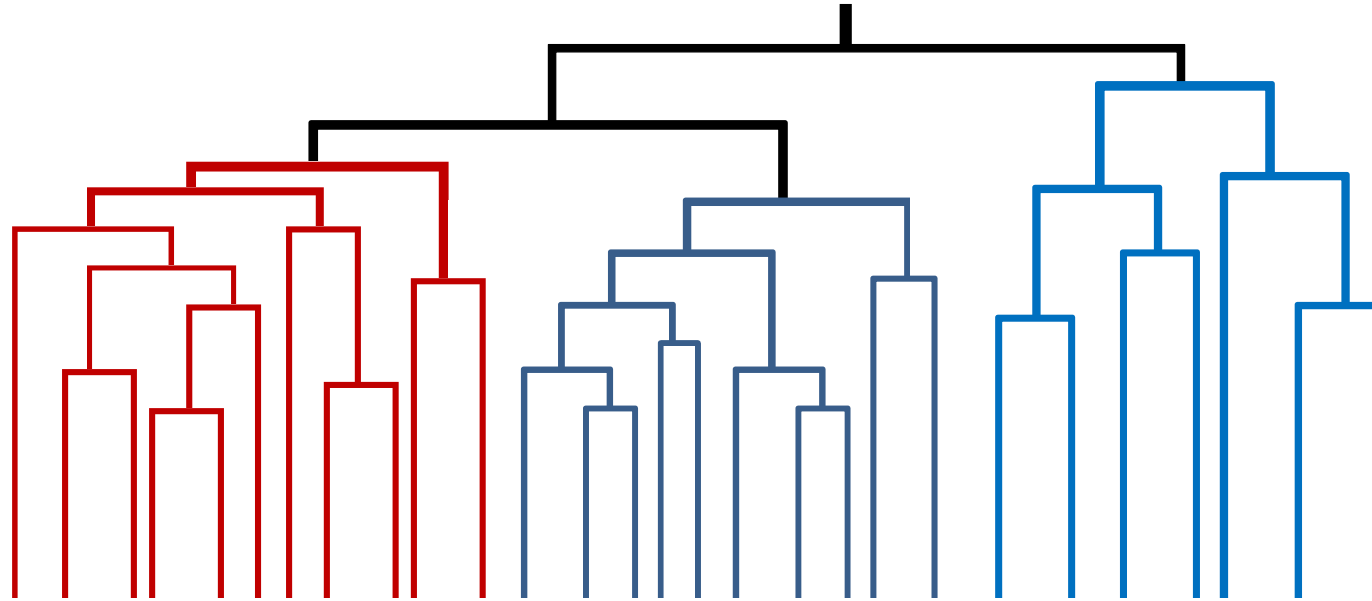# University of Hawai'i – West O'ahu
Peer Institution Revision 2019

Dr. Jeffrey Moniz, Vice Chancellor of Academic Affairs
Dr. Alan Rosenfeld, Associate Vice Chancellor of Academic Affairs
John Stanley, Director of Institutional Research
Christi Palacat, Undergraduate Research Assistant

Version: 4.1: May 6, 2019

What are peer institutions?

- Peer – similar role, scope, mission

- Other types of comparison groups
  - Competitor – students, faculty, finances
  - Aspirational – At UH, we call these "benchmark" institutions; those to emulate
  - Predetermined
    - Natural – athletic conference, region (WAC)
    - Traditional – historical (Ivy)
    - Jurisdictional – political or legal jurisdiction (state lines)
    - Classification – national reporting (Carnegie)

Why have peer institutions?

- Strategic Planning
  - Inform policy
  - Accreditation
- Performance Benchmarking
  - Faculty compensation
  - Teaching loads
  - Tuition schedules
  - Budget alignment
  - Used by other institutions for performance comparison
  - Surveys supply peer lists to prospective students and parents to compare cost and graduation rates

Who are our peers now?

- Reminder: Peer = similar role, scope, & mission.

  – Teeter and Brinkman (2003)

UH West Oahu current peers:

- California State University – Monterey Bay*
- Eastern Oregon University*
- Great Basin College
- Texas A&M University – Texarkana*
- The Evergreen State College*
- University of Hawaii – Hilo*
- University of Washington – Bothell Campus*
- University of Washington – Tacoma Campus*

*indicates Carnegie Classification 2015 (Basic): Master's institutions

Problems with current peer list

>15 years old. UH West Oahu still upper two-year at that time

	Total Enrollment (Fall 2017)	Total Undergrad. Enrollment (Fall 2017)	12 month SSH: Undergraduate Instruction (AY 2016-17)
UHWO	3,082	3,082	63,345
Current Peer Avg* (Min; Max)	4,175 (2,066; 7,584)	3,757 (1,610; 6,764)	124,751 (36,855; 237,747)
Manoa; Hilo	17,612; 3,539	12,881; 2,971	371,541; 80,175

	# Students Receiving a Bachelor's Degree (FY 2016-17)	Retention Rate (2016 cohort)	4-Yr Graduation Rate (2011 cohort)
UHWO	612	65	17
Current Peer Avg* (Min; Max)	882 (75; 1,703)	71 (57; 88)	24 (0; 43)
Manoa; Hilo	3,023; 712	79; 68	28; 14

|	6-Yr Graduation Rate (2011 cohort)	% Full-time first-time undergraduates awarded Pell (AY 2016-17)	Core Expenses (FY 2016-17)
UHWO	39	35	48,550,478
Current Peer Avg* (Min; Max)	43 (10; 64)	42 (34; 57)	75,585,597 (26,035,683; 175,918,286)
Manoa; Hilo	60; 41	28; 49	917,449,892; 107,556,102

*average includes UHWO

What are the 10 (or n) most similar institutions

to UH West Oahu?
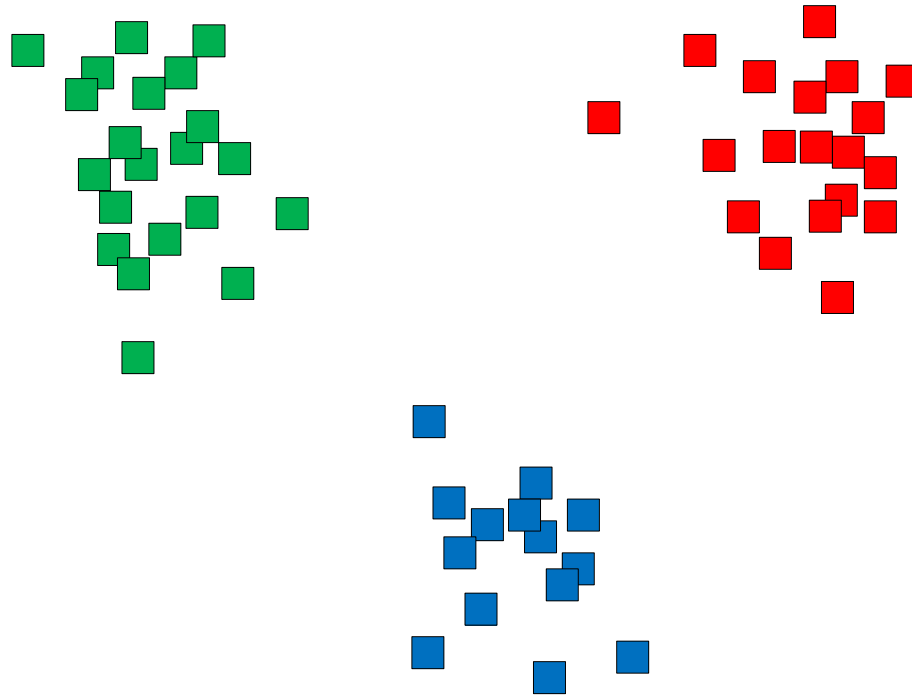
Relevant previous research

- Brinkman, P. T., & Teeter, D. J. (1987). Methods for selecting comparison groups. *New Directions for Institutional Research, 1987*(53), 5-23.
- Hurley, R. G. (2002). Identification and assessment of community college peer institution selection systems. *Community College Review, 29*(4).
- Teeter, D. & Brinkman, P. (2003). Peer institutions. In William Knight (Eds.), *The primer for institutional research* (pp. 111). Tallahassee: Association for Institutional Research.
- Xu, J. (2008). Using the IPEDS peer analysis system in peer group selection. *AIR Professional File, 2008*(110).
- Trainer, J. F. (2008). The role of institutional research in conducting comparative analysis of peers. *New Directions for Higher Education, 2008*(141), 21-30.
- Soldner, M. (2009). Peer comparison data: Meeting the needs of campus decision-makers. An AIR/NCES Data Policy Fellowship Report.
- Nzeukou, M., & Muntal, D. (2010). Peerless: A Knowledge-Based Selection Methodology of Peer Institutions. Presented at the Annual Forum of the Association for Institutional Research, Chicago, IL.
- McLaughlin, G., Howard, R., & McLaughlin J. (2011). Forming and Using Peer Groups Based on Nearest Neighbors with IPEDS Data. Presented at the Annual Forum of the Association for Institutional Research, Toronto, Ontario, Canada.
- Carrigan, S. (2012) Selecting Peer Institutions with IPEDS and Other Nationally Available Data. *New Directions for Institutional Research, 2012* (156), 61-68.
- Stanley, J. & Kilgore, W. (2014). A Mixed Methods Approach to Institutional Peer and Aspirant Identification. *Strategic Enrollment Management Quarterly* pp 164-174.

The Peer Selection Process Continuum

Data ⟷ Judgment
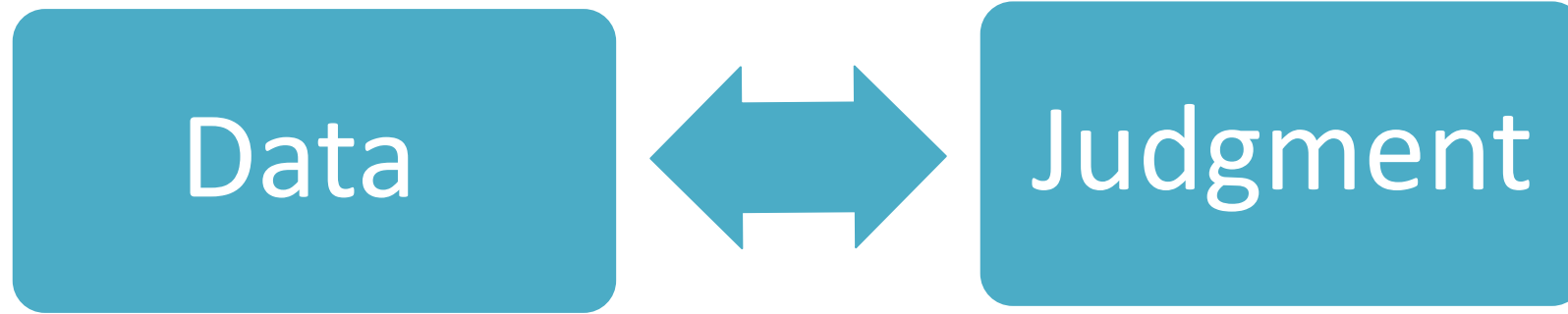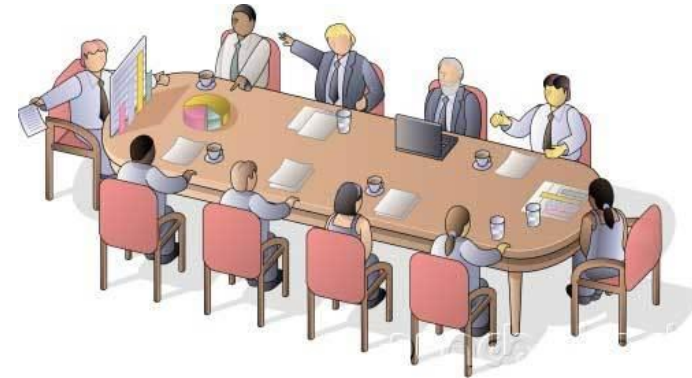
IPEDS

September 20, 2017: Presented overview of peer study at Chancellor's senior staff meeting and Chancellor's division chair's meeting (minutes taken).

November 15, 2017: Presented descriptive statistics of IPEDS data at Chancellor's senior staff meeting and Chancellor's division chair's meeting (minutes taken).

December 1, 2017: Presented overview of peer analysis 'V1' at UH West Oahu faculty senate (minutes taken, video recorded). Hosted an open house to all faculty and staff after faculty senate to present a complete analysis (including cluster analysis) of peer selection. Received feedback and incorporated it in to future iterations of the analysis.

February 13, 2018: Presented peer revision analysis 'V2' to senior executive management.

February 21, 2018: Presented peer analysis 'V2' at Chancellor's senior staff meeting and Chancellor's division chair's meeting (minutes taken). Received additional feedback and incorporated it in to a third version of analysis.

The remainder of 2018: Work put on hold due to campus-wide strategic planning initiatives.

January 15th and 16th , 2019: Presented peer analysis 'V3' at Chancellor's senior staff meeting and Chancellor's division chair's meeting (minutes taken).

May 6, 2019: The final peer analysis 'V4.1' and corresponding peer group was submitted to UH VPAPP as a request for official approval.

UNIVERSITY of HAWAI'I WEST O'AHU

Peer Schools Revision Open House

When: Friday, December 1, 2017
(after faculty senate from 1:30 to 2:15 pm)
Where: C-225
Hosted by: Dr. Kristina Guo and John Stanley
Food: Free Pizza (limited supply)

Please join us at our open house to discuss the revision to UHWO's list of peer schools. The current list is outdated and administration is revising it, but your input is needed. Peer schools are important for strategic planning and performance benchmarking, providing comparative data on important issues like faculty compensation, teaching loads, and institutional performance on graduation rates. At this open house, you'll have an opportunity to provide your input about the various facets of our campus that should be incorporated in the peer selection process. Pizza provided to the first arrivers!
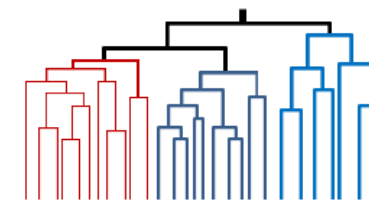
Dendogram: A statistical diagram used to illustrate the arrangement of clusters of similar data points (e.g., colleges) along certain characteristics.

9

IPEDS Descriptive Statistics

Data source

IPEDS

The Integrated Postsecondary Education Data System (IPEDS) is a system of interrelated surveys conducted annually by the National Center for Education Statistics (NCES), a part of the Institute for Education Sciences within the United States Department of Education. IPEDS consists of twelve interrelated survey components that are collected over three collection periods (Fall, Winter, and Spring) each year as described in the Data Collection and Dissemination Cycle. The completion of all IPEDS surveys is mandatory for all institutions that participate in, or are applicants for participation in, any federal financial assistance program authorized by Title IV of the Higher Education Act of 1965, as amended.[1] Statutory Requirements For Reporting IPEDS Data.

Data collected in IPEDS:

Institutional characteristics

Institutional prices

Admissions

Enrollment

Student financial aid

Degrees and certificates conferred (completions)

Student persistence and success (retention and graduation rates)

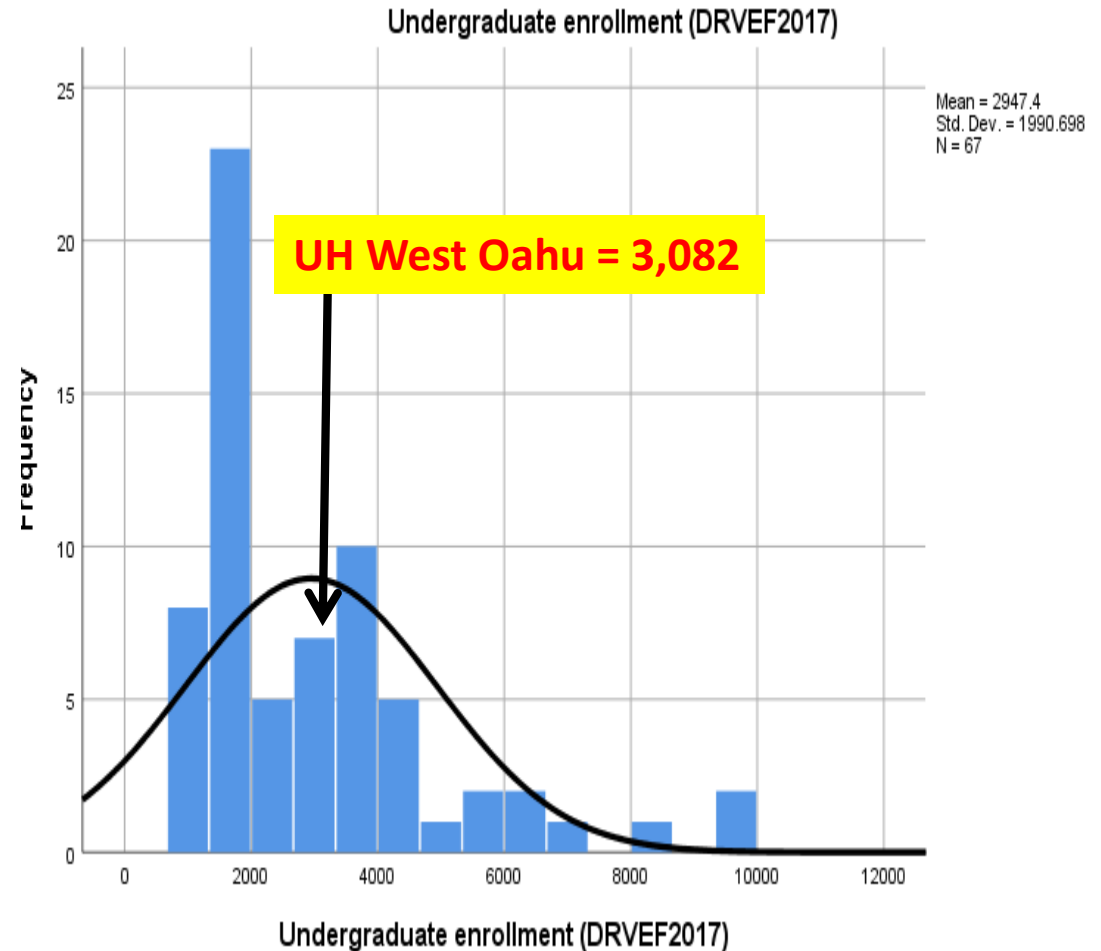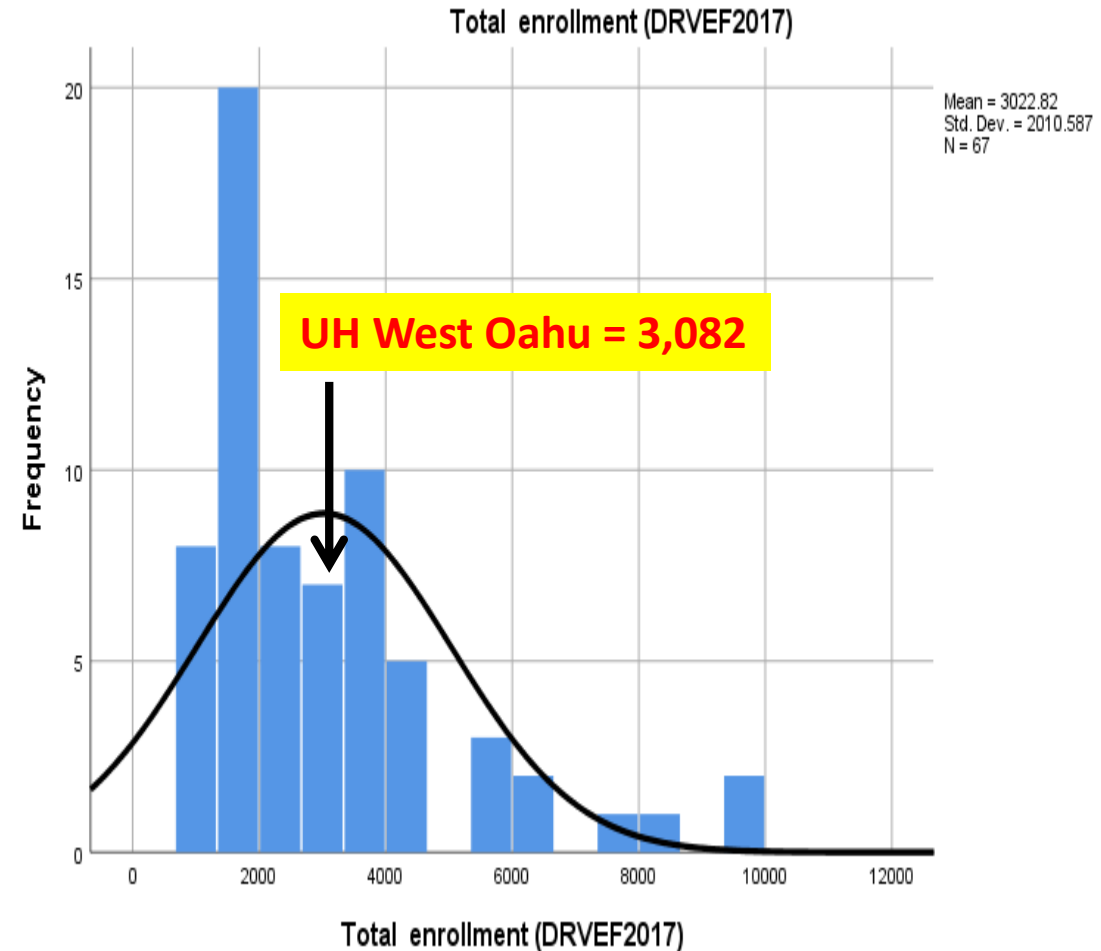Institutional resources

Institution characteristics selection

IPEDS

IPEDS Universe ……………………………………………………………….**7,121**

U.S. Public 4 year or above, degree granting…………………………**756**

Carnegie Classifications = Baccalaureate Diverse Fields
and Arts & Sciences; primarily baccalaureate or above…………..**87**

Title IV participating, institutional Size: 1,000 – 4,999…………… **60**
+ Institutional Size: 5,000 - 9,999………………………………………….**69**

Has full-time first-time undergraduates;
all programs not offered completely online…………………………..**67**

Final = 67 Institutions

(52 from Carnegies Baccalaureate Diverse Fields;
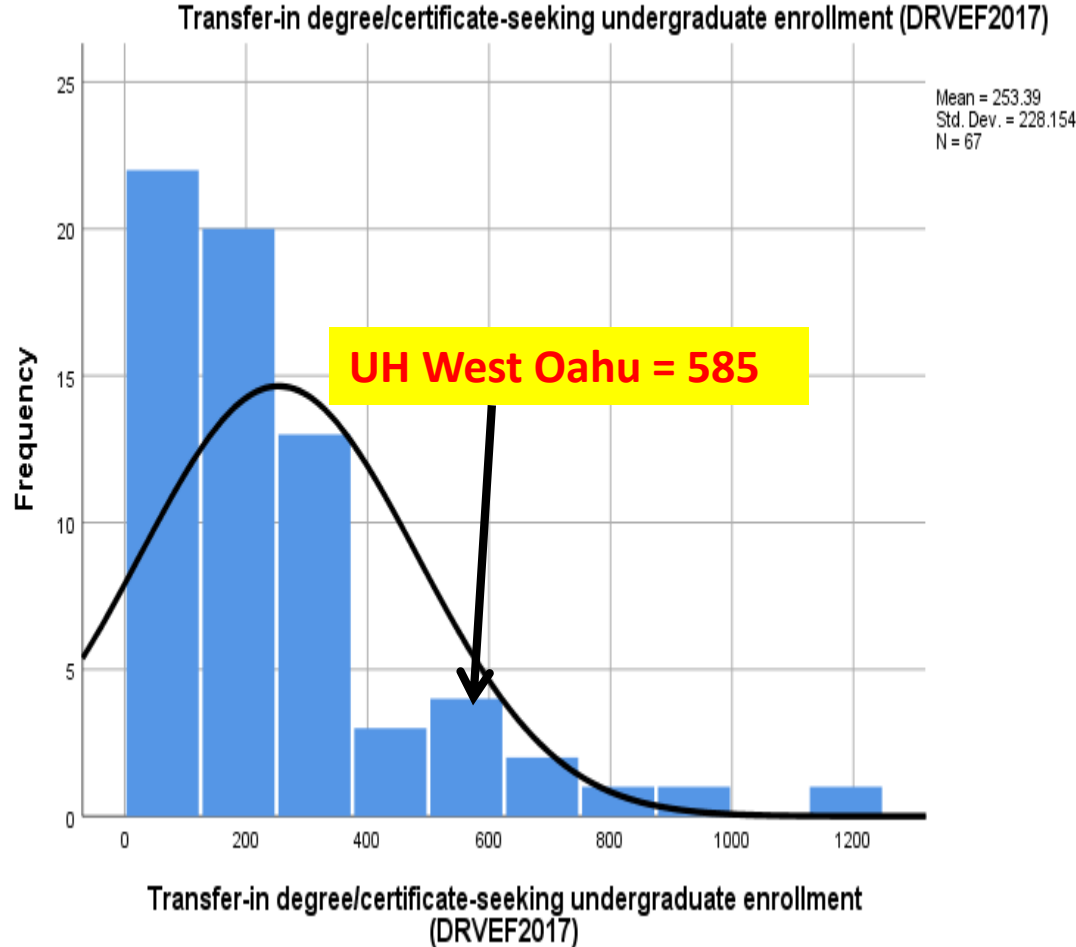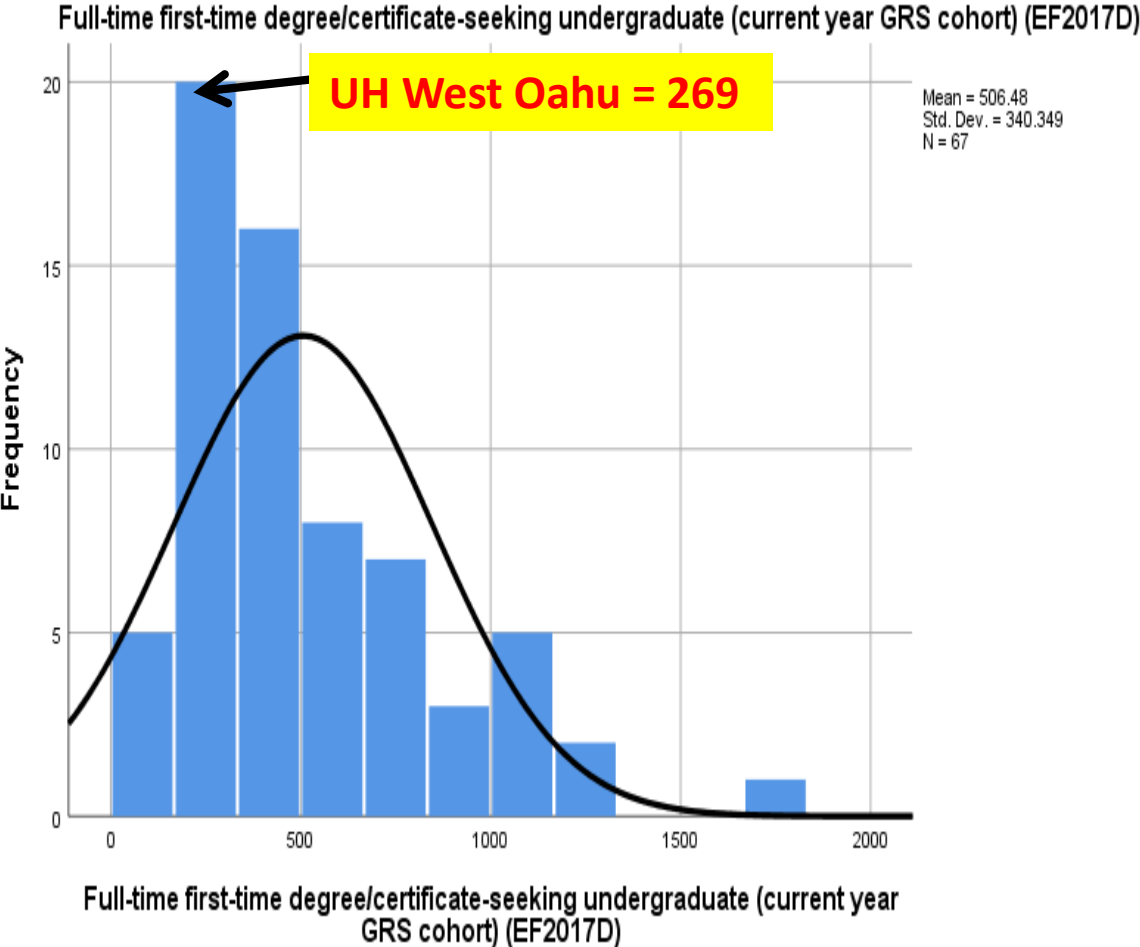15 from Carnegie Baccalaureate Arts/Sciences)

Data retrieved March 28, 2019

IPEDS FALL 2017

⣿IPEDS FALL 2017

Full-time first-time degree/certificate-seeking undergraduate (current year GRS cohort) (EF2017D)

UH West Oahu = 269

Mean = 506.48
Std. Dev. = 340.349
N = 67

Full-time first-time degree/certificate-seeking undergraduate (current year GRS cohort) (EF2017D)

Transfer-in degree/certificate-seeking undergraduate enrollment (DRVEF2017)

UH West Oahu = 585

Mean = 253.39
Std. Dev. = 228.154
N = 67

Transfer-in degree/certificate-seeking undergraduate enrollment (DRVEF2017)

IPEDS FALL 2017

Percent Part-Time UG Enrollment 2017

Mean = 24.84
Std. Dev. = 17.658
N = 67

UH West Oahu = 48%

Frequency / Percent Part-Time UG Enrollment 2017

Percent of undergraduate enrollment 18-24 (DRVEF2017)

Mean = 72.28
Std. Dev. = 17.461
N = 67

UH West Oahu = 50%

Frequency / Percent of undergraduate enrollment 18-24 (DRVEF2017)

15

IPEDS FALL 2017

Percent of undergraduate enrollment 25-64 (DRVEF2017)

Mean = 19.75
Std. Dev. = 13.235
N = 67

UH West Oahu = 40%

Percent of first-time undergraduates - out-of-state (DRVEF2017)

Mean = 17.45
Std. Dev. = 13.78
N = 56

UH West Oahu = 2%

Continuing and graduate enrollment

IPEDS FALL 2017

Continuing degree/certificate-seeking undergraduate enrollment (DRVEF2017)

UH West Oahu = 1,880

Mean = 1816.43
Std. Dev. = 1280.259
N = 67

Graduate enrollment (DRVEF2017)

UH West Oahu = 0

Mean = 75.42
Std. Dev. = 93.556
N = 67

IPEDS Fall 2017

Grand total (EF2016CP 52.0000-Business Management and Administrative Services Undergraduate total)

UH West Oahu = 234
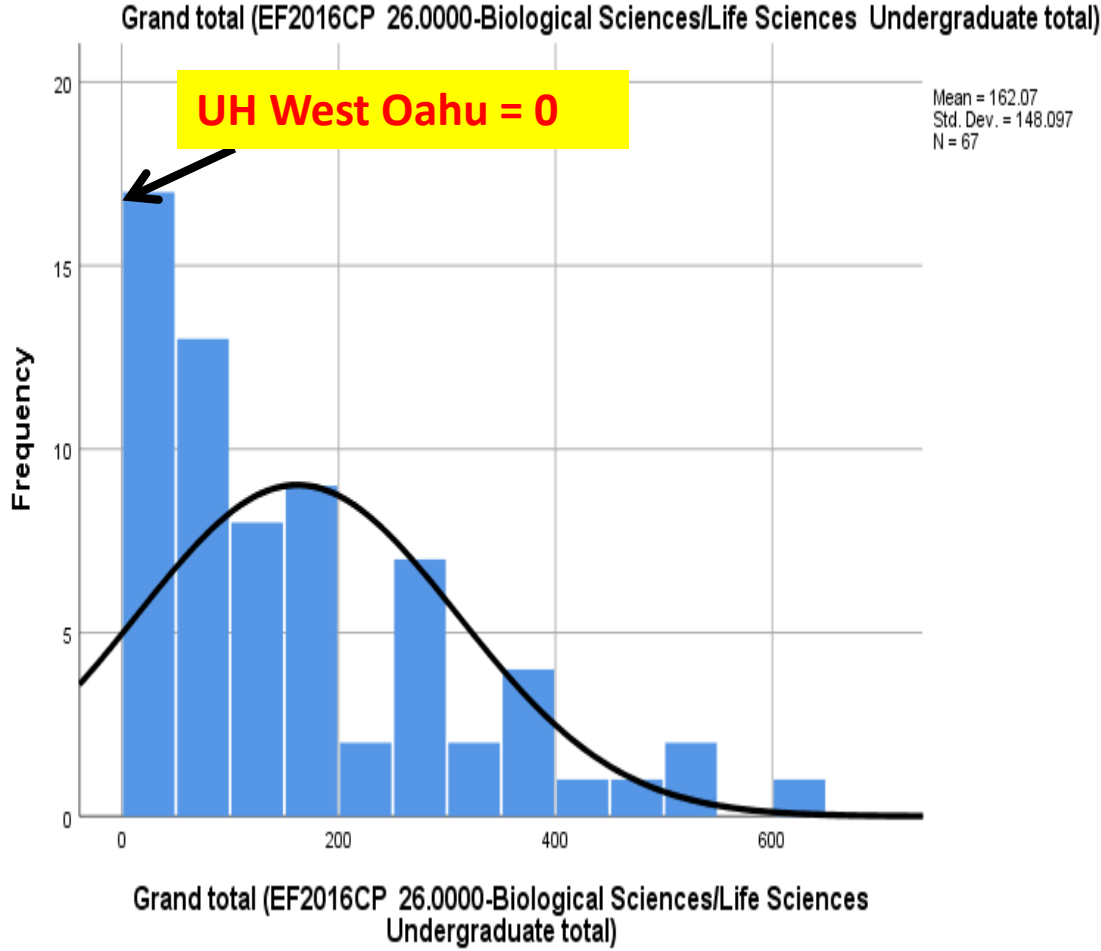
Mean = 387.91
Std. Dev. = 300.237
N = 67
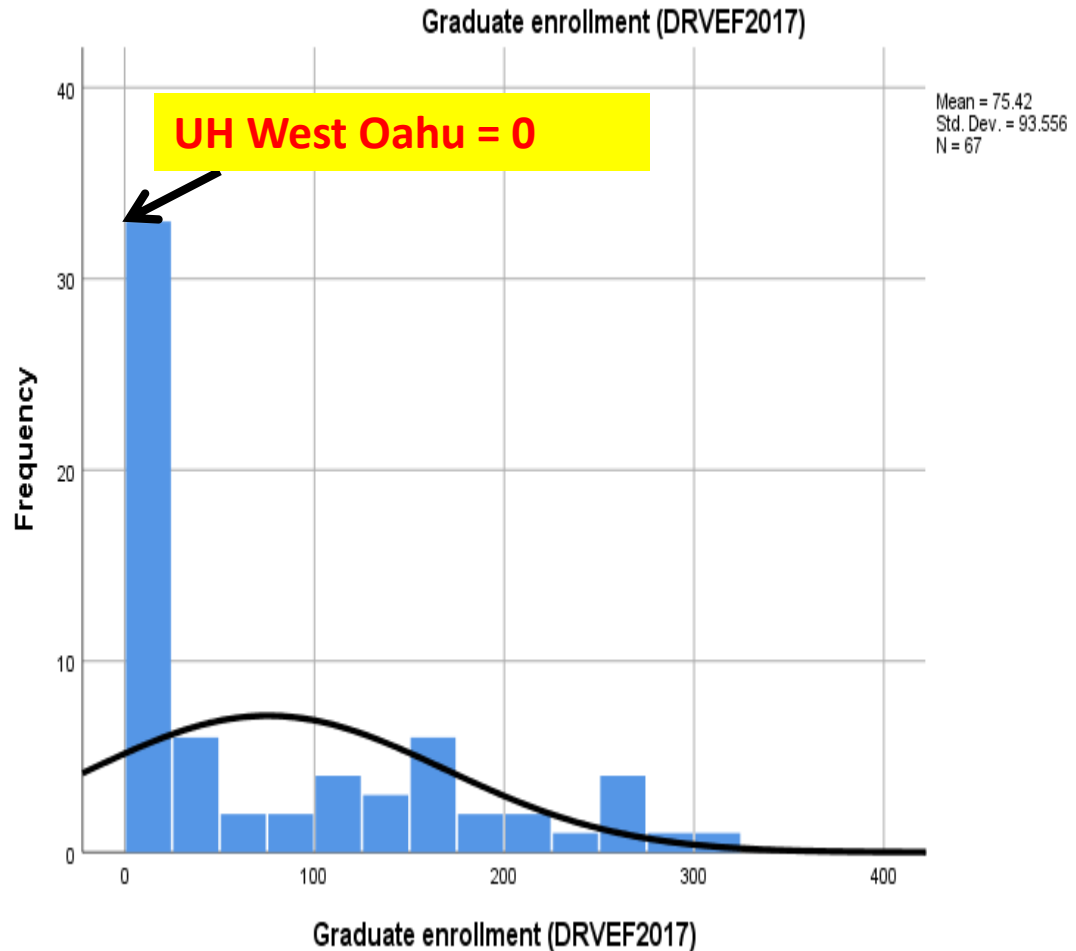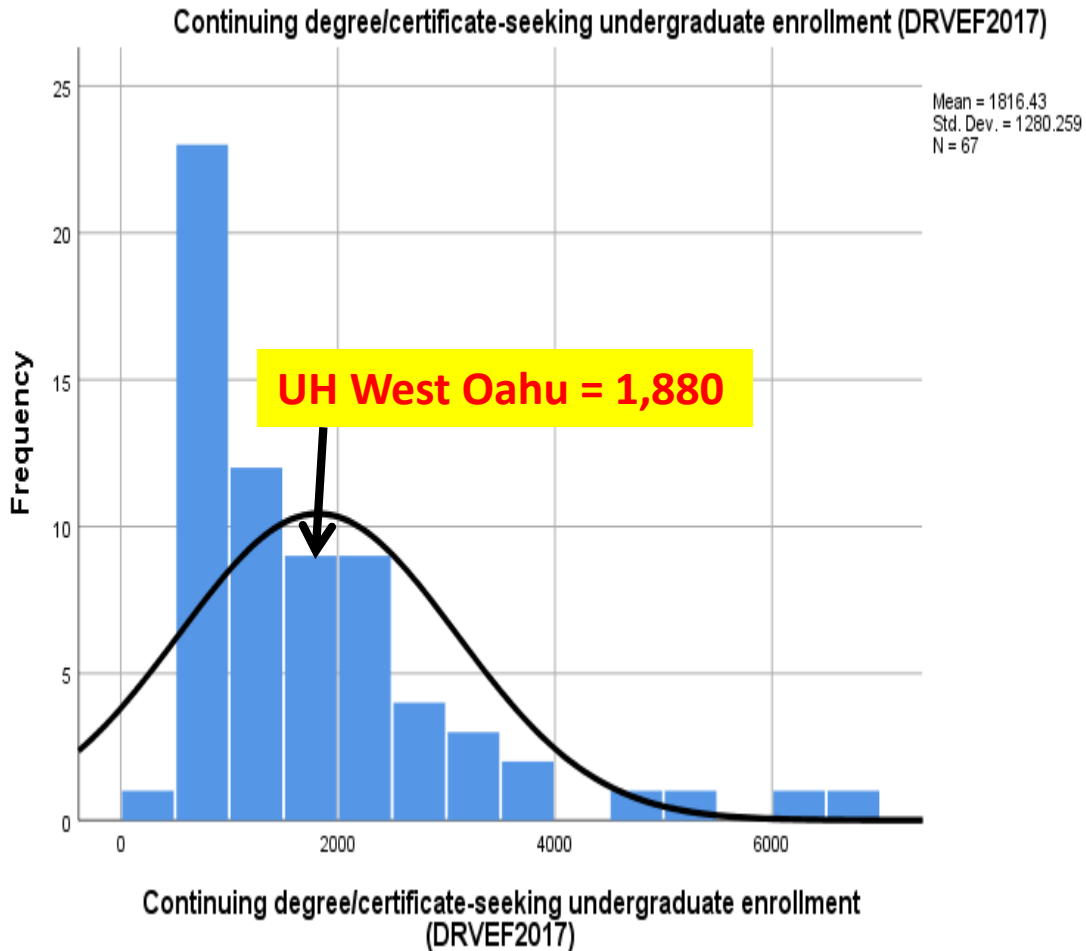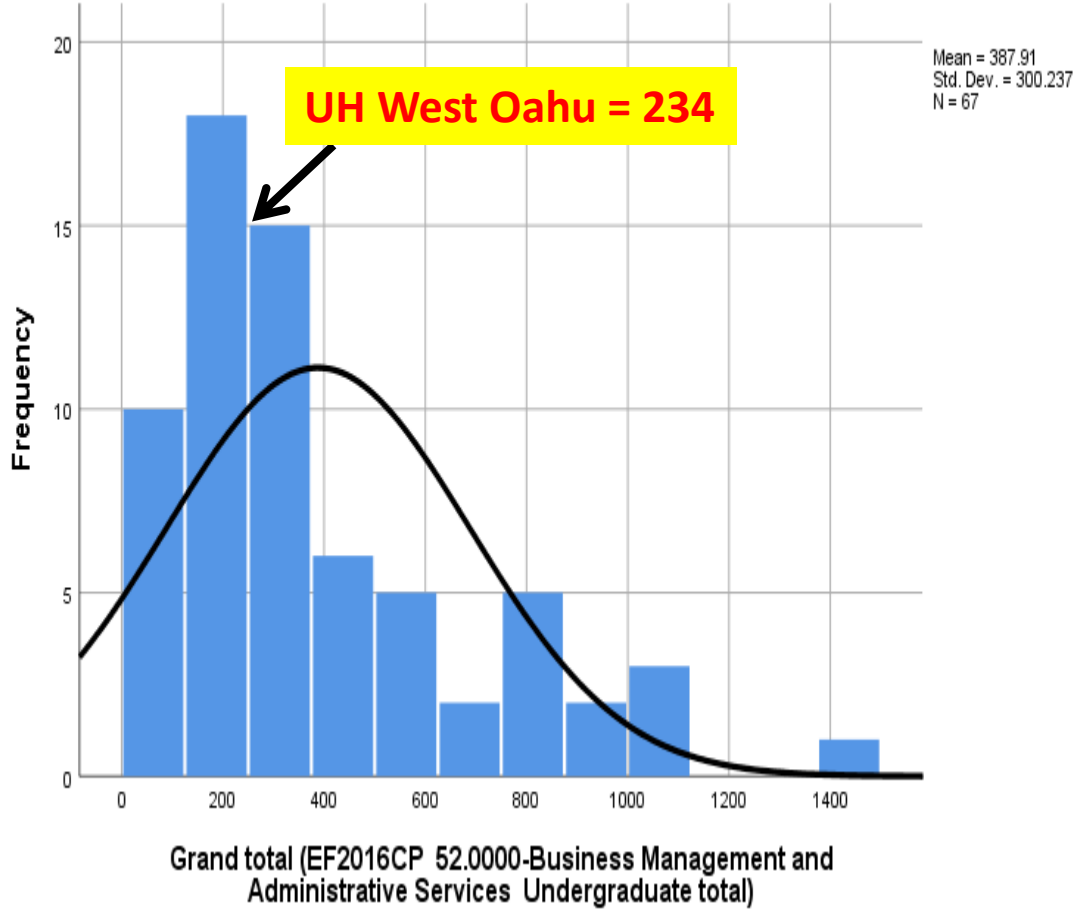
Grand total (EF2016CP 13.0000-Education Undergraduate total)

UH West Oahu = 150

Mean = 191.21
Std. Dev. = 190.892
N = 67

STEM undergraduate enrollment

IPEDS Fall 2017

Grand total (EF2016CP 26.0000-Biological Sciences/Life Sciences Undergraduate total)

UH West Oahu = 0

Mean = 162.07
Std. Dev. = 148.097
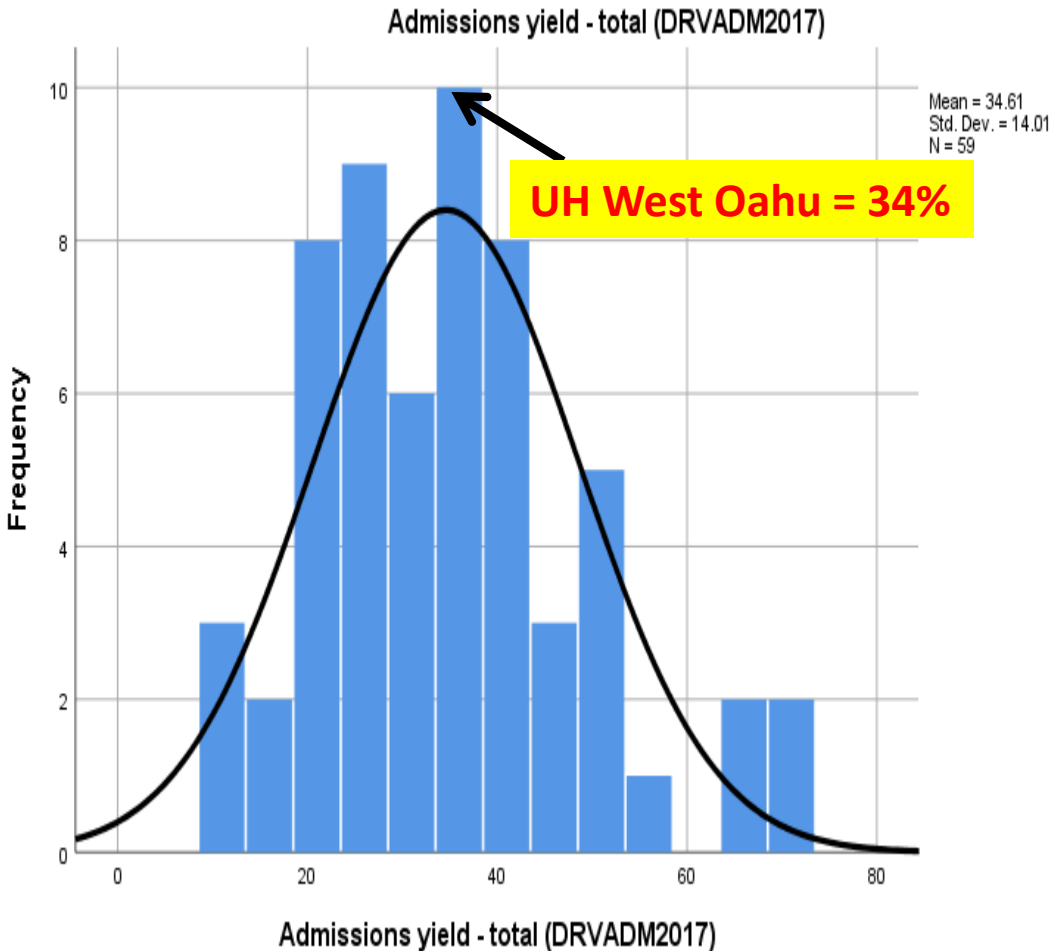N = 67

Grand total (EF2016CP 26.0000-Biological Sciences/Life Sciences
Undergraduate total)
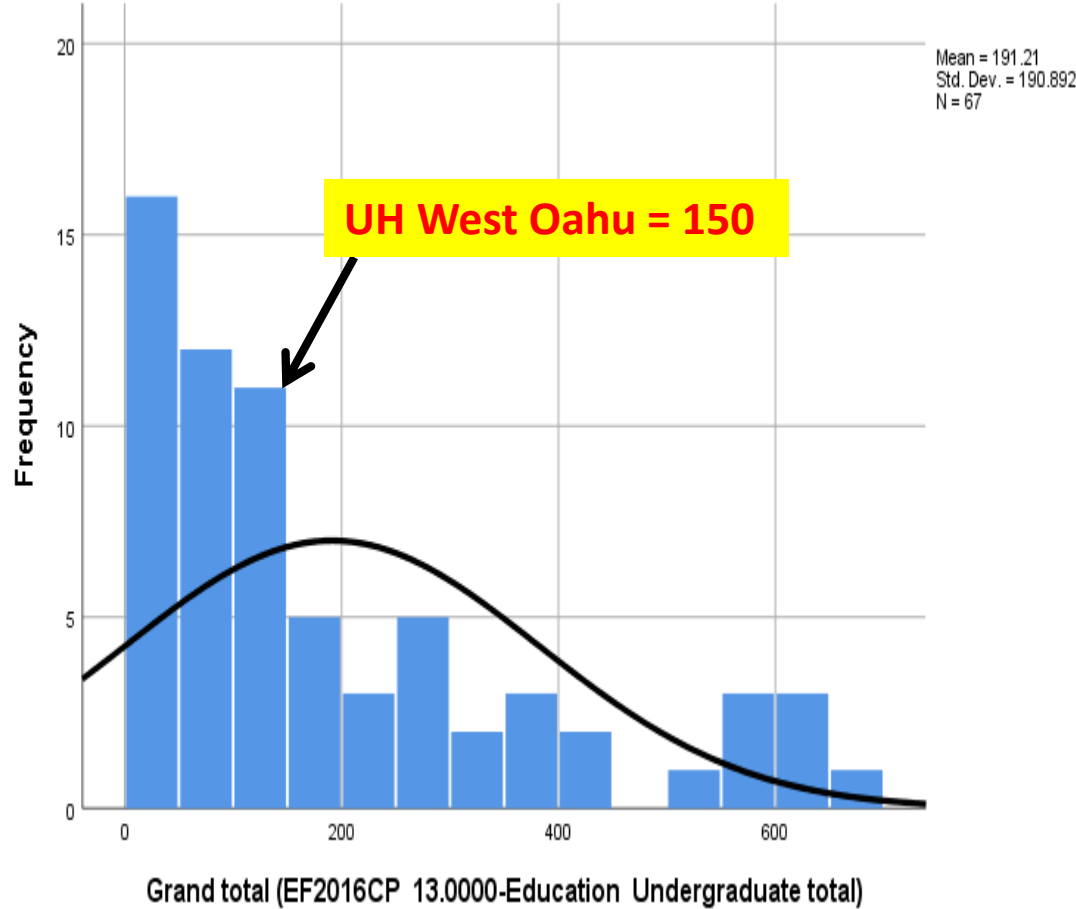
Admissions selectivity and yield (first-time freshmen)

IPEDS FALL 2017
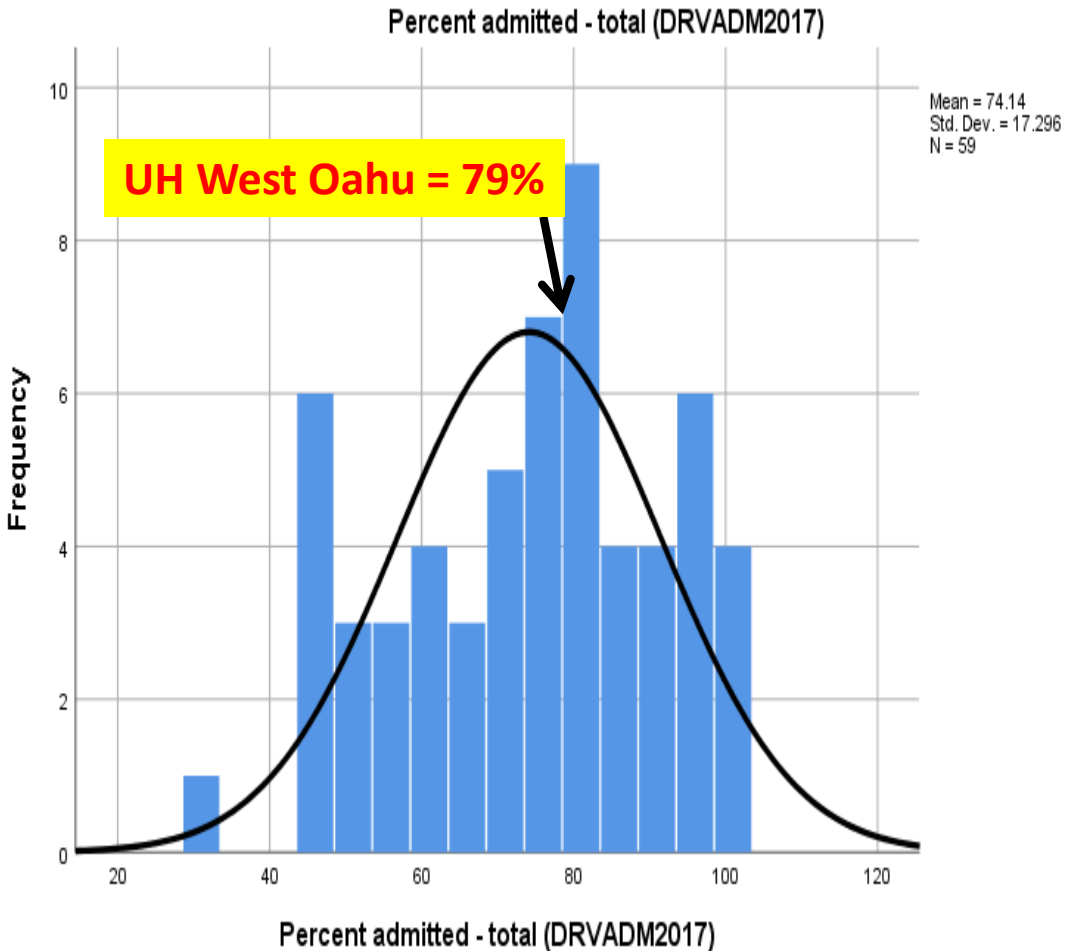
Percent admitted - total (DRVADM2017)

UH West Oahu = 79%

Mean = 74.14
Std. Dev. = 17.296
N = 59

Admissions yield - total (DRVADM2017)

UH West Oahu = 34%

Mean = 34.61
Std. Dev. = 14.01
N = 59

IPEDS FY 2016-17

Percent of full-time first-time undergraduates awarded any financial aid (SFA1617)

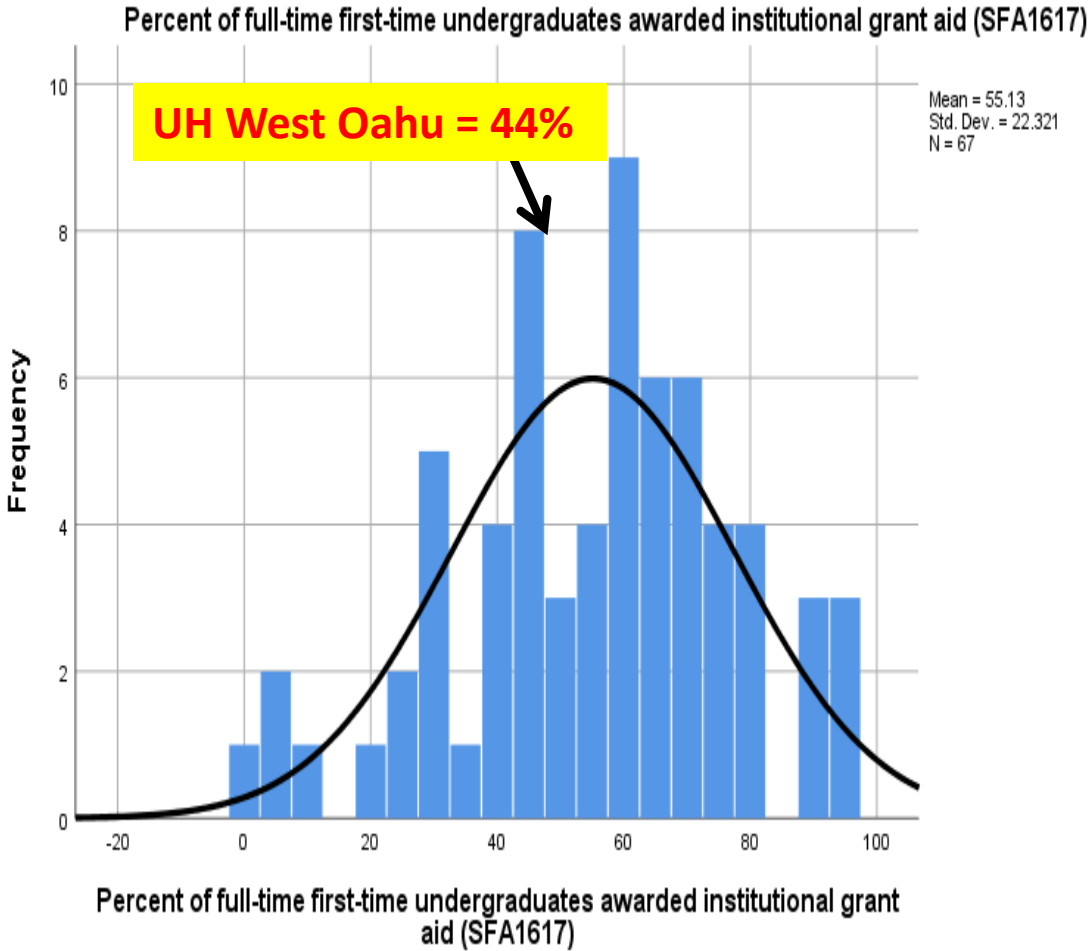Mean = 90.27
Std. Dev. = 7.571
N = 67

UH West Oahu = 62%
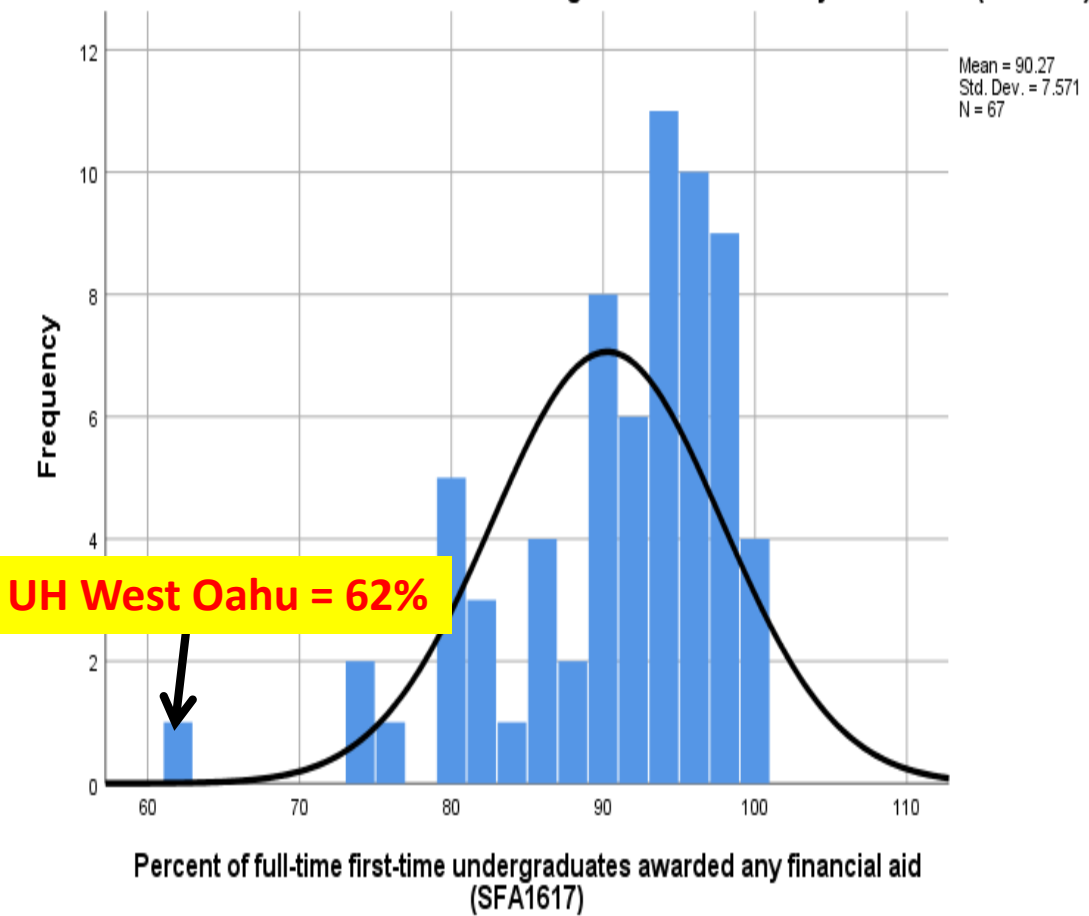
Percent of full-time first-time undergraduates awarded federal grant aid (SFA1617)
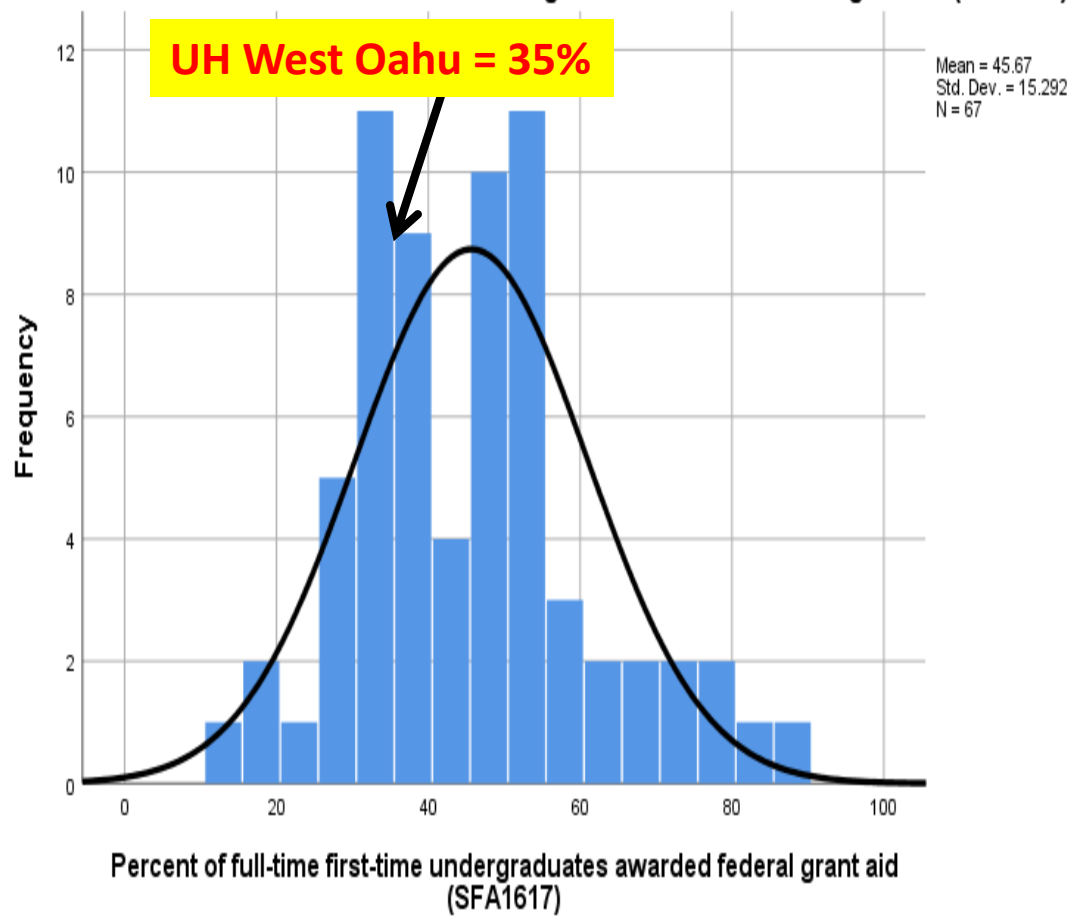
Mean = 45.67
Std. Dev. = 15.292
N = 67

UH West Oahu = 35%

IPEDS FY 2016-17

Percent of full-time first-time undergraduates awarded Pell grants (SFA1617)

UH West Oahu = 35%

Mean = 44.64
Std. Dev. = 14.888
N = 67

Percent of full-time first-time undergraduates awarded Pell grants (SFA1617)

Percent of full-time first-time undergraduates awarded institutional grant aid (SFA1617)
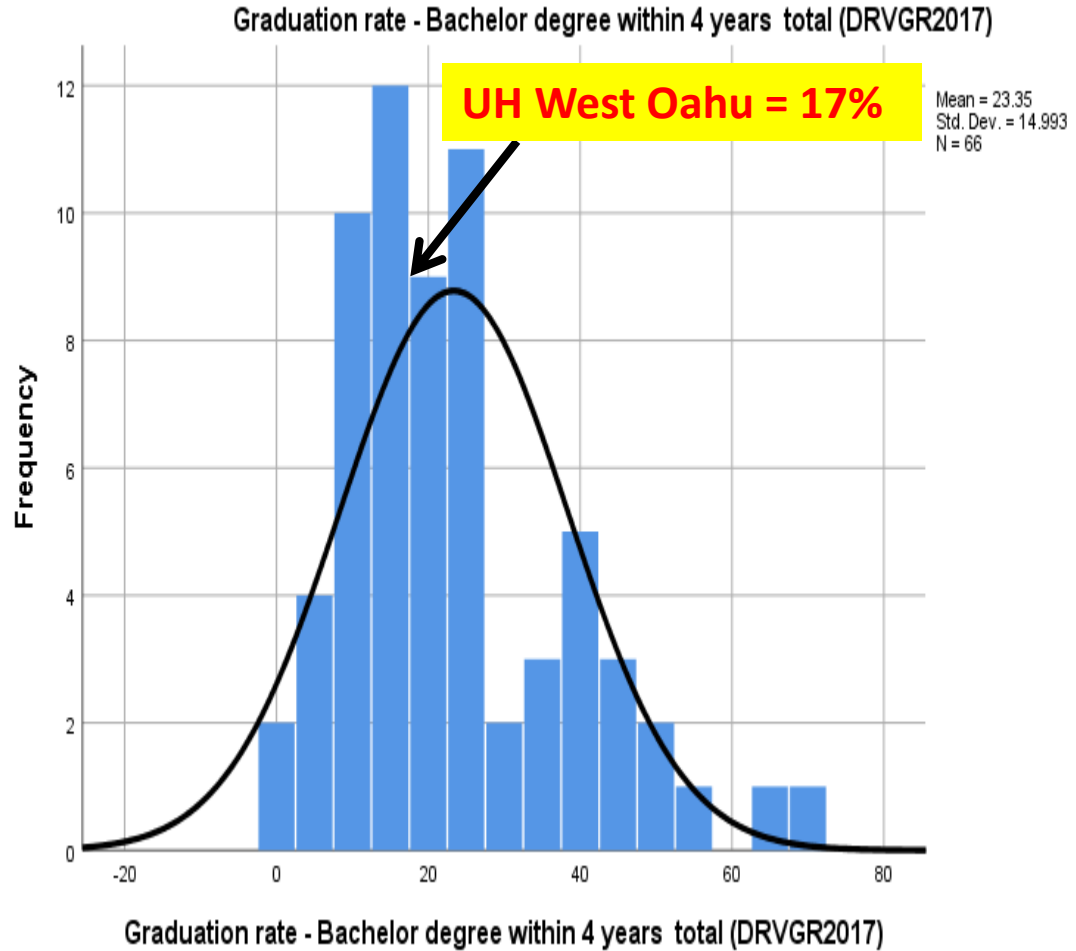
UH West Oahu = 44%

Mean = 55.13
Std. Dev. = 22.321
N = 67

Percent of full-time first-time undergraduates awarded institutional grant aid (SFA1617)
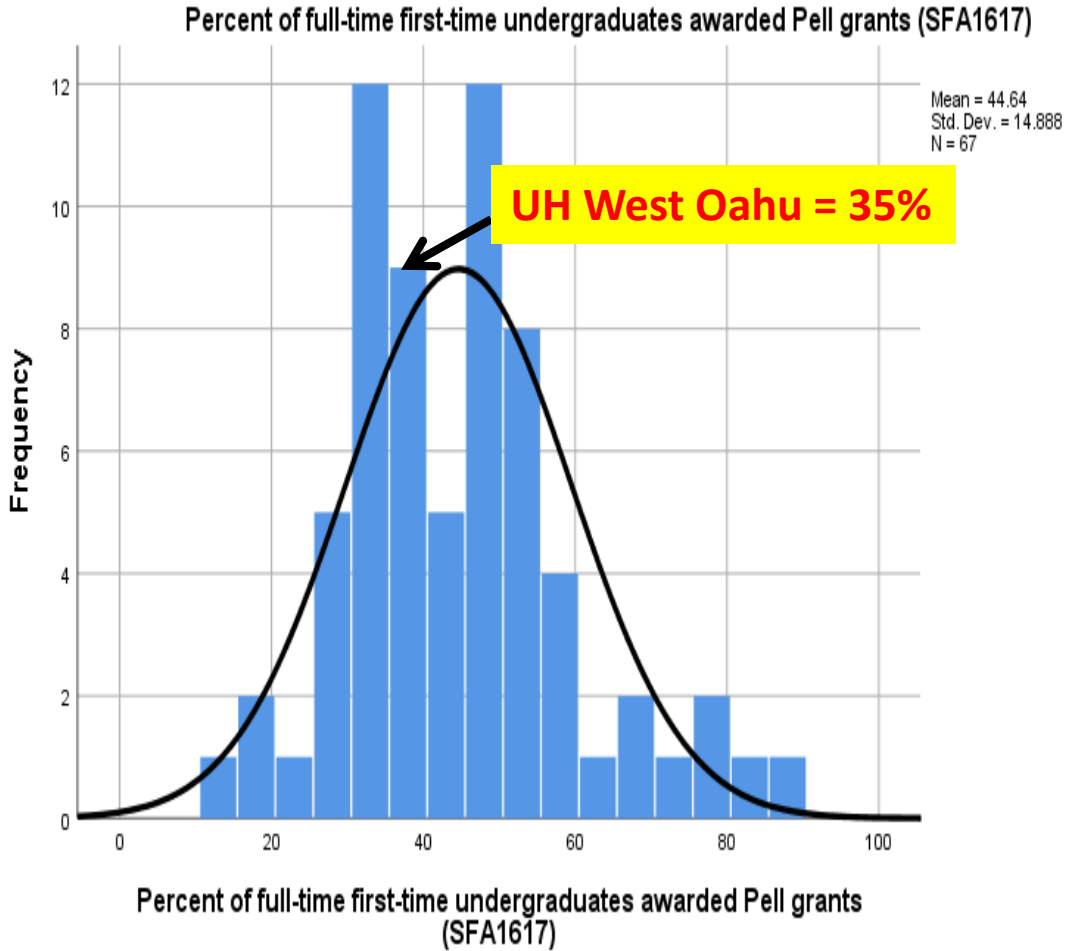
Degrees awarded and four-year graduation rate

IPEDS Note: 4-yr graduation rate is based on the 2011 cohort of first-time full-time freshmen.
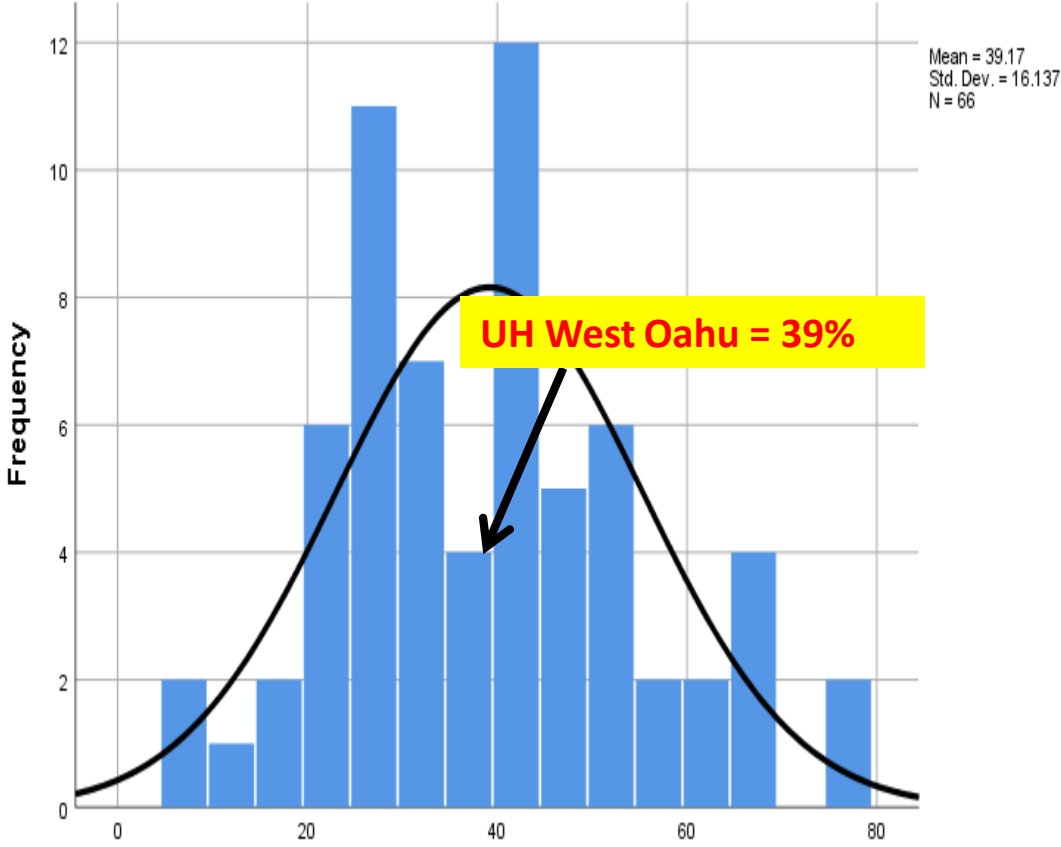

Grand total (C2017_A First major Grand total Bachelor's degree)

UH West Oahu = 623

Mean = 454.6
Std. Dev. = 293.273
N = 67

Graduation rate - Bachelor degree within 4 years total (DRVGR2017)

UH West Oahu = 17%

Mean = 23.35
Std. Dev. = 14.993
N = 66
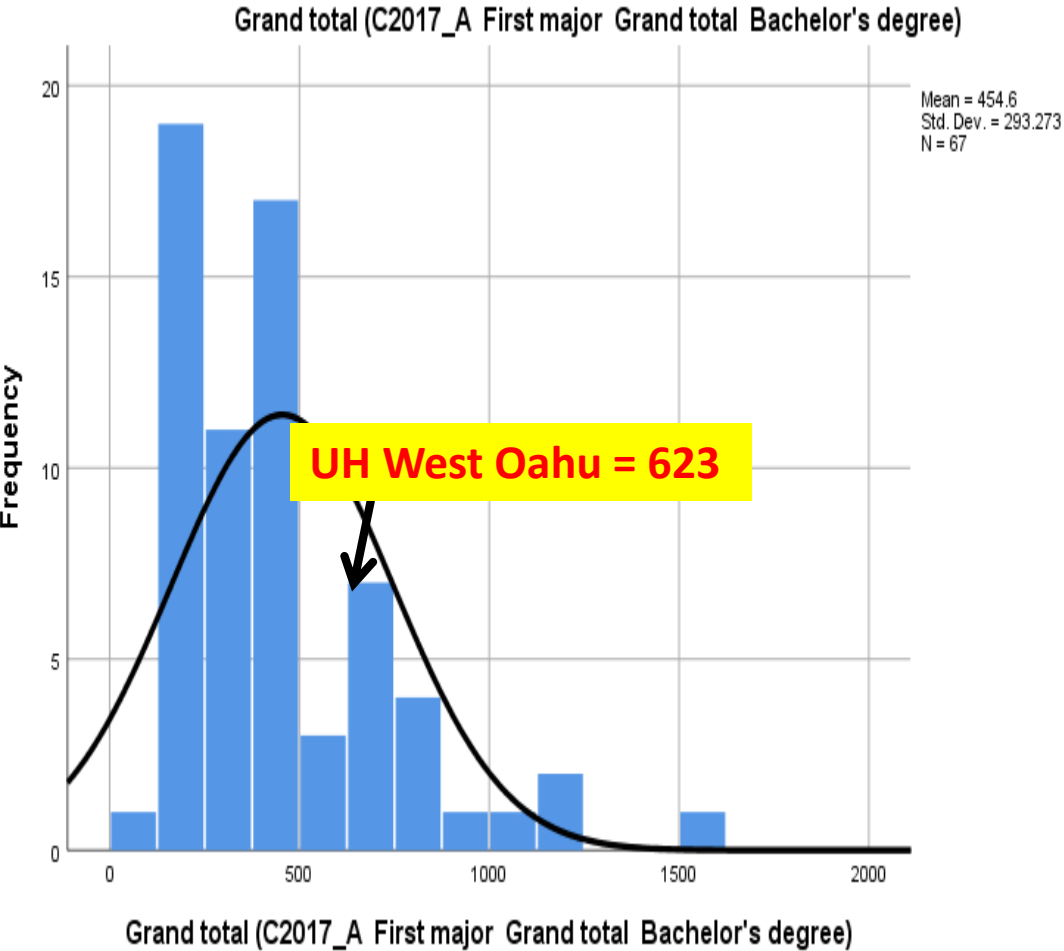
Five-year and six-year graduation rate

Graduation rate - Bachelor degree within 5 years total (DRVGR2017)

Mean = 35.53
Std. Dev. = 16.452
N = 66

UH West Oahu = 33%

Graduation rate - Bachelor degree within 6 years total (DRVGR2017)

Mean = 39.17
Std. Dev. = 16.137
N = 66

UH West Oahu = 39%

Retention rate

Note: The retention rate is based on the 2016 cohort of first-time full-time freshmen
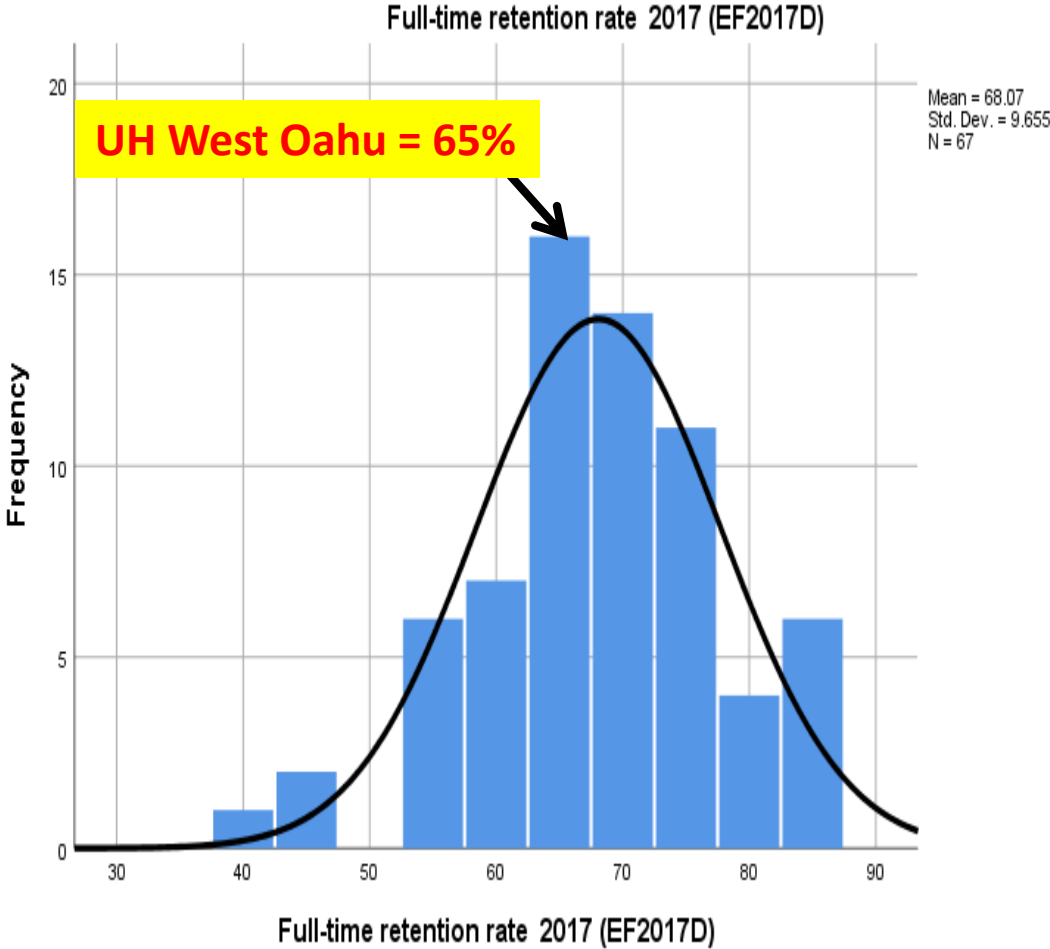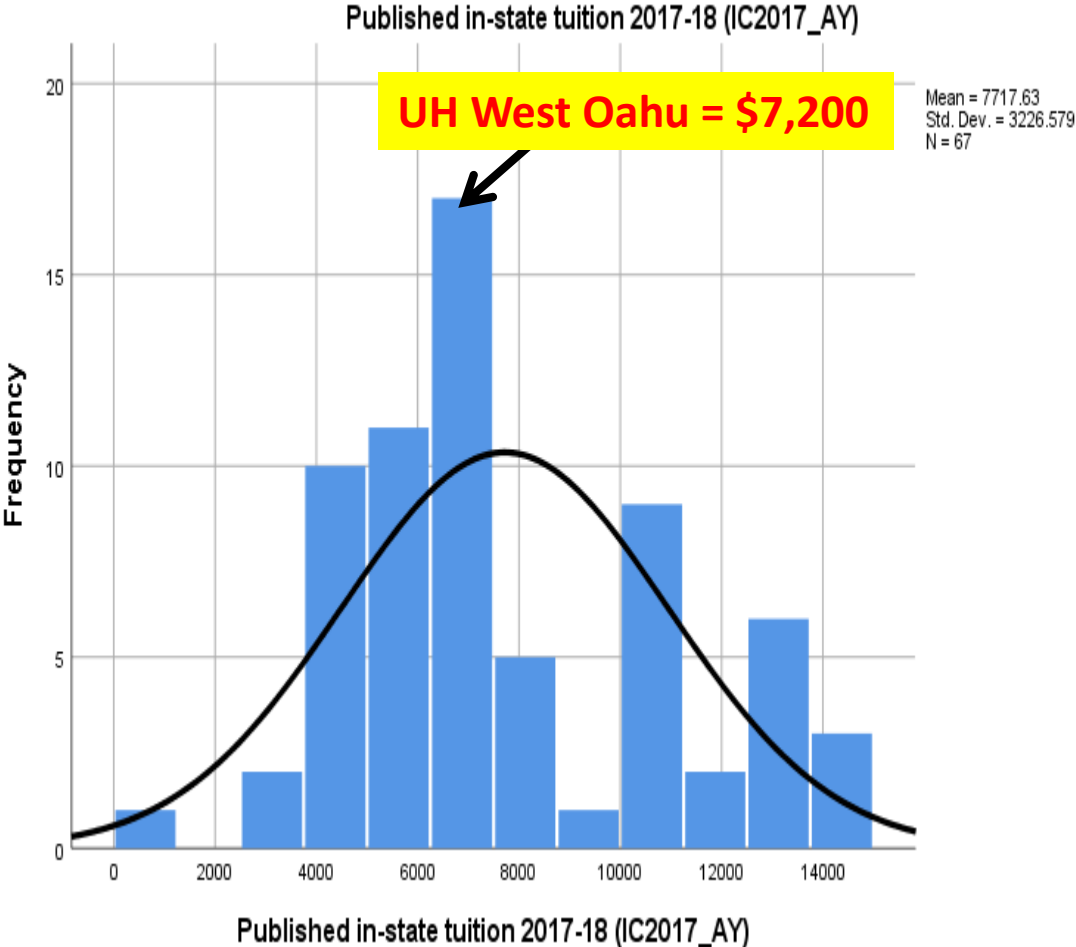
Full-time retention rate 2017 (EF2017D)

UH West Oahu = 65%

Mean = 68.07
Std. Dev. = 9.655
N = 67

In-state tuition

Published in-state tuition 2017-18 (IC2017_AY)

UH West Oahu = $7,200

Mean = 7717.63
Std. Dev. = 3226.579
N = 67
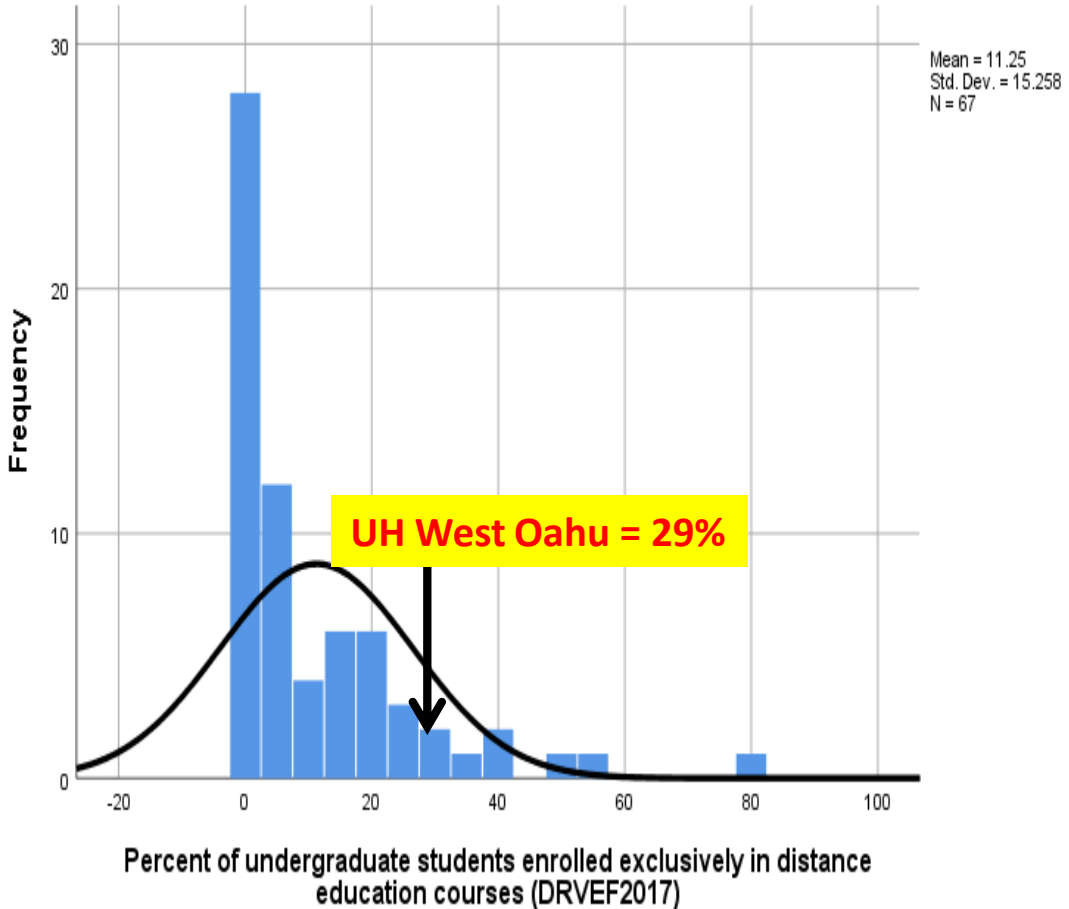
IPEDS FALL 2017

Percent of undergraduate students enrolled exclusively in distance education courses (DRVEF2017)

Mean = 11.25
Std. Dev. = 15.258
N = 67

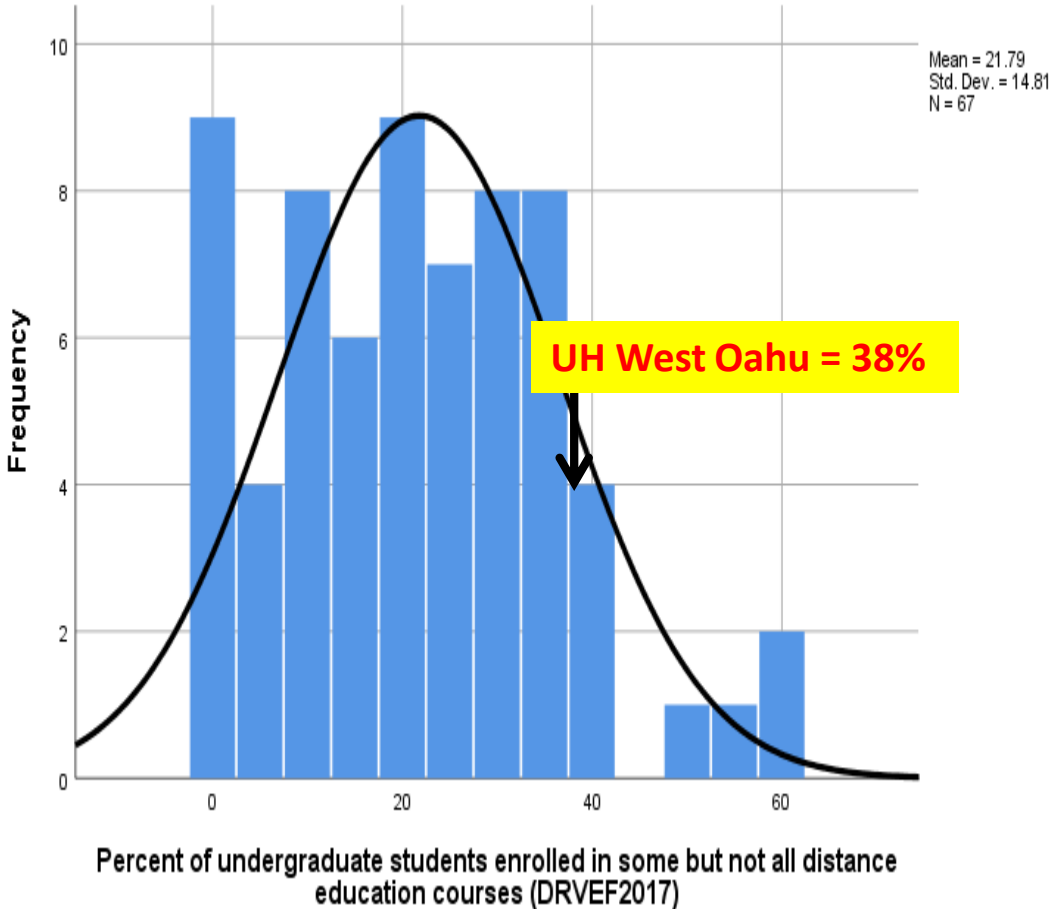**UH West Oahu = 29%**

Percent of undergraduate students enrolled exclusively in distance education courses (DRVEF2017)

Percent of undergraduate students enrolled in some but not all distance education courses (DRVEF2017)

Mean = 21.79
Std. Dev. = 14.81
N = 67

UH West Oahu = 38%
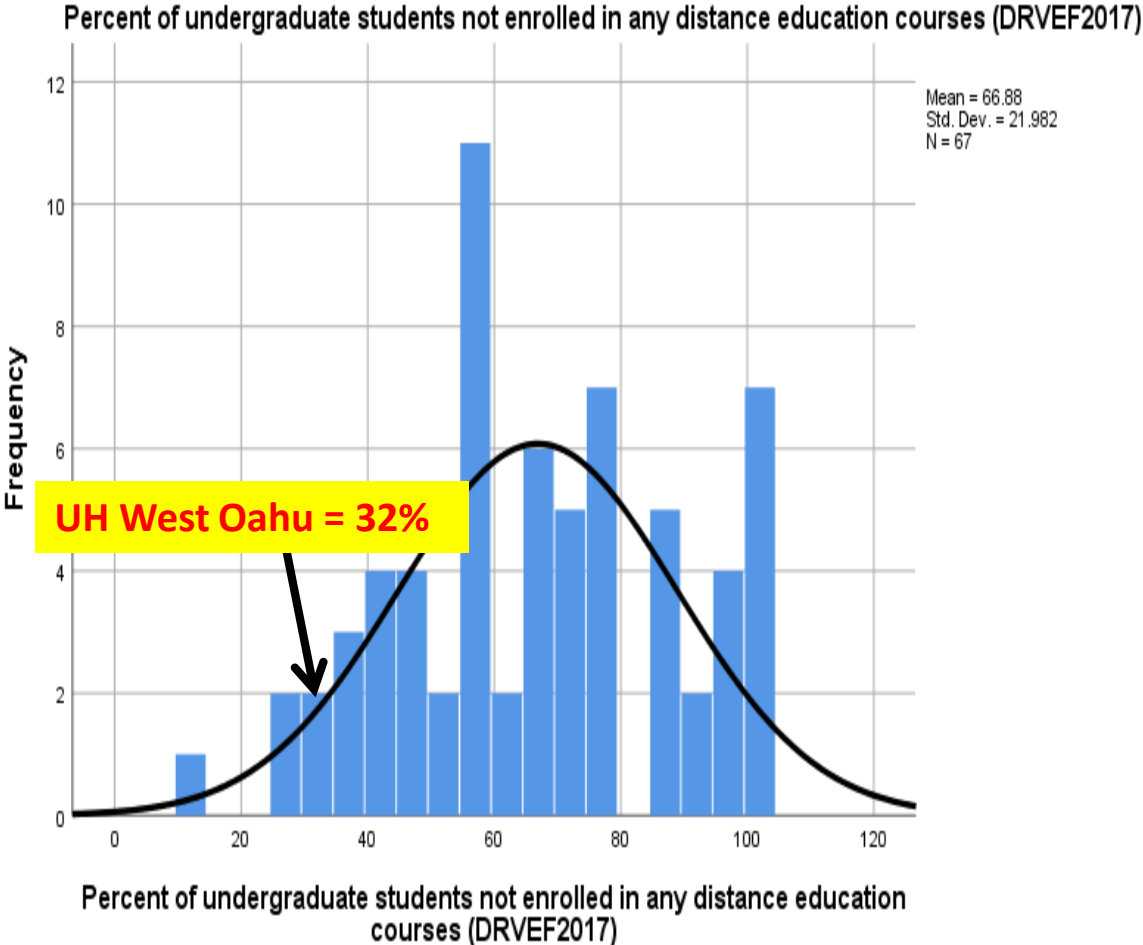
Percent of undergraduate students enrolled in some but not all distance education courses (DRVEF2017)

Distance education

Percent of undergraduate students not enrolled in any distance education courses (DRVEF2017)

Mean = 66.88
Std. Dev. = 21.982
N = 67

UH West Oahu = 32%

Percent of undergraduate students not enrolled in any distance education courses (DRVEF2017)
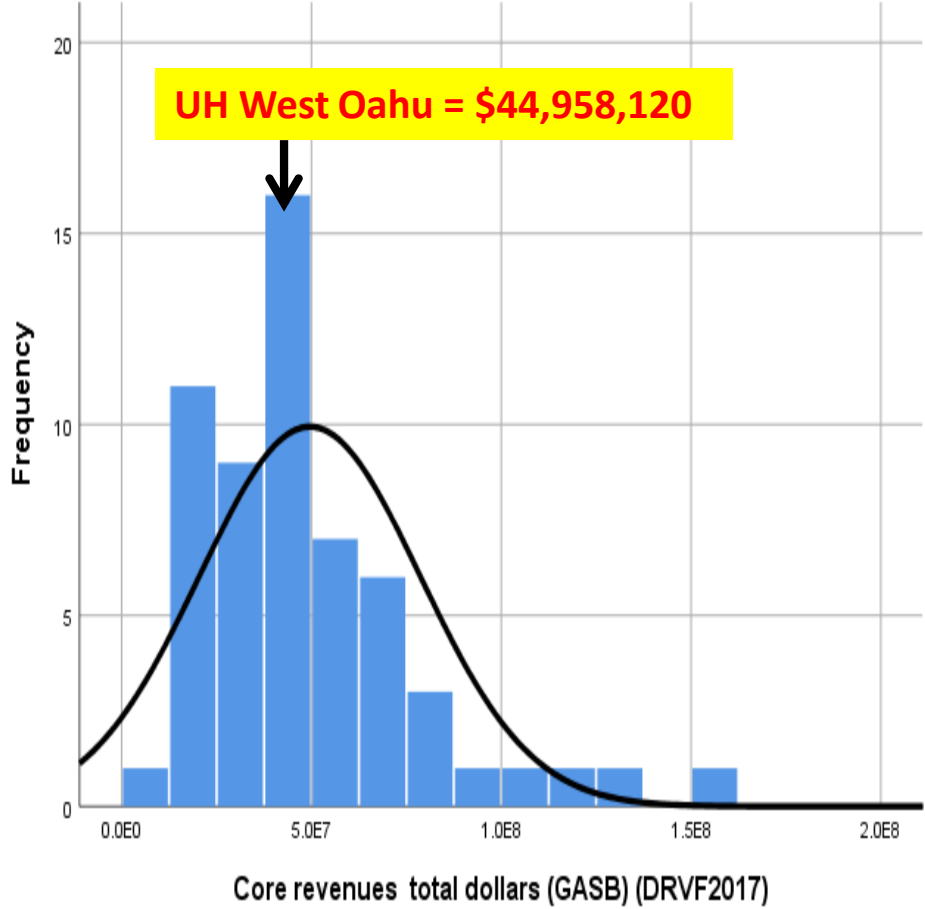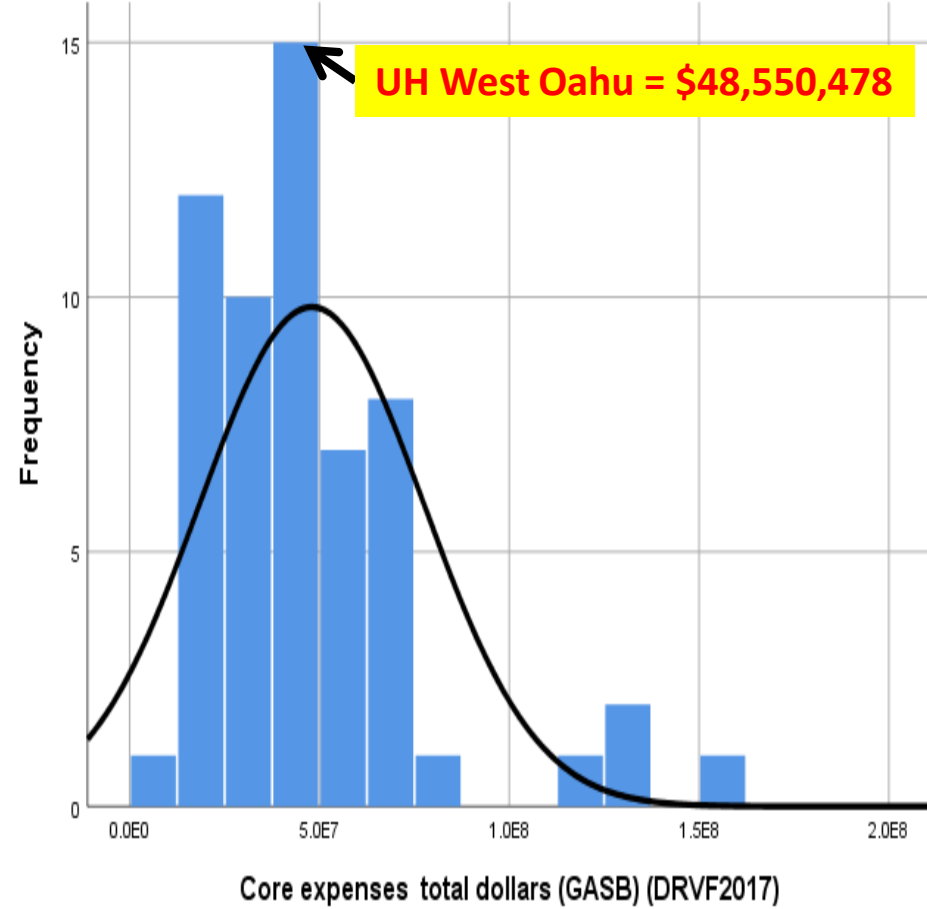
Budget

IPEDS FY 2016-17

Core revenues total dollars (GASB) (DRVF2017)

UH West Oahu = $44,958,120

Mean = 49558028.05
Std. Dev. = 29086654.44
N = 58

Core expenses total dollars (GASB) (DRVF2017)

UH West Oahu = $48,550,478

Mean = 47963354.91
Std. Dev. = 29492048.993
N = 58

IPEDS FALL 2017

Total employees (EAP2017 All staff)

Mean = 477.98
Std. Dev. = 261.497
N = 66

UH West Oahu = 344

Full-time non-instructional staff - number (SAL2017_NIS)

Mean = 218.88
Std. Dev. = 111.403
N = 66

UH West Oahu = 160
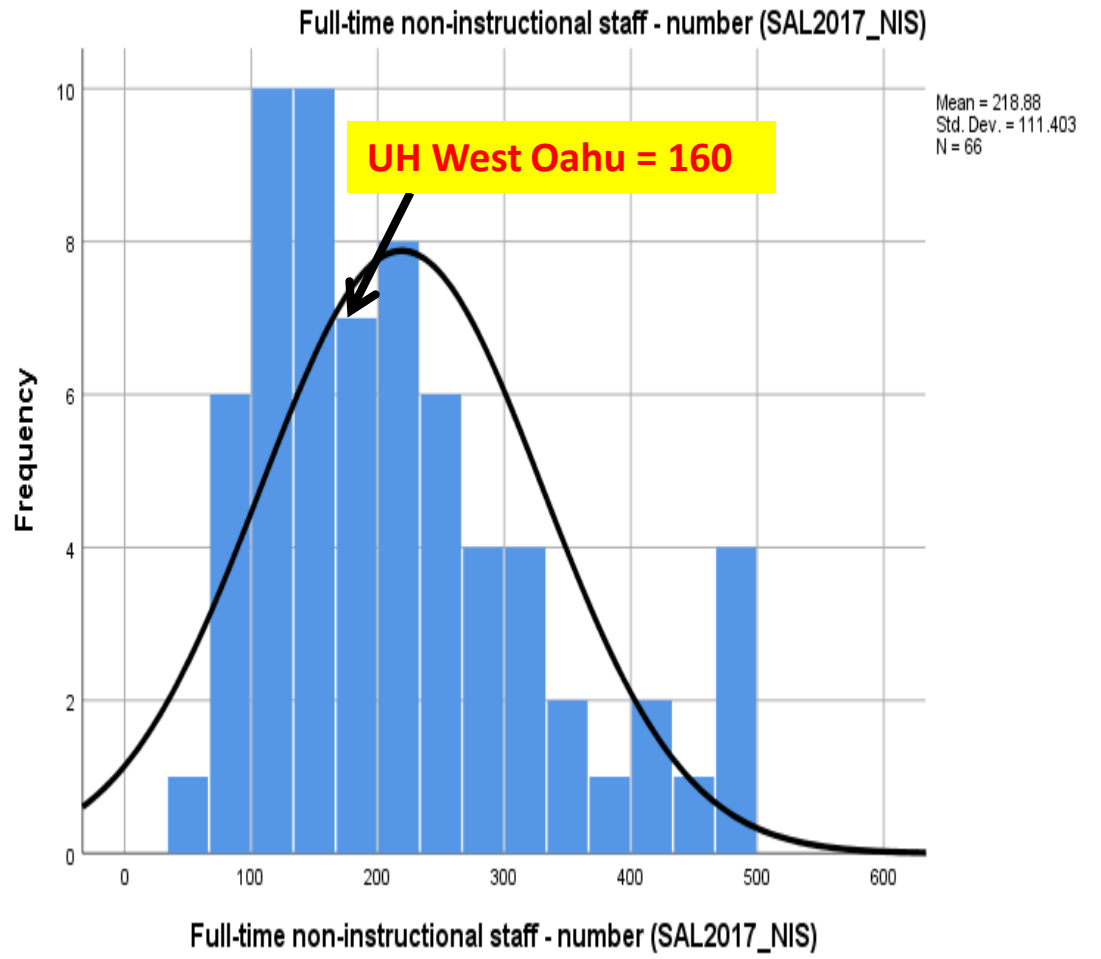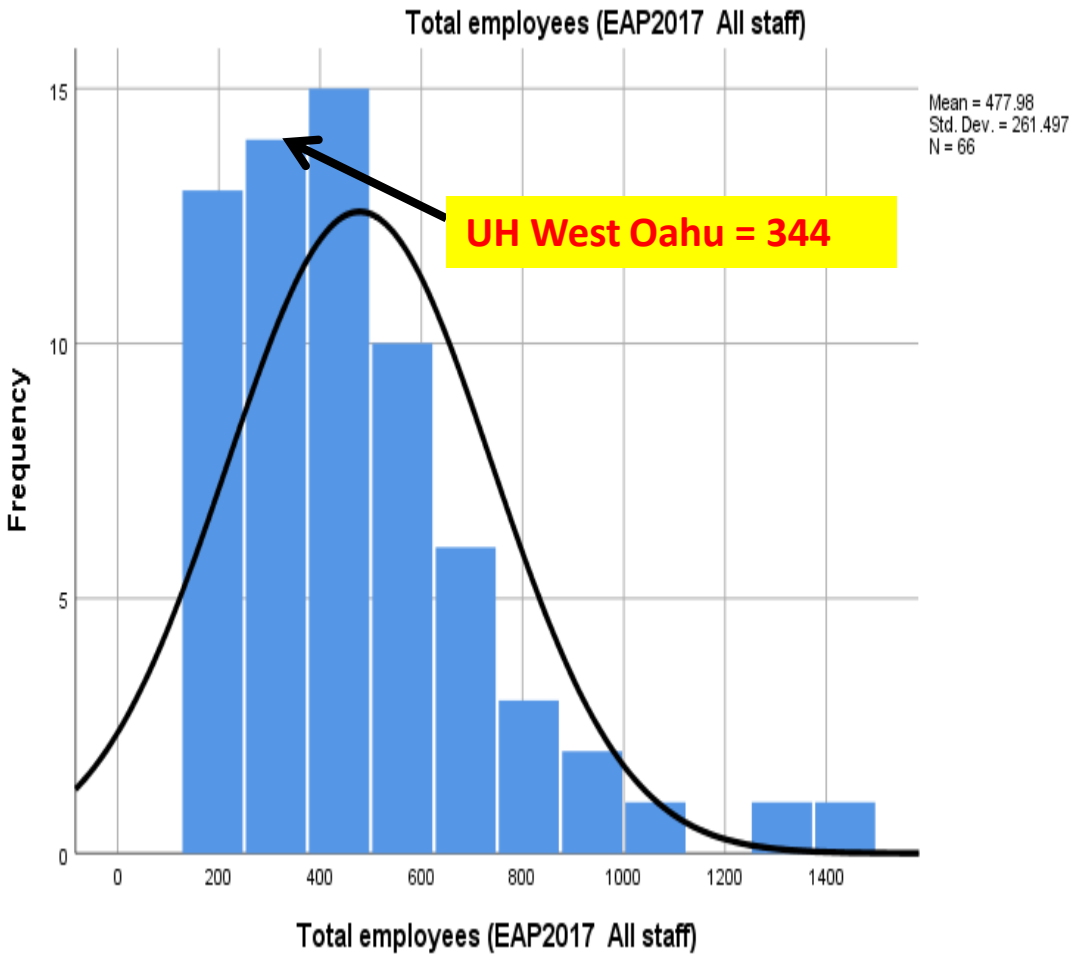
Instructional faculty (headcount and FTE)

IPEDS FALL 2017

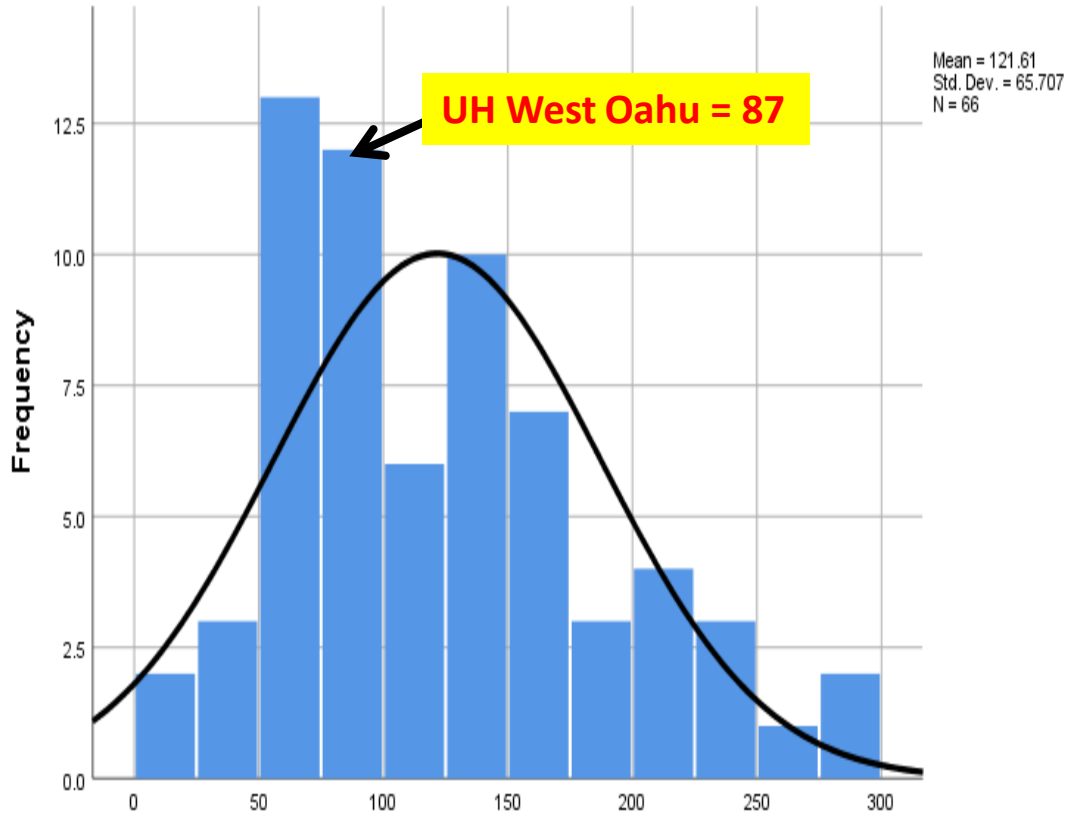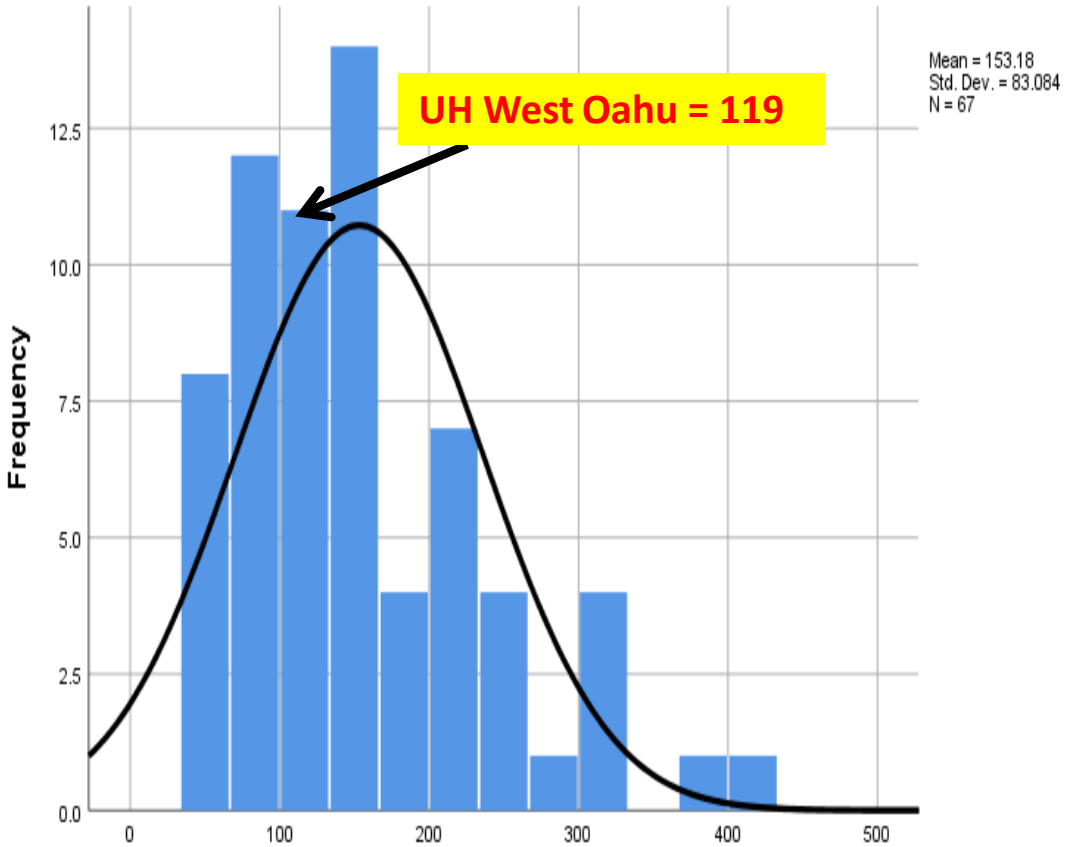Instructional staff on 9 10 11 or 12 month contract-total (SAL2017_IS All full-time instructional staff total)
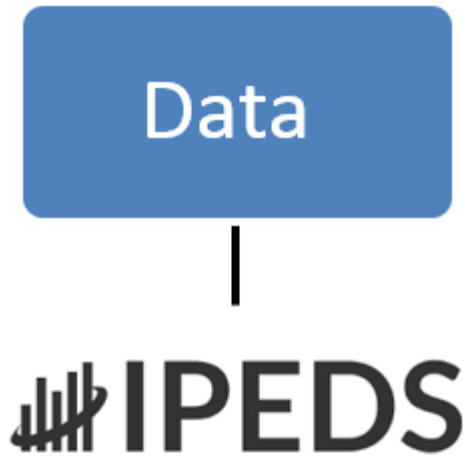
UH West Oahu = 87

Mean = 121.61
Std. Dev. = 65.707
N = 66

Instructional FTE (DRVHR2017)

UH West Oahu = 119

Mean = 153.18
Std. Dev. = 83.084
N = 67

Data

IPEDS

Freshmen Cohort Characteristics
- Retention and graduation rates
- Acceptance rate and admissions yield
- # of Freshmen

Undergraduate Demographics
- # Undergraduates (part-time, transfers, continuing, out-of-state, etc)
- # Bachelor degrees awarded
- # Undergraduates ages 25-64
- % Enrolled in distance education

Institutional Size, Scope, Mission, Budget
- Total Enrollment, BUSA enrollment
- Total revenues, expenses
- Tuition and fees as % of Revenues
- # I-faculty, # of employees
- SSH per faculty
- Expenses per BA completion

Strategic Plan/ KPIs/ Perf. Funding

+ many conversations with faculty, staff, and administration to determine additional parameters...

Data preprocessing

- Considering reliability & validity of data

- Standardization

- Random ordering

- Address outliers (noise handling) & missing data

- Descriptive statistics

- Dimension reduction

Choosing a methodology

- Statistical clustering is the most commonly used methodology in peer selection.

  -Teeter (1984), Brinkman (1987), Christal (1987), Nzeukou & Muntal (2010),

- Clustering is a statistical procedure that combines individual cases in to homogeneous groups, called clusters, so that distances between clusters are maximized and distances within clusters are minimized.

- Several different clustering methods (i.e. hierarchical, two-step)

- Supporting methods to clustering include factor analysis and discriminant function analysis

Data management tasks

- Choose clustering procedure
  - Hierarchical Agglomerative Clustering (UH Manoa)
  - 2-step sequential (UH West Oahu)

- Choose method for forming groups
  - Between-Groups Linkage (HAC) (UH Manoa)
  - Within-Groups Linkage (HAC)
  - Nearest Neighbor/Furthest Neighbor (HAC)
  - Bayesian Information Criterion (2SS)
  - Akaike Information Criterion (2SS) (UH West Oahu)

- Choose statistic to measure distance
  - Euclidian
  - Log-likelihood (UH Manoa & UH West Oahu)
  - Pearson correlation
  - Cosine

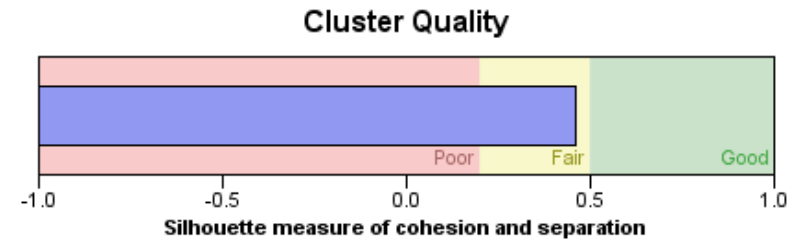# IPEDS Cluster Analysis Results

A two-step cluster analysis was employed with a fixed seven cluster group solution.
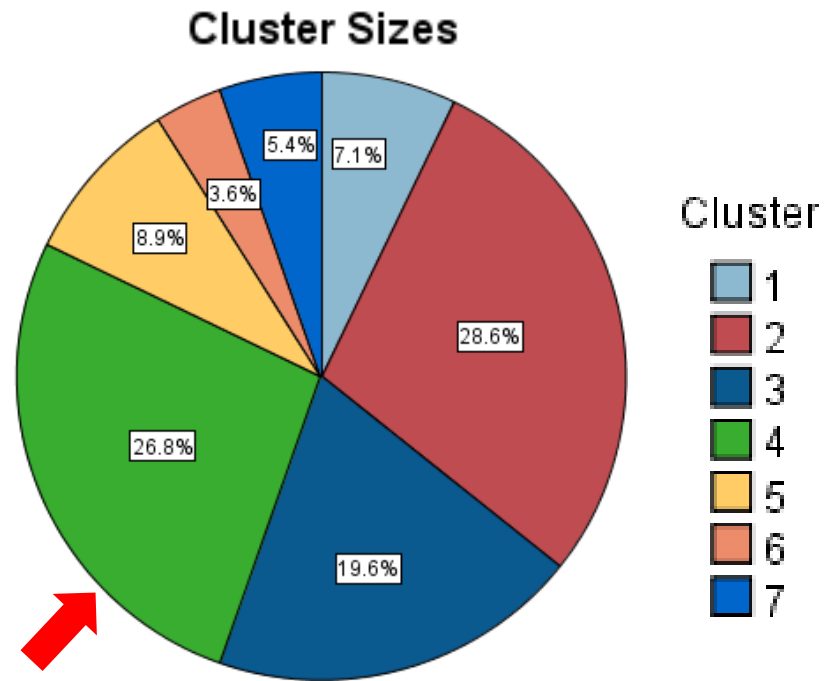
Cluster Sizes

UH West Oahu's
Cluster Group #4, N=15

Cluster Quality

Size of Smallest Cluster	2 (3.6%)	
Size of Largest Cluster	16 (28.6%)	
Ratio of Sizes: Largest Cluster to Smallest Cluster	8.00	

Variable influence

Ten data elements were chosen in the areas of freshmen cohort performance, institutional scope and mission, and institutional size and budget. The graph below measure the influence of each IPEDS variable in determining cluster group membership.

Predictor Importance using SPSS Cluster Evaluation Algorithm
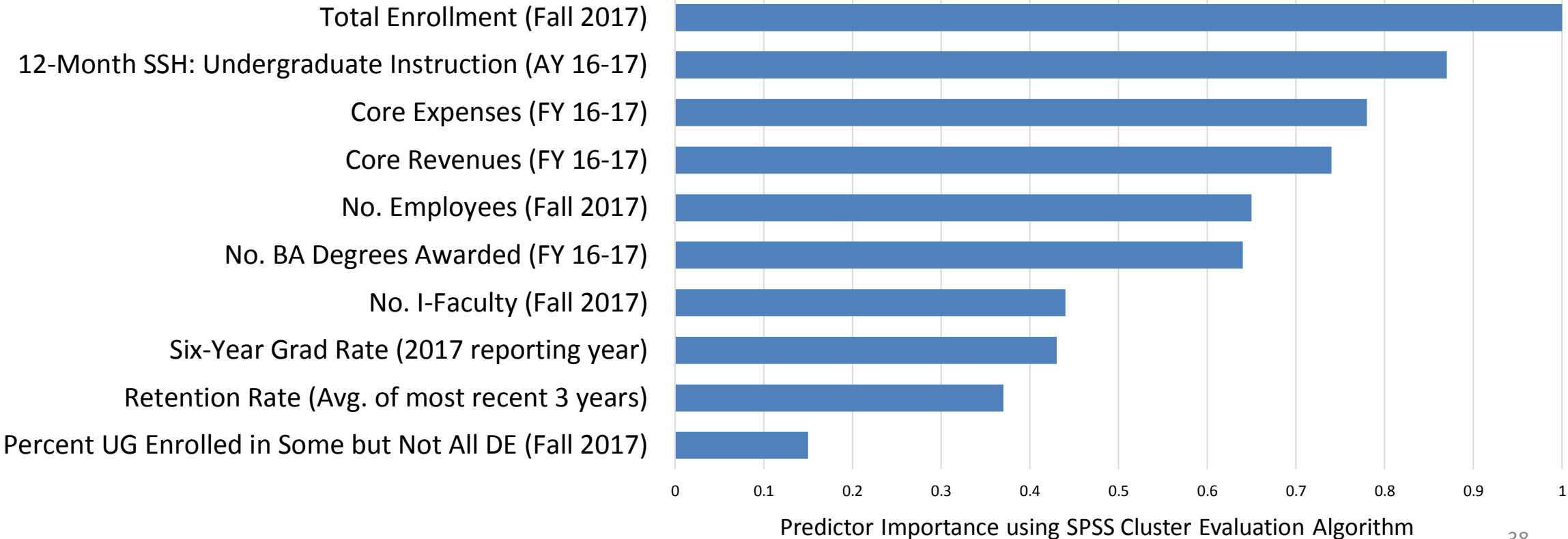
Cluster Group #4 relative and absolute box plots

Cluster Group #4 rank ordering

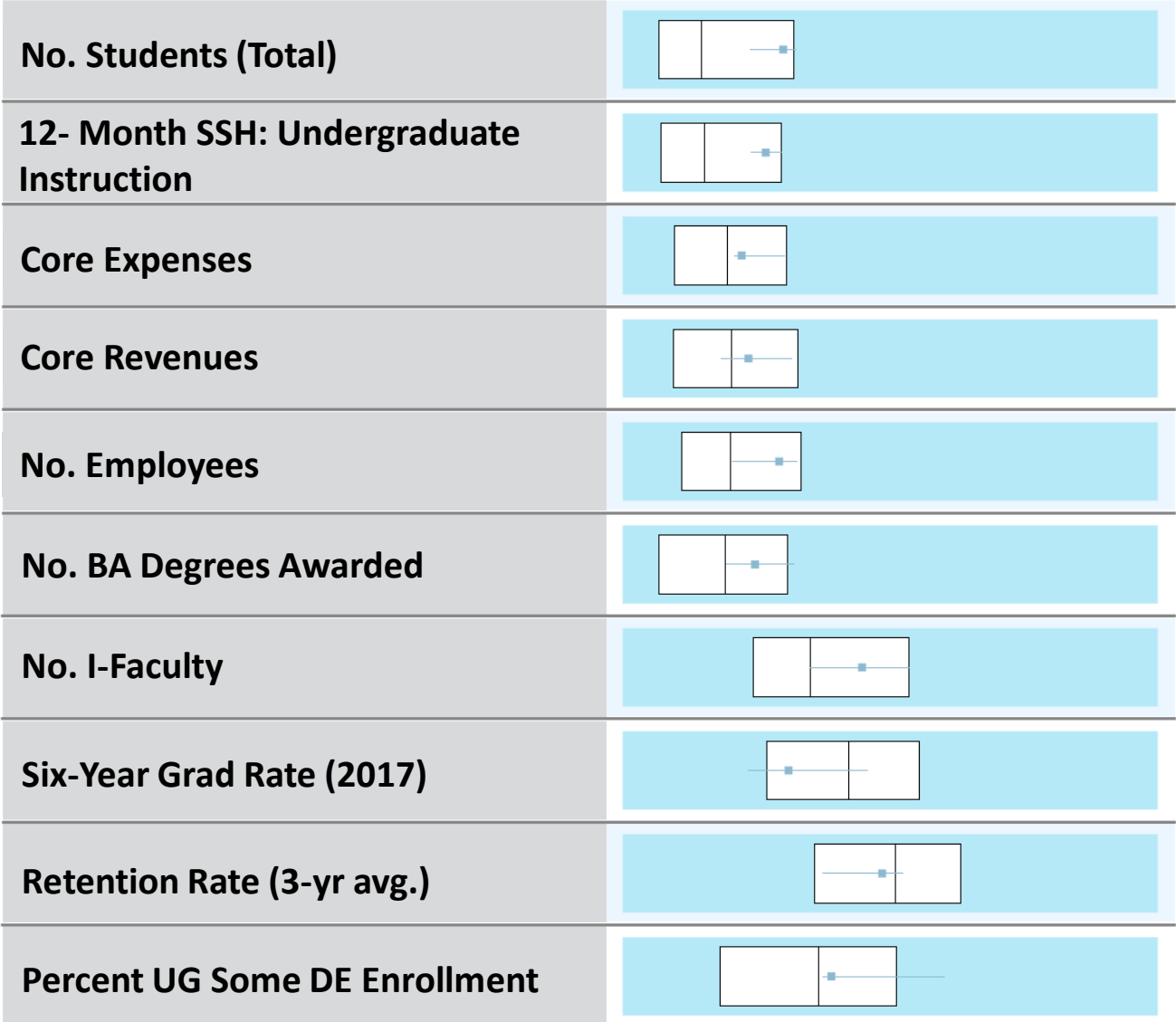*Final step:* Schools in Cluster Group #4 were separated in to two groups: WUE member schools and non-WUE schools. Next, schools were rank-ordered according to 6-year graduation rates. All WUE member schools were admitted to the peer group. Non-WUE schools with less than 30% six-year graduation rates were excluded.

Institution Name	Carnegie Class.	State	WUE Member	Six-Year Graduation Rate ▼
Fort Lewis College	Arts &Sciences	Colorado	Yes	40
University of Hawaii-West Oahu	Diverse Fields	Hawaii	Yes	39
Lewis-Clark State College	Diverse Fields	Idaho	Yes	23
Nevada State College	Diverse Fields	Nevada	Yes	16

Non-WUE Schools

Institution Name	Carnegie Class.	State	WUE Member	Six-Year Graduation Rate
Lander University	Diverse Fields	South Carolina	No	42
Shepherd University	Arts & Sciences	West Virginia	No	42
University of South Carolina-Aiken	Diverse Fields	South Carolina	No	41
Indiana University-Kokomo	Diverse Fields	Indiana	No	39
University of Wisconsin-Parkside	Arts & Sciences	Wisconsin	No	34
University of Arkansas at Pine Bluff	Diverse Fields	Arkansas	No	29
West Virginia State University	Arts & Sciences	West Virginia	No	26
Rogers State University	Diverse Fields	Oklahoma	No	25
Shawnee State University	Diverse Fields	Ohio	No	24
Kentucky State University	Diverse Fields	Kentucky	No	21
University of Maine at Augusta	Diverse Fields	Maine	No	15

New Peer Group

1. Fort Lewis College*^w
2. Indiana University-Kokomo
3. Lander University*
4. Lewis-Clark State College*w
5. Nevada State College*w
6. Shepherd University^
7. University of Hawaii-West Oahu*w
8. University of South Carolina-Aiken*
9. University of Wisconsin-Parkside*^

*indicates Title III eligible institutions
^ indicates Carnegie Classification: Arts & Sciences institutions
w indicates WUE member institution

New Peer Group versus Old Peer Group (2017-18 data)

	UH WEST OAHU	OLD PEER AVERAGE	NEW GROUP AVERAGE
Total Enrollment	**3,082**	4,175	**3,530**
Number of I-Faculty (9,10,11,12 mo.)	**87**	153	**137**
12-month Total SSH per I-Faculty FTE	**728**	648	**682**
Bachelors Awarded	**623**	882	**585**
4 year Grad Rate	**17**	24	**17**
5 year Grad Rate	**33**	38	**31**
6 year Grad Rate	**39**	43	**35**
Retention Rate	**65**	71	**64**
Core Expenses (in millions)	**$49**	$76	**$47**
Core Expenses per Completion (in thousands)	**$78**	$119	**$82**

www.tinyurl.com/uhwo2019peers

- Public, interactive dashboard for conducting benchmarking analysis.

- Allows comparison of UH West Oahu with 67 similarly sized, public baccalaureate colleges as well as limiting comparisons to the new peer group.
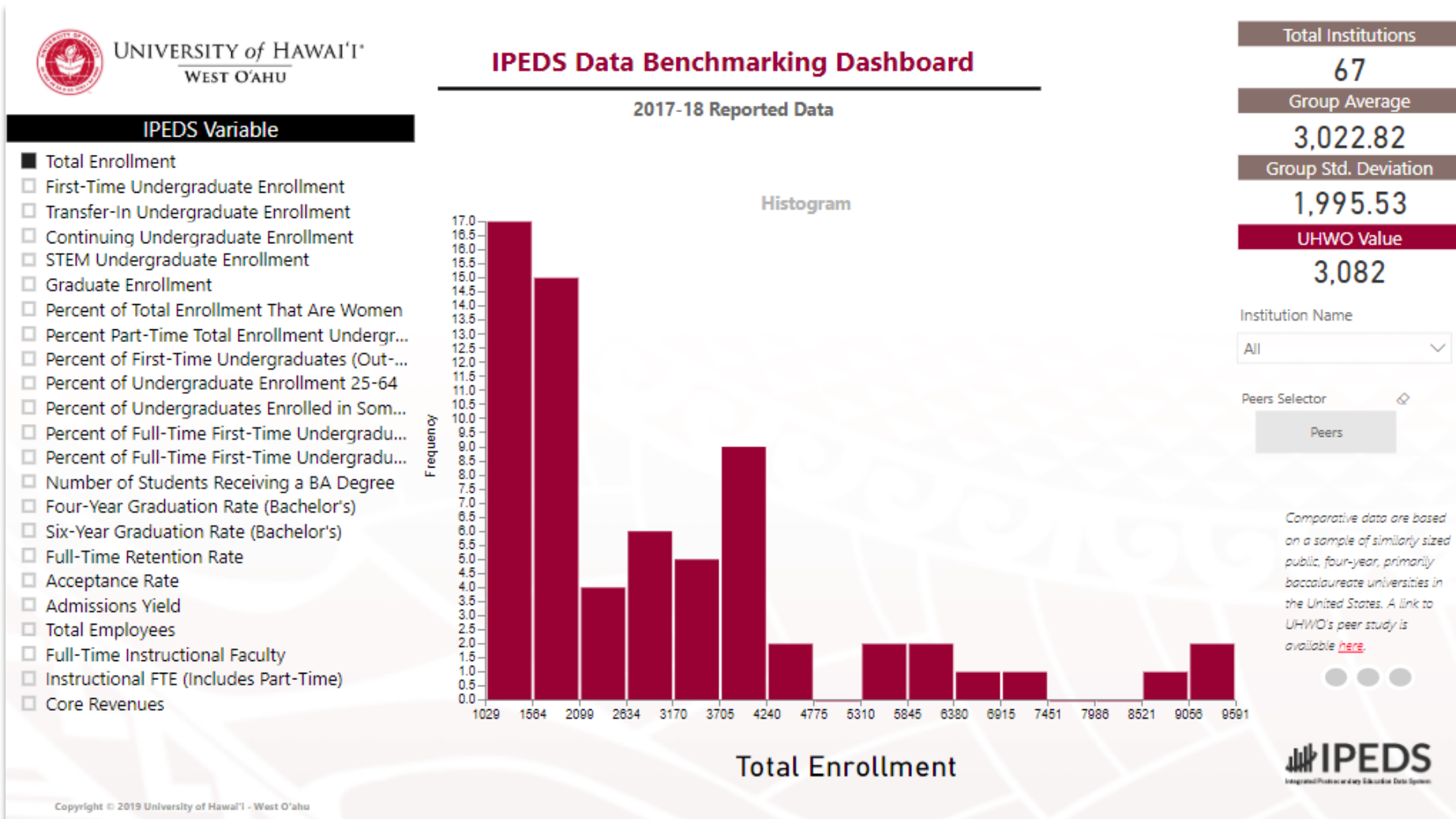
Questions?

Dr. Jeffrey Moniz, Vice Chancellor for Academic Affairs
jmoniz@hawaii.edu

Dr. Alan Rosenfeld, Associate Vice Chancellor for Academic Affairs
alan3@hawaii.edu

John Stanley, Director of Institutional Research
jstanley@hawaii.edu