ALLAN HANCOCK COLLEGE

Success Team Data Dive

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Purposes

- Building data literacy—understanding how to gather, examine, and make meaning of student data—is essential to ensuring educators are empowered to take informed action throughout this institutional transformation.

Barrier

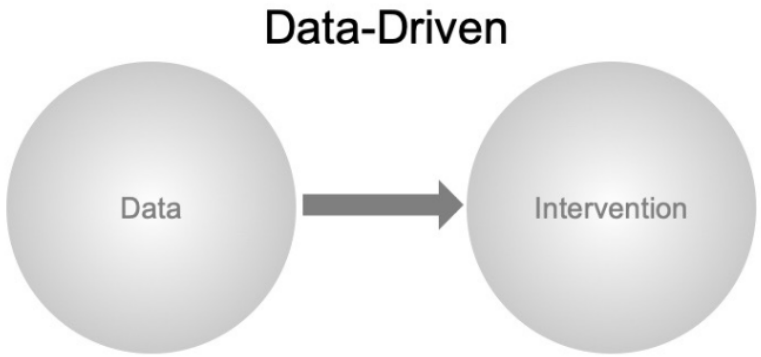
- Establishing or advancing a culture of inquiry across all functions and levels of the college

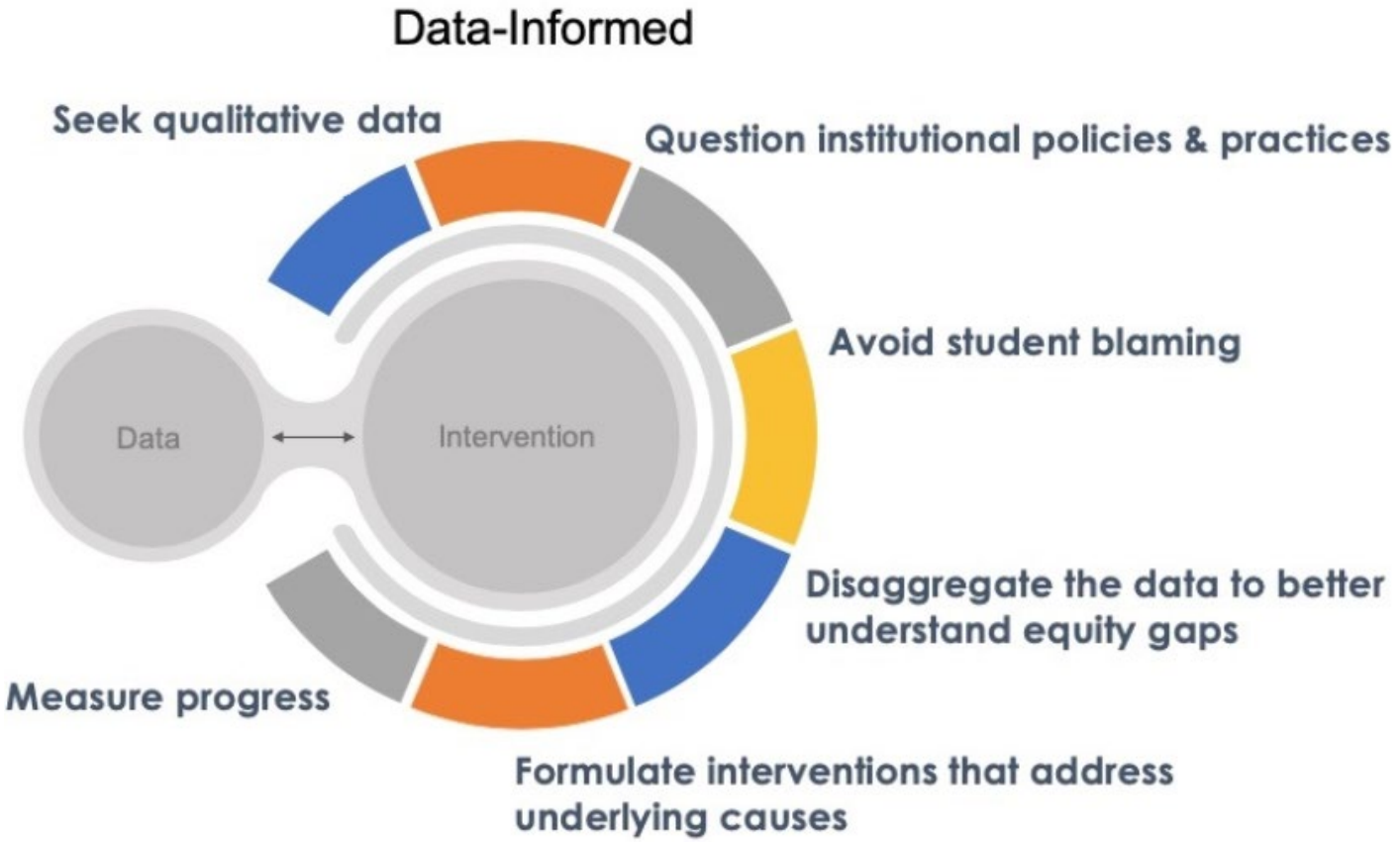
- Why is this a barrier?

Data Coaching

The process of engaging college personnel in providing direct support to their peers to build capacity to access and use data to improve student achievement and equity

Data-Driven vs. Data-Informed





Credit: Al Solano: http://www.continuous-learner.com/2019/10/data-driven-vs-data-informed-campuses.html

Data-Driven Decision-Making

The student success rate across all English courses at the college is 50%. Invest in supplemental instruction.

Data-Informed Decision-Making

English success rates are low, but further investigation shows Pell recipients and other students from resource-poor backgrounds are struggling the most. Should the campus continue to focus on students as the problem? Is our standard and expensive tutoring strategy the best option to remedy these opportunity gaps? Are there policies and practices that are hindering equity and student success?

What Roles Do Data Coaches Play?

Process of Advancing Data Literacy and Inquiry through Data Coaches

1. Determine purpose and functions of coaches
2. Assess maturity of data society (culture, literacy, infrastructure) to foster collaborative inquiry process
3. Set specific goals

Articulate a Clear Purpose for Data Coaches and Coaching Efforts

- Align effort to major initiatives that aim to increase student success and equity
- Know, and better understand, key momentum points
- Support efforts to close equity gaps and foster equity minded ethos
- Help others make data informed decisions

Coaches Lead a Collaborative Inquiry Process

- Understand how to tell a story with data
- Understand varying levels of data literacy
- Recognize and address resistance to equity gaps revealed through data analysis
- Lead institutional transformation

Set Goals Realizing Role of Coach is Ongoing, Iterative Process

- Build an inclusive team
- Determine student loss points and high impact opportunities
- Access, collect, assess, and narrate data
- Help sustain data-informed change
- Rinse and repeat

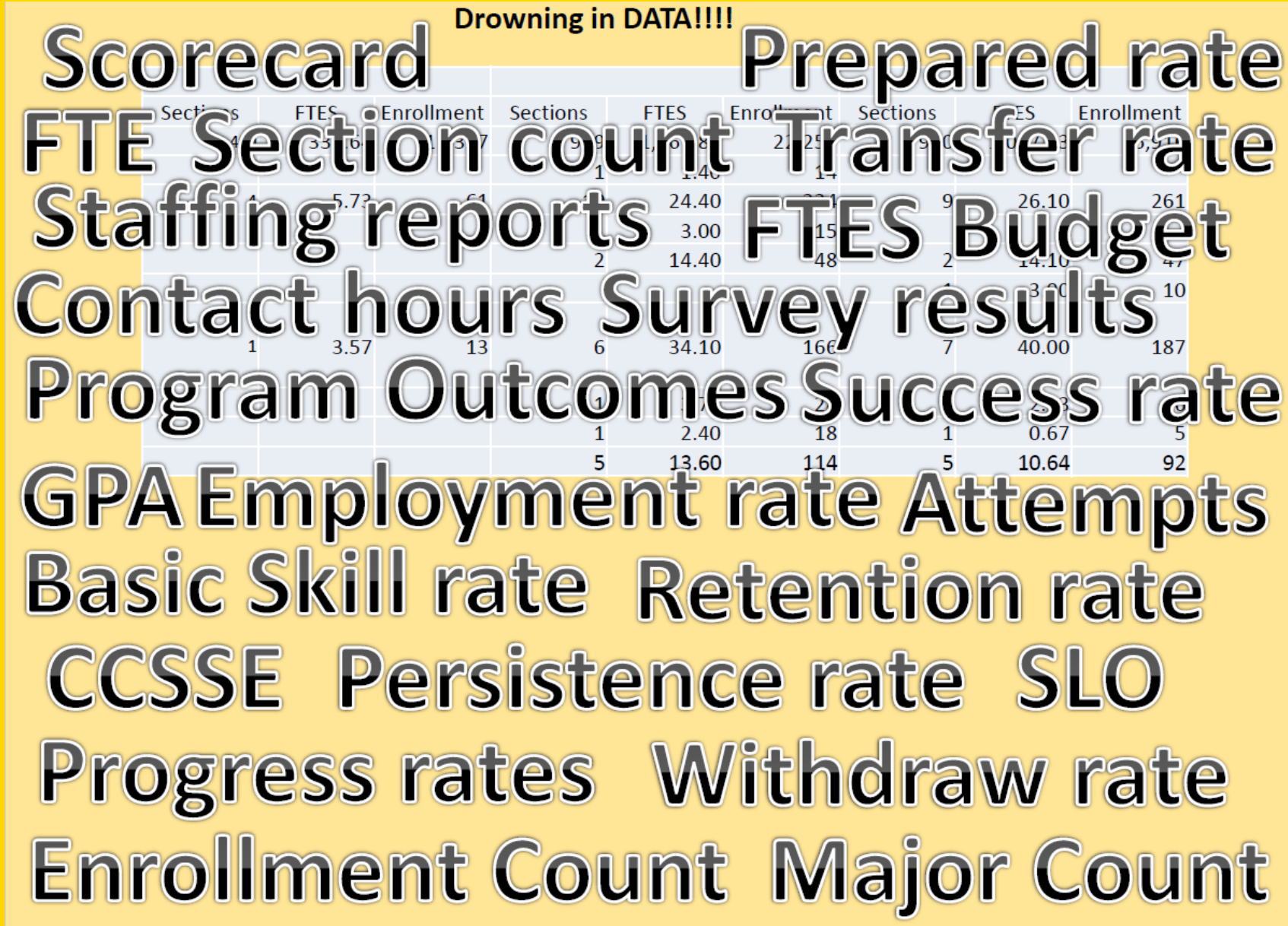
Data Coaches

- Provide direct support to key college personnel
- Build capacity to access and use data for informed decision-making
- Help connect people to resources
- Provide one-on-one and group training opportunities

What about you?

- How have you promoted data informed culture in your program/department?
- What are some of the challenges?
- What are some of the strategies you use or might use?

Data Definitions



Vocabulary: We all need to speak the same language

"I think I speak for all of us when I say what in God's name are you talking about?"

Types of Observational* Data

- **Cohort Study** – Participants are monitored over time. For example, a fall cohort is a group of people that start college at the same time.

- **Cross-sectional Study** -- participants are observed only once, offering a 'snapshot' of the characteristics of interest at that particular moment.

*Observational designs are **non-experimental**, quantitative designs. In contrast to experimental designs in which the investigator manipulates the independent variable and observes its effect, the investigator conducting observational research observes both the independent and dependent variables. In observational studies, variation in the independent variable may be due to genetic endowment, self-selection, or occupational or environmental exposures" (Meininger, 2017).

- **Cohort Study Examples**
  - Graduation and transfer rates
  - Percent of first year students who complete transfer math and English

Advantages

1. Allows calculation of incidence/rate
2. Helps to avoid selection bias – but be careful
3. **Aligns with Guided Pathways & Completion by Design**

Challenges

1. May take a while to see outcomes
   Prospective versus retrospective
2. Have to identify length of time to follow, which may influence your conclusion
   Example: what is our graduation rate and how does it differ by SES

- **Cross-sectional Study Examples**
  - Course success and retention rates
  - Number of degrees awarded each year

Advantages

1. Quick and intuitive
2. Immediately available in real time
3. Easy to disaggregate and assess disproportionate impact

Challenges

1. Possible bias. Self selection
2. Lacks context.
   i. Who is or isn't included
   ii. May not provide necessary details to attribute cause and effect

Retention

Earning a grade in a course other than a W.

Success

Earning a grade in a course of A, B, C, or CR/P.

Retention Rate

The number of students completing a course with a grade other than a W divided by the number of students that were enrolled at census.

Success Rate

The number of students that had success in a course divided by the number of students that were enrolled in a course at census.

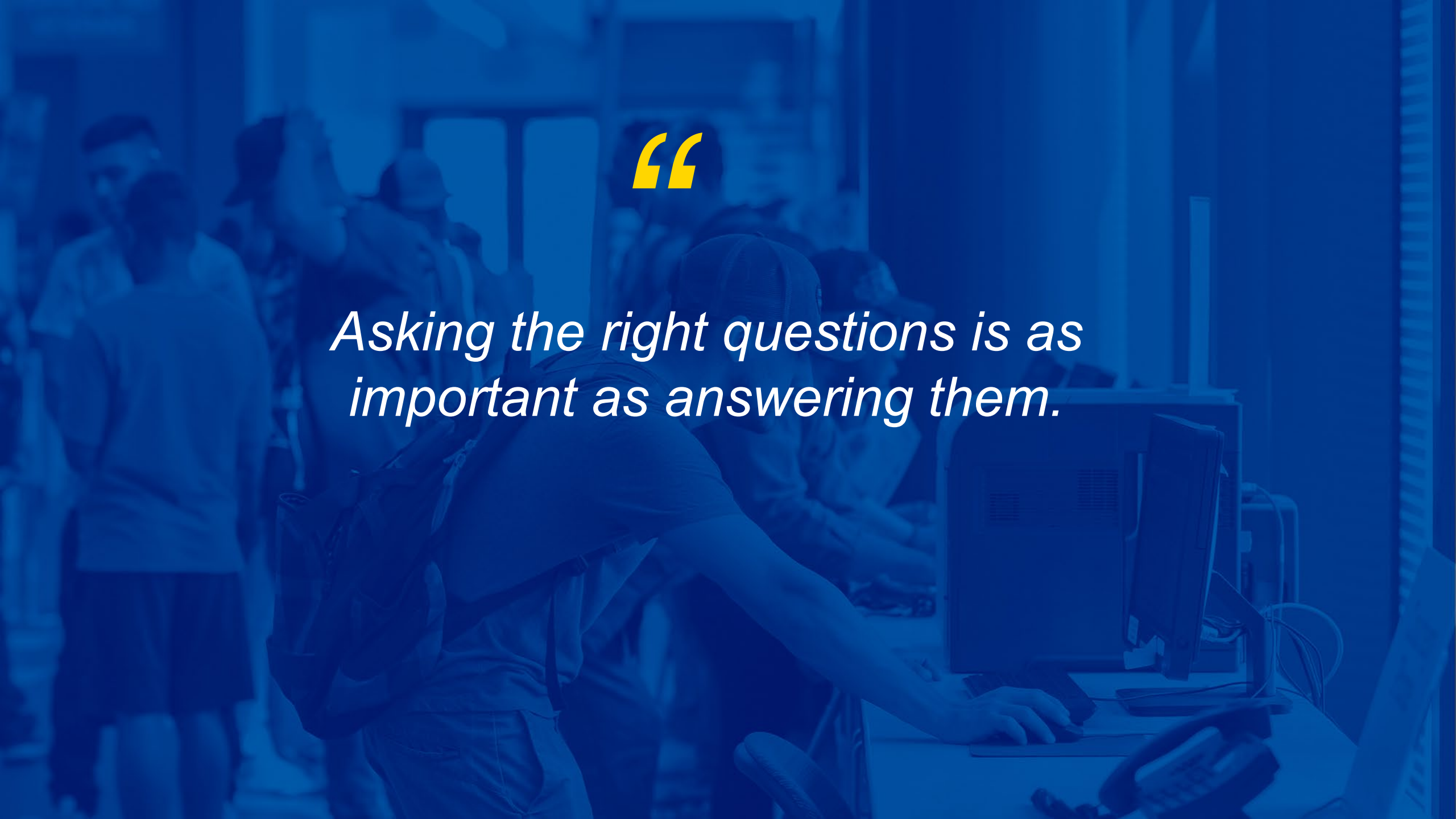
Example of Cross Sectional and Disaggregated Data

		Academic Year 2019-20							
Demo Choice Group	Demo Choice Group2	Headco..	Enroll	Retention %	PPG AHC Retention Mod	PPG AHC Retention Impact	Success %	PPG AHC Success Mod	PPG AHC Success Impact
Asian	Null	378	1,497	85.7%	2.1%		76.5%	3.2%	
Black	Null	491	2,063	81.5%	-2.2%	46	69.9%	-3.6%	74
Filipino	Null	488	1,963	85.3%	1.8%		75.8%	2.4%	
Hispanic	Null	7,536	32,888	81.8%	-3.4%	1,105	70.3%	-5.8%	1,908
Native Am	Null	360	1,583	78.6%	-5.1%	81	68.6%	-4.9%	77
Other	Null	2	11	100.0%			100.0%		
Pac Isl	Null	167	675	79.0%	-4.7%	32	64.7%	-8.7%	59
White	Null	7,129	28,509	86.2%	4.3%		77.6%	7.1%	
Unknown	Null	516	1,481	80.5%	-3.2%	47	68.3%	-5.2%	76
Grand Total		**17,034**	**70,670**	**83.6%**			**73.4%**		

		Academic Year 2019-20							
Demo Choice Group	Demo Choice Group2	Headco..	Enroll	Retention %	PPG AHC Retention Mod	PPG AHC Retention Impact	Success %	PPG AHC Success Mod	PPG AHC Success Impact
Asian	Unknown	5	14	85.7%			71.4%		
	Female	198	882	85.4%	1.8%		78.1%	4.8%	
	Male	175	601	86.2%	2.6%		74.2%	0.8%	
Black	Unknown	6	26	84.6%			84.6%		
	Female	219	856	80.1%	-3.5%	30	68.9%	-4.5%	39
	Male	266	1,181	82.4%	-1.3%	15	70.3%	-3.2%	37
Filipino	Unknown	2	2	50.0%			0.0%		
	Female	261	1,043	86.2%	2.6%		77.2%	3.8%	
	Male	225	918	84.4%	0.8%		74.3%	0.9%	
Hispanic	Unknown	129	409	71.4%	-12.3%	50	56.5%	-17.0%	70
	Female	4,097	18,717	83.3%	-0.5%	94	72.7%	-0.9%	161
	Male	3,310	13,762	80.2%	-4.3%	586	67.1%	-7.5%	1,027

What's missing?

- **Who is not here.**
- **How many prior attempts.**

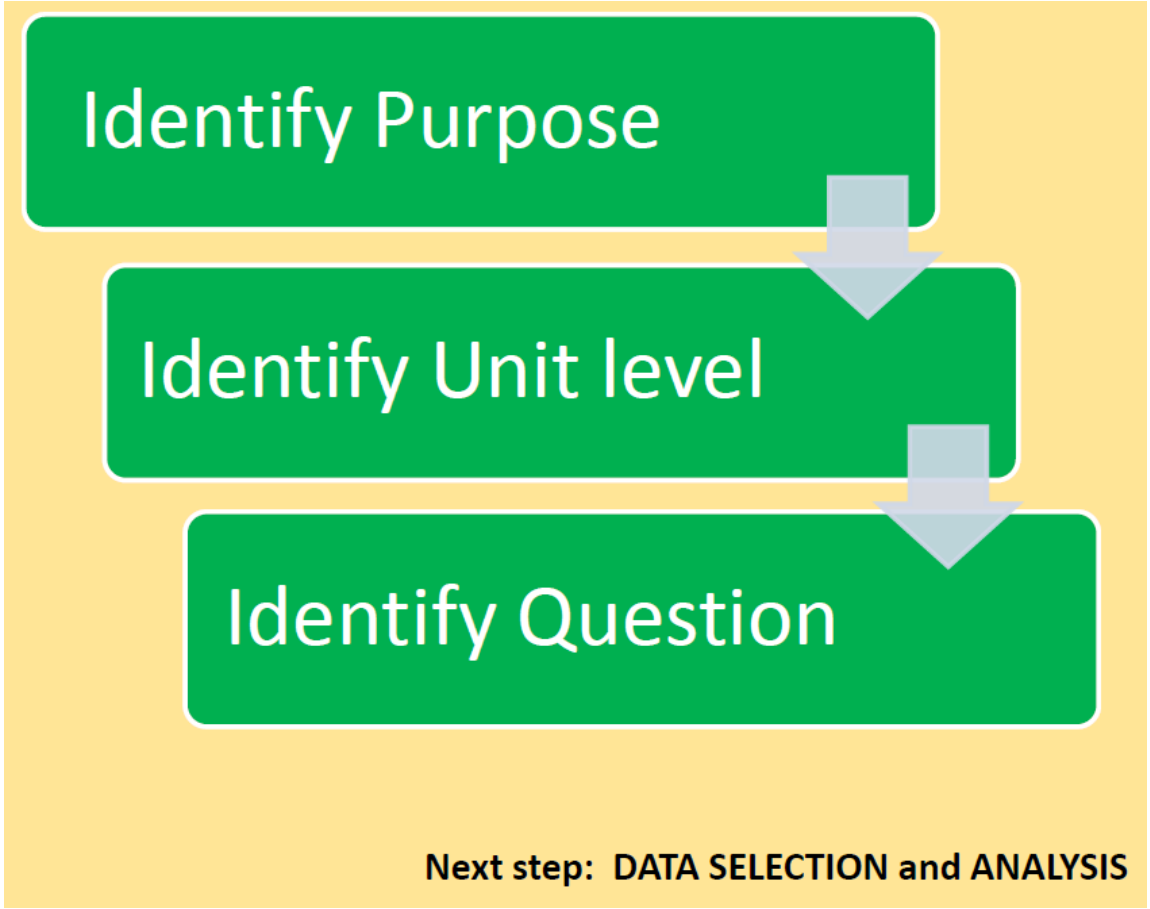


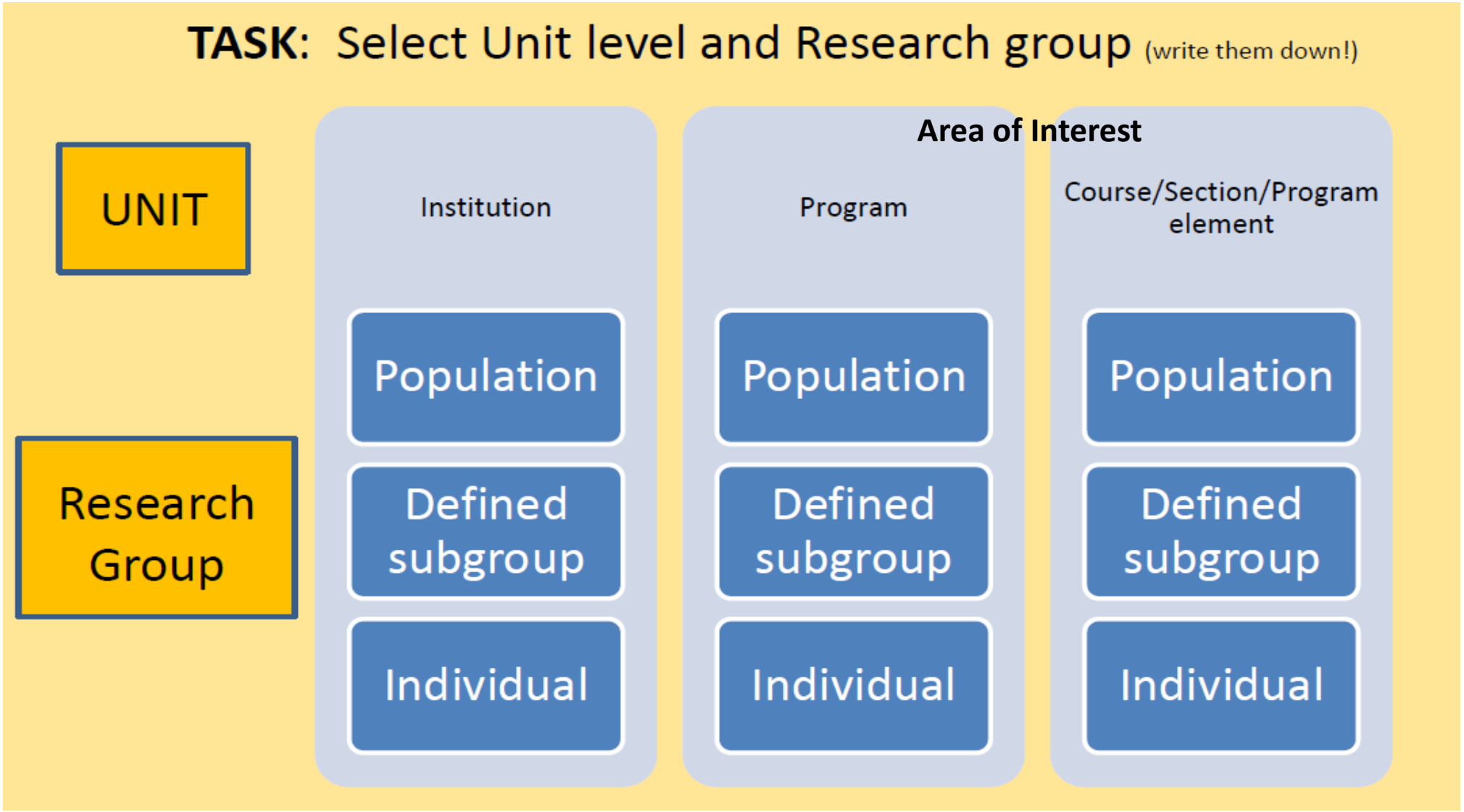
Asking the right questions is as important as answering them.

Getting Started

Actionable Analysis

- What comes first … the data or the question?
- Don't get caught in paralysis by analysis




TASK: Select Unit level and Research group (write them down!)
UNIT
Research Group
Area of Interest
Institution
Program
Course/Section/Program element
Population
Defined subgroup
Individual
Population
Defined subgroup
Individual
Population
Defined subgroup
Individual

Disaggregating Data

- I’ve heard that term, but what is that?
- Why Disaggregate?
- What are some of the challenges?

Why Focus on Race and Ethnicity?

(Taken from Center for Urban Education Student Equity Plan Review)

1. Race is visible
2. Financial Aid policies exist to remove barriers to low-income students; no similar policy for racially minoritized students
3. Race impacts the development of social capital crucial for educational opportunity
4. Not focusing on race makes it difficult to fully understand impact of race on educational opportunity

Introduction to Disproportionate Impact

> **A substantial literature base reveals not only that returns to higher education programs are stratified but also that this stratification operates along racial/ethnic, gender, and socioeconomic lines.**

Introduction to Disproportionate Impact

Some Nomenclature

- Achievement Gap – focuses on lack of achievement by some groups; implies inherent differences in ability to achieve outcomes. -- AVOID

- Equity Gap – focuses on the gaps in achievement between groups that have historically been underrepresented and underserved relative to those groups that have enjoyed privilege or relative privilege.

- Opportunity Gap – focuses on differences in access to resources and opportunity among groups as central to the existence of gaps in outcomes or performance metrics; emphasizes role of implicit bias.

Aggregate Data Can Mask Underlying "Lurking" Variables

Can Mistake Cause and Effect by Ignoring Details

- Ice Cream Sales Linked to Shark Attacks
- Drinking Soda Associated with Violence

Classic Example of Confounding

	All		Men		Women	
	Apps	Admit	App	Admit	App	Admit
Total	12,763	41%	8,442	44%	4,321	35%

Data taken from UC Berkeley Fall 1973 Applications

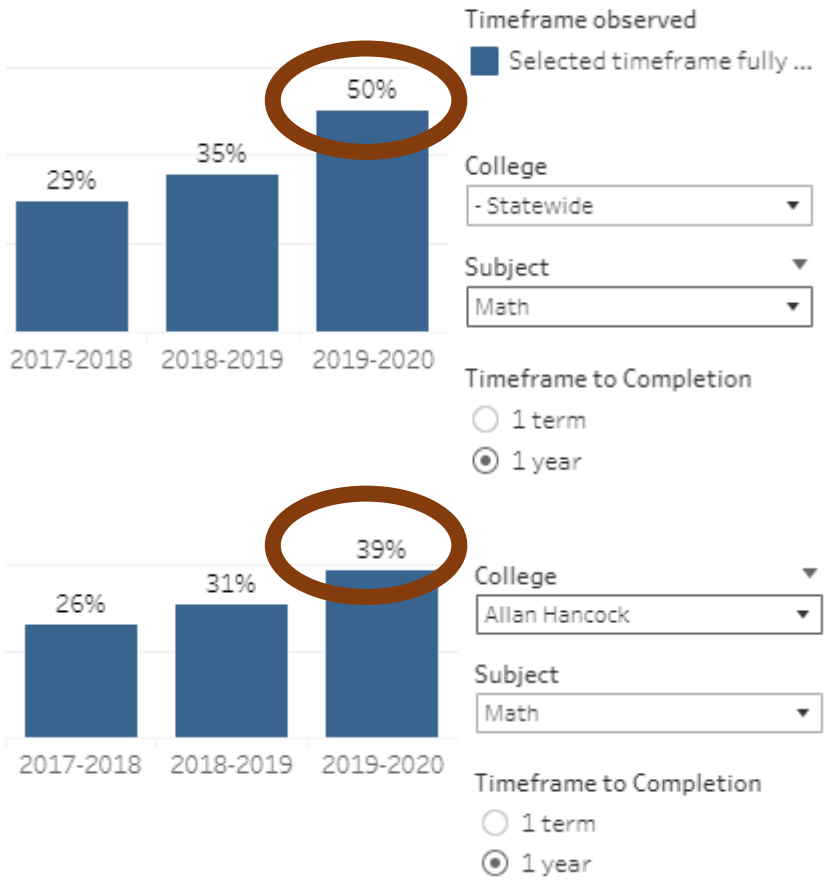
Apps – number of graduate applicants
Admit – proportion of applicants admitted
Dept –departments to which students apply

	All		Men		Women	
Dept	Apps	Admit	Apps	Admit	Apps	Admit
A	933	64%	***825***	62%	108	***82%***
B	585	63%	***560***	63%	25	***68%***
C	918	35%	325	***37%***	***593***	34%
D	792	34%	417	33%	375	35%
E	584	25%	191	***28%***	***393***	24%
F	714	6%	373	6%	341	7%

When examining the individual departments, it appeared that 6 out of 85 departments were significantly biased against men, while 4 were significantly biased against women.

These results and subsequent publication popularized concept of Simpson's Paradox. **Females applied to departments with lower acceptance rates.**

AB 705 One Year Math Throughput



- What questions do you have?
- What additional data would you want to see?

Source: https://www.cccco.edu/About-Us/Chancellors-Office/Divisions/Educational-Services-and-Support/transfer-level-dashboard

AB 705 One Year Math Throughput

All Levels	Cohort	Throughput	Rate	
AHC	1,183	459	39%	
Statewide	146,057	72,976	50%	
Start Transfer Level	**Cohort**	**Throughput**	**Rate**	Percent Starting at Transfer Level
AHC	728	434	60%	62%
Statewide	115,735	69,131	60%	79%
Start One Level Below	**Cohort**	**Throughput**	**Rate**	Percent Starting One Level Below
AHC	324	21	6%	27%
Statewide	24,636	3,526	14%	17%

- What questions do you have?
- What additional data would you want to see?

Source: https://www.cccco.edu/About-Us/Chancellors-Office/Divisions/Educational-Services-and-Support/transfer-level-dashboard

Next Steps?

- *Success Teams Identify Goals and Possible Challenges*
- *Follow-up sessions on GP data dashboards and inquiry discussions*
- *What else?*