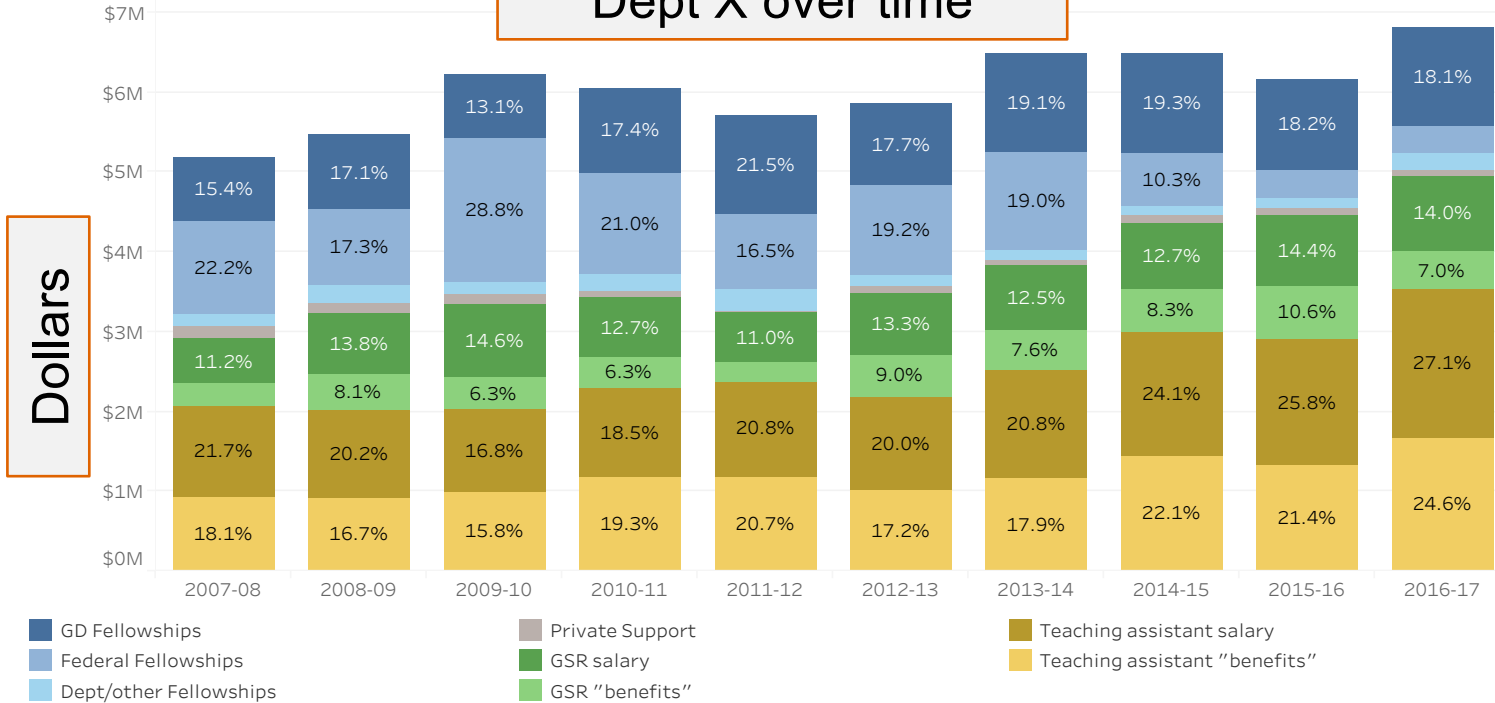
**INSTRUCTIONS:** This report shows overall graduate student support totals by year. Select the detail breakdown to see totals by Detailed Funding Type, General Funding Type, Doctoral/Master's, Gender, International/Domestic/URM, Field or Degree Level. You can further restrict the data by Doctoral/Master's, Merit/Non-Merit and by Field.

Select Detail: Doctoral Master's | Merit: (All) | Select Field: (All) | Select Doctoral Master's: (All)



# Per capita merit funding trend – dept X

Dept X over time



**Data Notes** 🐱

**INSTRUCTIONS:** Select a field and then select a major within that field to see merit support by type.

Select Field

Select Major

Award Year  
 All

Doctoral/Master's/Prof  
 Multiple values

Select URM Domestic Intl  
 All

Select Gender  
 All

**Dept X**

Students Supported  
 100.0%

Per Capita Support  
 \$44,522

Per Capita All Enrolled  
 \$44,522

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**Division Y**

Per Capita Support  
 \$46,608

	Fellowships				Employment				Grand Total
	GD Fellowships	Federal Fellowships	Dept/other Fellowships	Private Support	GSR salary	GSR "benefits"	Teaching assistant salary	Teaching assistant "benefits"	
2007-08									
2008-09									
2009-10									
2010-11									
2011-12									
2012-13									
2013-14									
2014-15									
2015-16									
2016-17									

% Diff Year-over-Year
▲ 5.7%
▲ 13.9%
▼ -2.9%
▼ -5.7%
▲ 2.9%
▲ 10.7%
▼ -0.1%
▼ -5.1%
▲ 10.6%

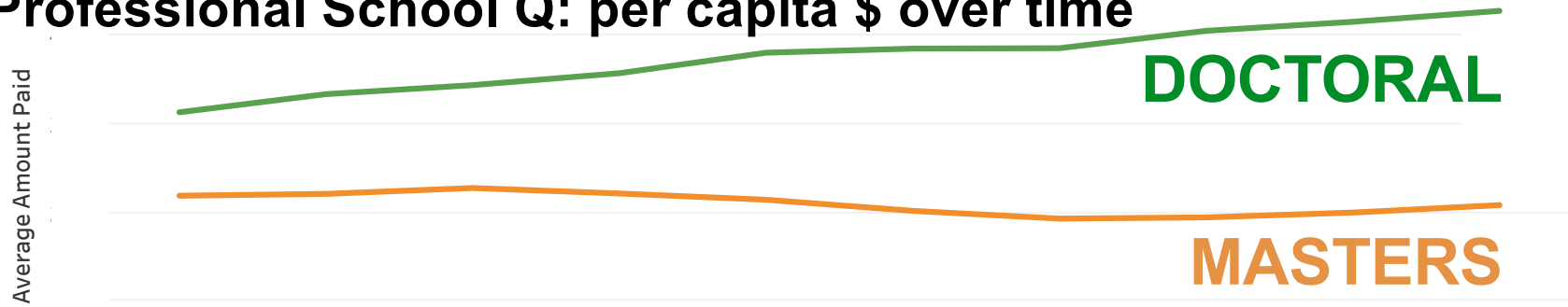


# Per capita merit funding: Depts in a School/Division

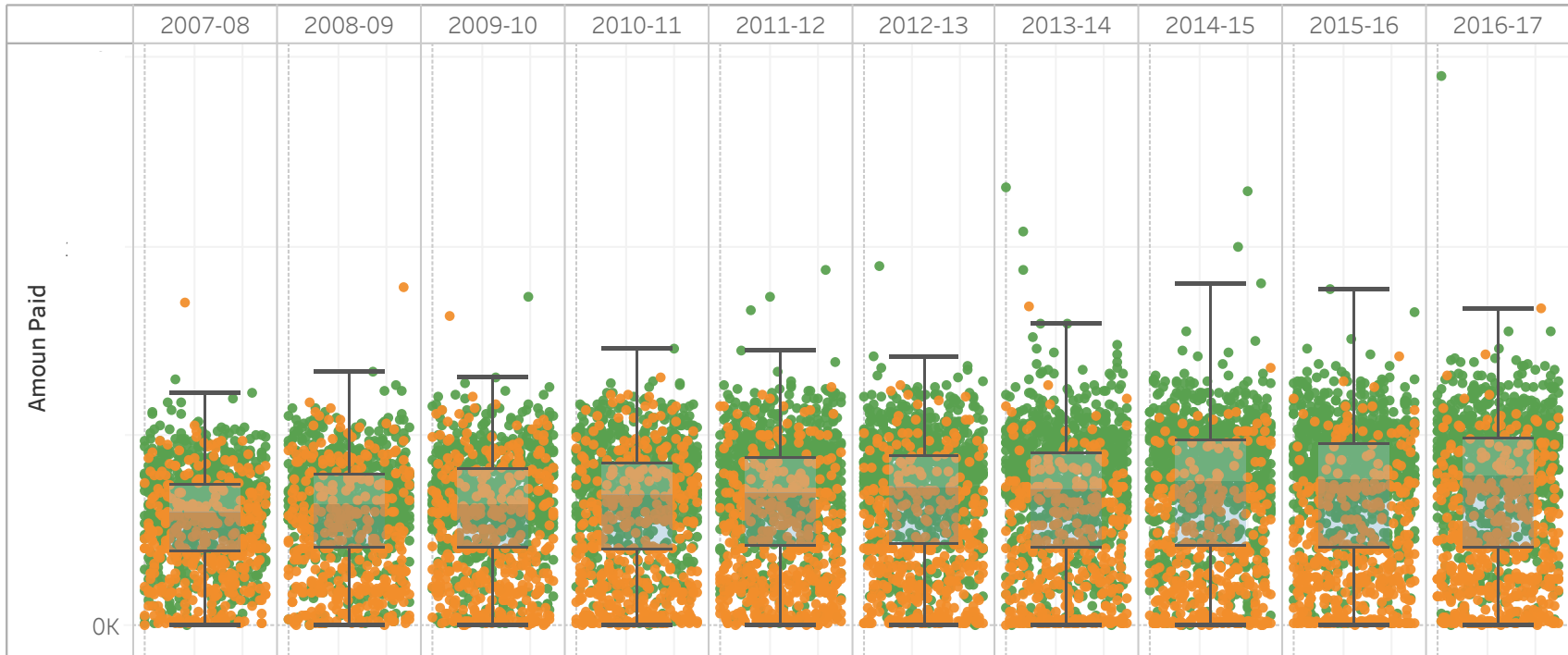


# Masters vs doctoral funding

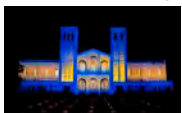
Professional School Q: per capita \$ over time



OK



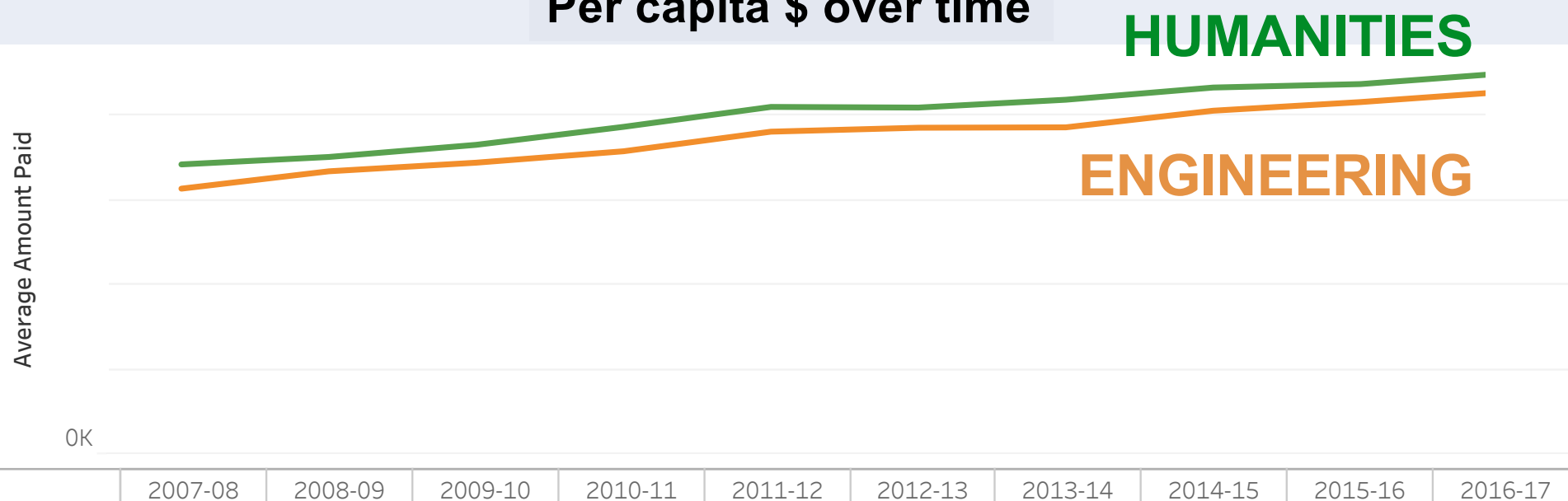
2007-08 2008-09 2009-10 2010-11 2011-12 2012-13 2013-14 2014-15 2015-16 2016-17



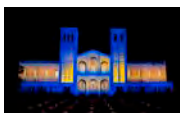


# Per capita doctoral funding comparison

Per capita \$ over time



Providing facts that counter myths can support more effective program reviews!



# Doctoral 10-yr completion by entering cohort (3 yr clusters)

- Completion Rate Select
- 10-Year Completion
  - 8-Year Completion
  - All Completions

- TTD Select
- Elapsed TTD
  - Registered TTD

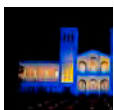
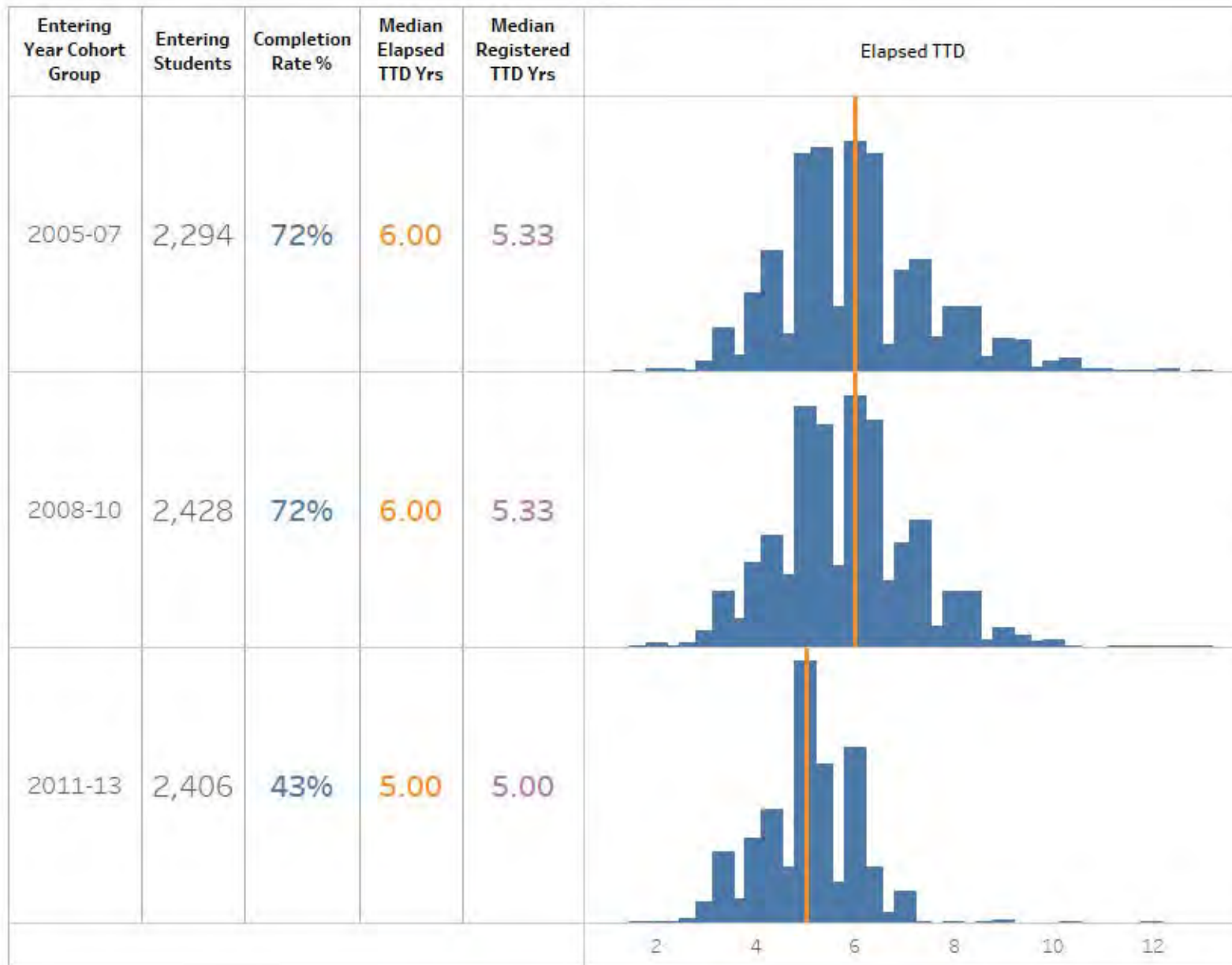
- Category
- Gender
  - Intl Domestic URM

3-Yr Entering Cohort  
Multiple values

Field Select  
All

Major  
All

- Doc Mas
- Doctoral
  - Master's
  - Professional



# Doctoral 10-yr completion by entering cohort

Entering cohort  
3-year  
clusters

## Department S

Year	Category	Entering Students	Completion Rate %	Median Elapsed TTD Yrs	Median Registered TTD Yrs	Elapsed TTD
2005-07	Domestic Non-URM	102	70%	5.67	5.33	
	Domestic URM	16	38%	6.00	5.83	
	Int'l	14	79%	5.33	5.00	
2008-10	Domestic Non-URM	91	67%	6.00	5.67	
	Domestic URM	15	67%	6.00	5.67	
	Int'l	29	90%	5.33	5.00	
2011-13	Domestic Non-URM	89	38%	5.17	5.00	
	Domestic URM	19	37%	5.00	5.00	
	Int'l	23	57%	5.33	5.00	

Completion Rate Select

- 10-Year Completion
- 8-Year Completion
- All Completions

TTD Select

- Elapsed TTD
- Registered TTD

Category

- Gender
- Intl Domestic URM

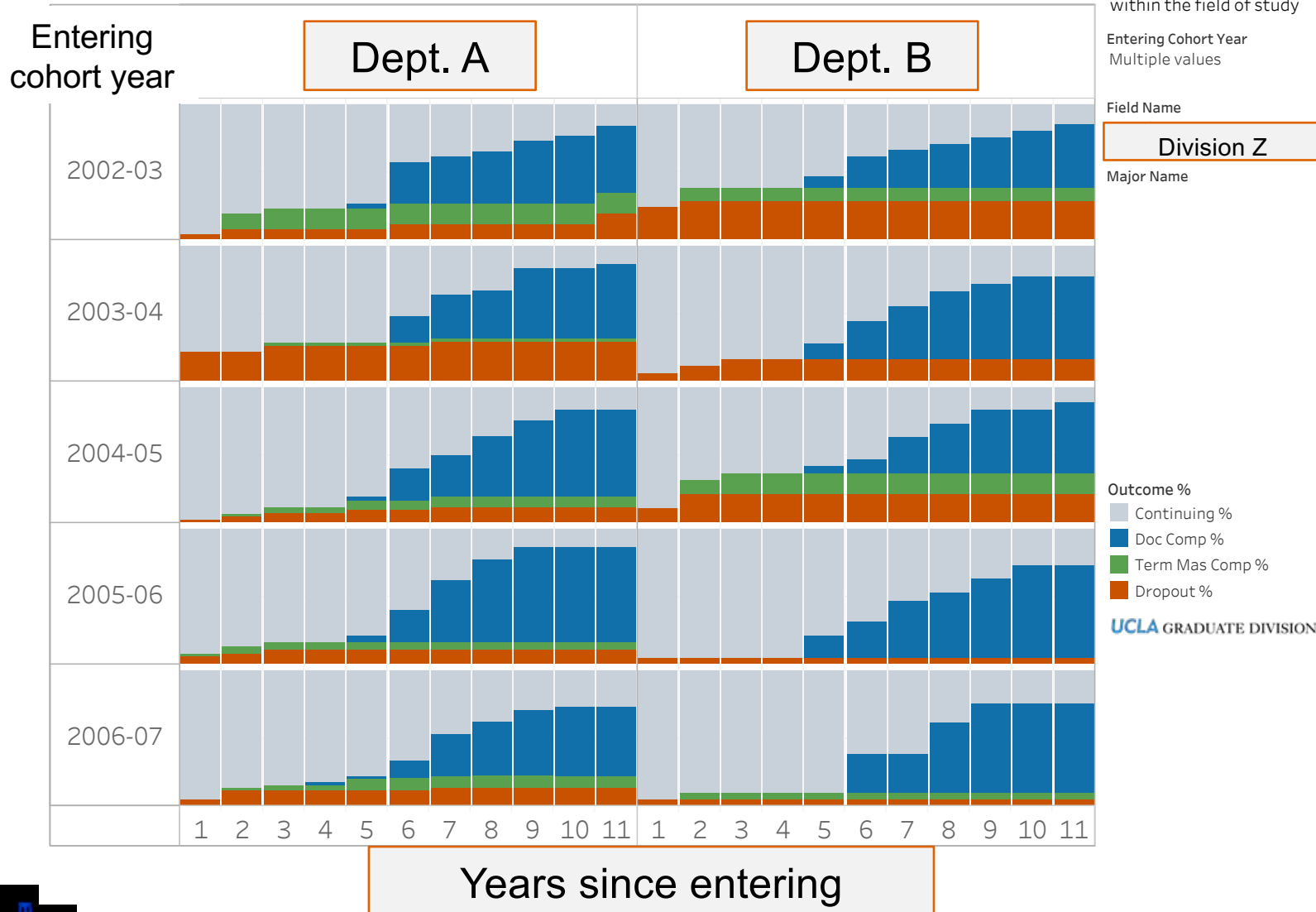
3-Yr Entering Cohort  
Multiple values



# Student outcomes: PhD, MA, continuing or left

## Doctoral Cohort Outcomes

% Students: Continuing, Dropping Out, Exiting with Terminal Master's Degree, or Completing Doctoral Degree Each Year since Entering



### INSTRUCTIONS:

1. Select entering cohort years
2. Select field of study
3. Select 1 or more majors within the field of study

Entering Cohort Year

Multiple values

Field Name

Division Z

Major Name

### Outcome %

- Continuing %
- Doc Comp %
- Term Mas Comp %
- Dropout %

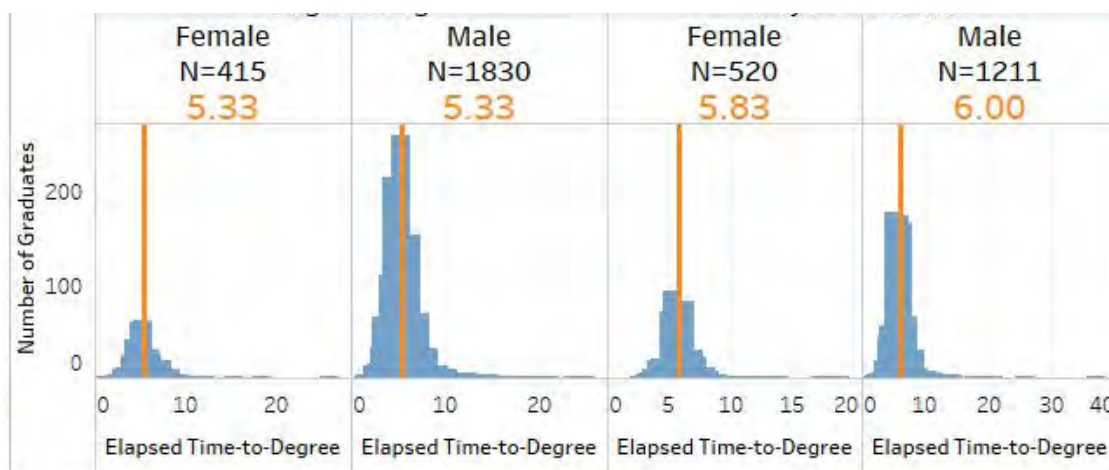
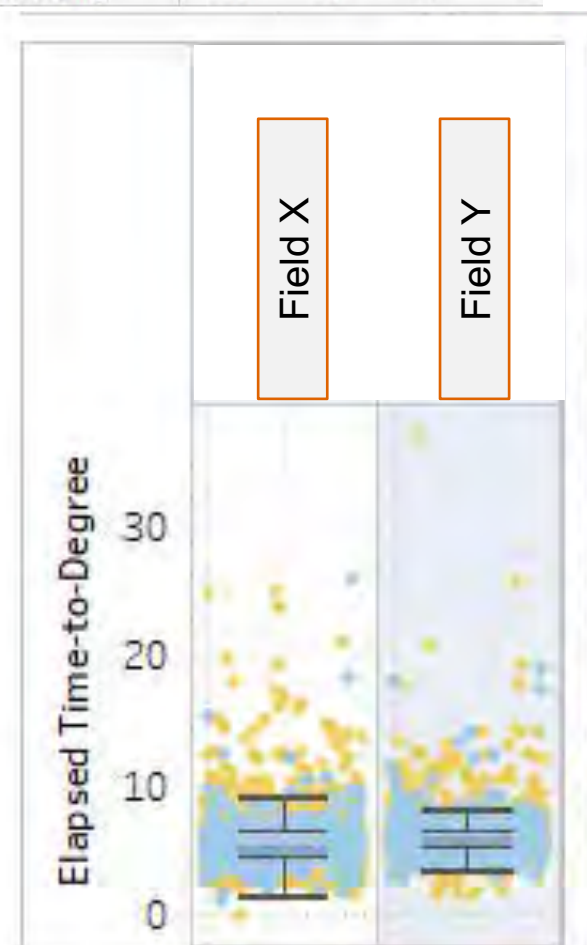
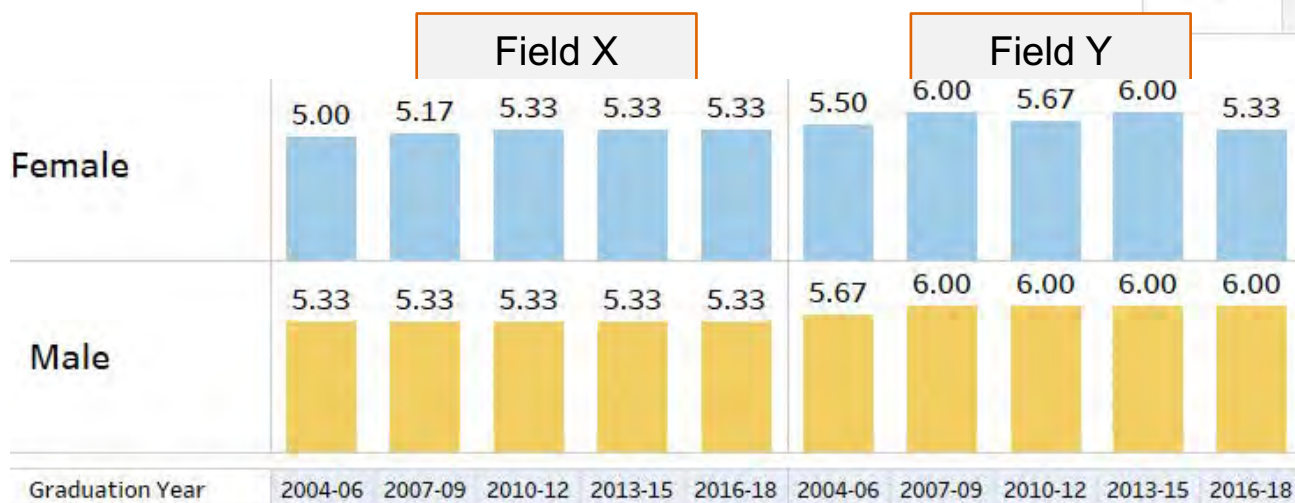
UCLA GRADUATE DIVISION



# Student outcomes: median elapsed TTD

3-year clusters, by graduation year

		Graduation Year			
		2004-06	2007-09	2010-12	2013-15
Female	Mean TTD Years	5.16	5.36	5.59	5.8
	Median TTD Years	5.00	5.17	5.33	5.3
	Headcount	59	94	81	84
Male	Mean TTD Years	5.67	5.53	5.74	5.7
	Median TTD Years	5.33	5.33	5.33	5.3
	Headcount	338	337	367	41

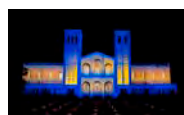


# Current student and exit survey data – old presentation

\*Compared to similar programs reviewed since 2014-15

Please see end of report for number of respondents and response rates.

Question Number		Years Reviewed				
		17-18	14-15	17-18	14-15	16-17
		<b>Department</b>				
		<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>
<b>Percent who indicated "Very Satisfied" or "Satisfied" on the following items:</b>		<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>	<b>%</b>
5	Advising/guidance from faculty	100.0	69.1	85.7	78.0	61.5
6	Advising/guidance from departmental staff	100.0	81.5	78.6	55.9	84.6
7	Formal evaluations (other than grades) on progress toward your degree	0.0	46.3	61.5	59.0	50.0
8	The availability of faculty members in your department for consultations	100.0	77.8	85.7	72.9	46.2
9	The quality of instruction in lecture classes in your major	100.0	69.1	85.7	72.6	69.2
10	The quality of instruction in seminar classes in your major	100.0	67.5	71.4	72.9	61.5
11	The quality of instruction in laboratory or field classes	0.0	27.5	28.6	56.4	46.2
12	The value of required courses for educating you in your field	100.0	75.0	71.4	64.7	69.2
13	The value of departmental requirements in facilitating your educational and professional goals	0.0	58.8	64.3	60.2	76.9
14	Departmental resources (library, laboratories, equipment, etc.) provided for student research and scholarship	100.0	72.8	64.3	76.3	53.8
15	The space available in your department for student use	100.0	70.4	71.4	67.8	46.2
16	The sense of community among graduate students in your department	100.0	79.0	64.3	60.7	69.2
17	The extent to which faculty in your department are sensitive to diversity issues	100.0	45.7	50.0	54.7	61.5
18	The morale of graduate students in your program	100.0	69.1	71.4	42.4	53.8
19	The level of financial assistance you have received	0.0	70.4	78.6	54.2	92.3
20	The extent to which your department helps you obtain financial support	100.0	57.5	71.4	50.8	92.3
21	The overall quality of faculty mentoring in your program	0.0	72.2	14.3	72.9	46.2
	The extent to which faculty in your department educate and assist graduate students in obtaining					



# Association of American Universities Data Exchange (AAUDE) Doctoral Exit Survey

(Data included is from years 2015-16 and 2016-17)

These survey data are shared through the AAUDE (AAU Data Exchange) Data Warehouse and are governed by strict rules to protect the confidentiality of both individual and institutional survey participants. Maintaining the integrity of these rules is essential to the continued sharing of exit survey data through the AAU Data Exchange.

Identification of other schools' data is available only to the highest level of university administration, on a confidential basis. Presentation of these data to office heads and directors, department chairs and general faculty is permissible only in an aggregated format, with limited or no identification of peer schools. The Institutional Research office can develop acceptable forms of presentation to these audiences.

## Field and Program

CIP Field Choice

Field

Program Choice

All other programs in field

Department

### Schools in Peer Comparison

In the past 2 years, 23 peer schools have participated in the AAUDE Doctoral Exit survey.

### Schools in Peer Comparison with a similar field\*

Below are the number of AAUDE peer schools with programs in the Field



### Schools in Peer Comparison with a similar program\*

Below are the number of AAUDE peer schools with similar programs to Department



### Number of survey participants from programs in the Field

Below are the counts of individual responders from UCLA and the AAUDE Peer institutions



### Number of survey participants from UCLA Department and similar AAUDE peer programs

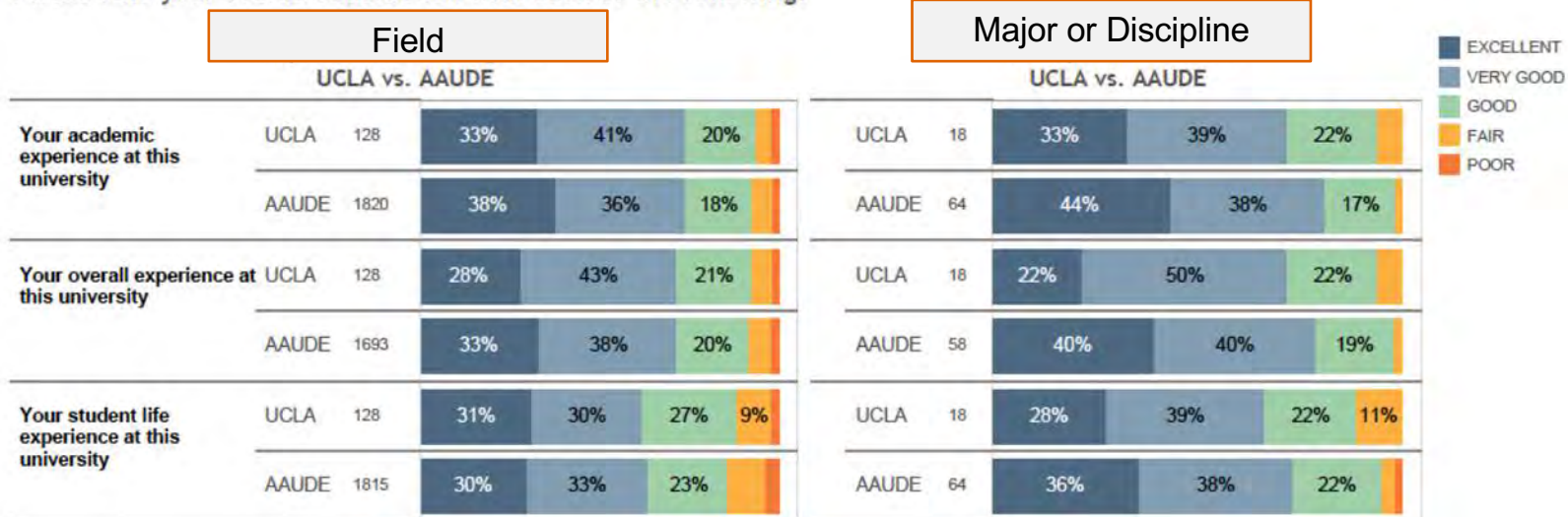
Below are the counts of individual responders from UCLA and the AAUDE Peer institutions



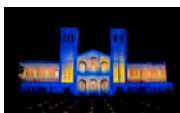
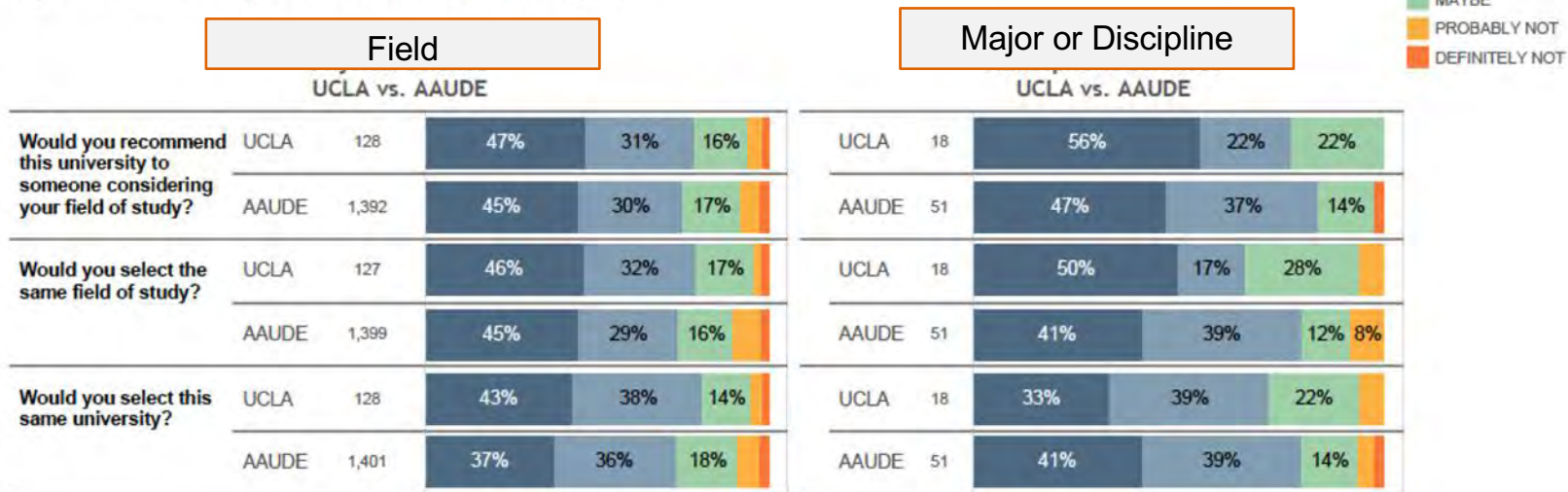
# Student survey – new graphics & comps

## Overall Satisfaction

Please rate your overall satisfaction with each of the following:



If you were to start your doctoral career over again...

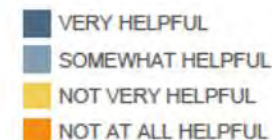




# Student survey data – deeper dive

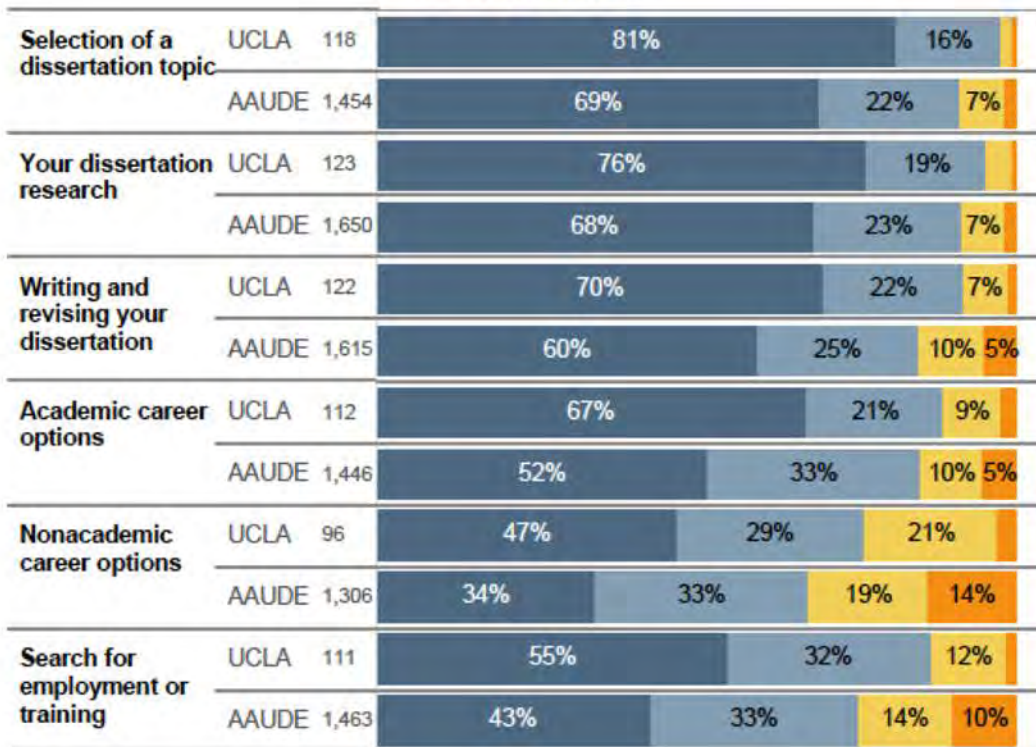
## Faculty Mentoring and Advising

How *helpful* was the advice you received from your dissertation/thesis advisor in each of these areas?



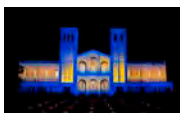
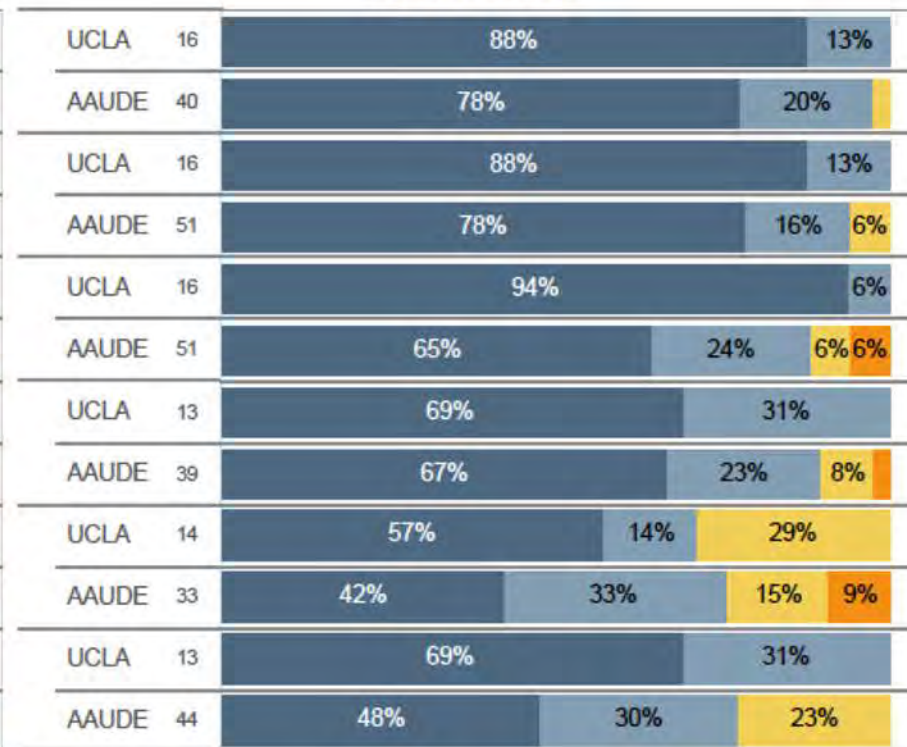
### Field

UCLA vs. AAUDE



### Major or Discipline

UCLA vs. AAUDE



# Questions to consider

**How far to drill down**

**What to redact**

Student IDs

Small data sets

**Who gets to see what and when?**

*Available to all UCLA faculty and SAOs 24/7*

**How do you encourage dashboard use and get feedback??**

In program reviews

In budgeting

In strategic planning

In fundraising





**Thank you** for advancing  
**excellence in graduate education.**

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**UCLA**