

Improvement in Action; Influencing an On the Go Data Culture

Dr. Dan Stroud, Dr. Brooke DePue, & Mr. Jarvis Hampton



Learning Outcomes

1. Participants in this session will **understand** the growing evolution of Data Visualization.
2. Participants in this session will **receive** information regarding descriptive tools that can shape their future Data Visualization efforts at their institutions.
3. Participants in this session will **recognize** new ways to promote and improve distribution/usage of dashboards created to strengthen institutional decision-making.
4. Participants in this session will **collaborate** on both training and marketing concepts designed to improve data management on their campuses



Overview

- Culture of Institutional Effectiveness from 1950 until now → entering a new era
- Culture of Institutional Effectiveness at WT's campus
 - Table Discussion
- Connecting the Dots
 - Assessment and Strategic Planning
 - Training for a Data Culture
 - Going Beyond – Private Dashboards
- Improvements Seen



Culture



Institutional Research's Past Roles

**Table 8.1. The Evolution of Institutional Research:
Adapting to Institutional Challenges**

	<i>External Conditions</i>	<i>Management Press</i>	<i>Organization and Governance</i>	<i>Performance Focus</i>	<i>Primary Role of IR</i>
1950	Growth and expansion	Direction and accountability	Formal and collegial	Resources	Descriptive, developmental
1960	Disruption and demands	Order, control, and access	Political and open systems	Reputation	Analytical, comparative
1970	Economic recession	Efficiency and market orientation	Managerial and market	Results Productivity and efficiency	Evaluative, quantitative
1980	Constraint and quality	Reduction Reallocation and retrenchment Effectiveness and quality	Organized anarchy Cultural and conglomerate	Results: Goal achievement Student performance Structure and reengineer	Analytical, comparative Planning and policy analysis
1990 2000	Educational challenges and new constituents	Redesigning institutions	Entrepreneurial networks Alliances and joint ventures Virtual organizations	Redefine industry and university role Redirect mission and relationships Reorganize process and structure Reform workplace culture	Knowledge industry analyst Anticipatory, proactive



Entering a New Era

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2010 2025	—————	—————	—————	—————	Data Management, Intelligence, Visualization and Instruction



Culture of IE at WT

- Prior to Fall 2018 (the dark ages)



Culture of IE at WT

WEST TEXAS A&M UNIVERSITY															
Fall 2022 - Student Summary Statistics															
September 7, Census															
	2021	2022 Total				2021	2022 Male				2021	2022 Female			
Classification	No.	No.	% Total	Diff	% Chg	No.	No.	% Total	Diff	% Chg	No.	No.	% Total	Diff	% Chg
Freshmen	1,512	1,494	16.11	-18	-1.19	652	714	7.70	62	9.51	860	780	8.41	-80	-9.30
Sophomore	1,122	1,104	11.90	-18	-1.60	487	454	4.89	-33	-6.78	635	650	7.01	15	2.36
Junior	1,853	1,820	19.62	-33	-1.78	690	675	7.28	-15	-2.17	1,163	1,145	12.35	-18	-1.55
Senior	2,559	2,507	27.03	-52	-2.03	1,034	1,021	11.01	-13	-1.26	1,525	1,486	16.02	-39	-2.56
Total Undergraduate	7,046	6,925	74.66	-121	-1.72	2,863	2,864	30.88	1	0.03	4,183	4,061	43.78	-122	-2.92
2nd Bachelor's	94	99	1.07	5	5.32	37	36	0.39	-1	-2.70	57	63	0.68	6	10.53
Master's Admitted	2,259	2,068	22.30	-191	-8.46	911	794	8.56	-117	-12.84	1,348	1,274	13.74	-74	-5.49
PACE/Cert/Non Deg	62	76	0.82	14	22.58	14	21	0.23	7	50.00	48	55	0.59	7	14.58
Doctoral Pending	0	0	0.00	0	N/A	0	0	0.00	0	N/A	0	0	0.00	0	N/A
Doctoral Admitted	69	87	0.94	18	26.09	25	32	0.35	7	28.00	44	55	0.59	11	25.00
Master's Pending	51	20	0.22	-31	-60.78	26	10	0.11	-16	-61.54	25	10	0.11	-15	-60.00
Total Graduate	2,441	2,251	24.27	-190	-7.78	976	857	9.24	-119	-12.19	1,465	1,394	15.03	-71	-4.85
WTAMU Total	9,581	9,275	100	-306	-3.19	3,876	3,757	40.51	-119	-3.07	5,705	5,518	59.49	-187	-3.28
	2021	2022 Total				2021	2022 Male				2021	2022 Female			
Department/Colleg	No.	No.	% Total	Diff	% Chg	No.	No.	% Total	Diff	% Chg	No.	No.	% Total	Diff	% Chg
AGS	986	1,050	11.32	64	6.49	344	373	4.02	29	8.43	642	677	7.30	35	5.45
CP	79	73	0.79	-6	-7.59	37	32	0.35	-5	-13.51	42	41	0.44	-1	-2.38
LEES	498	459	4.95	-39	-7.83	184	180	1.94	-4	-2.17	314	279	3.01	-35	-11.15



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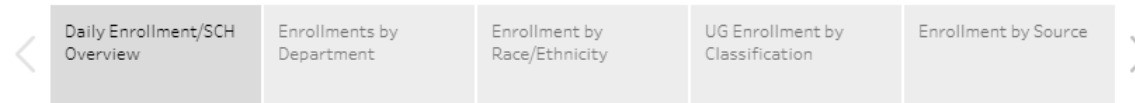
Culture of IE at WT

- Prior to Fall 2018 (the dark ages)
- First Visualizations

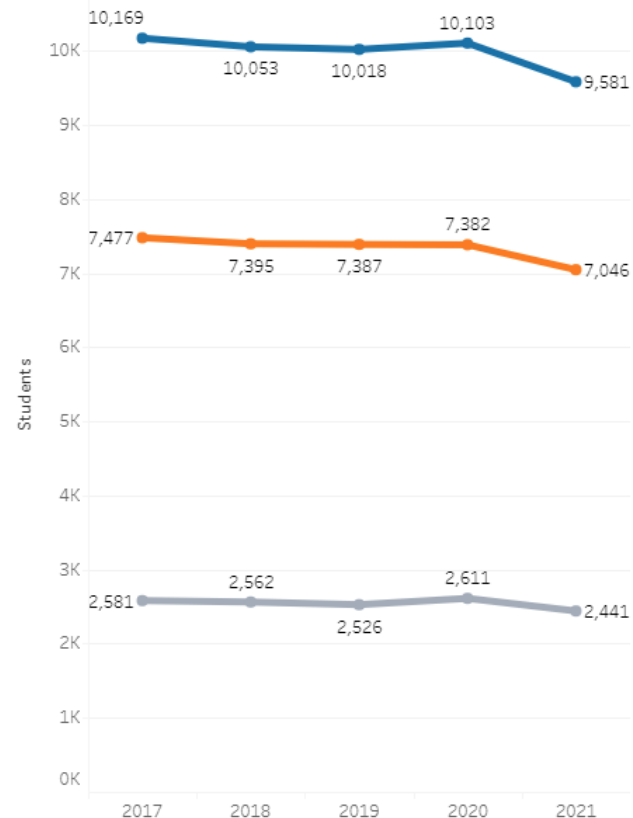


Culture of IE at WT

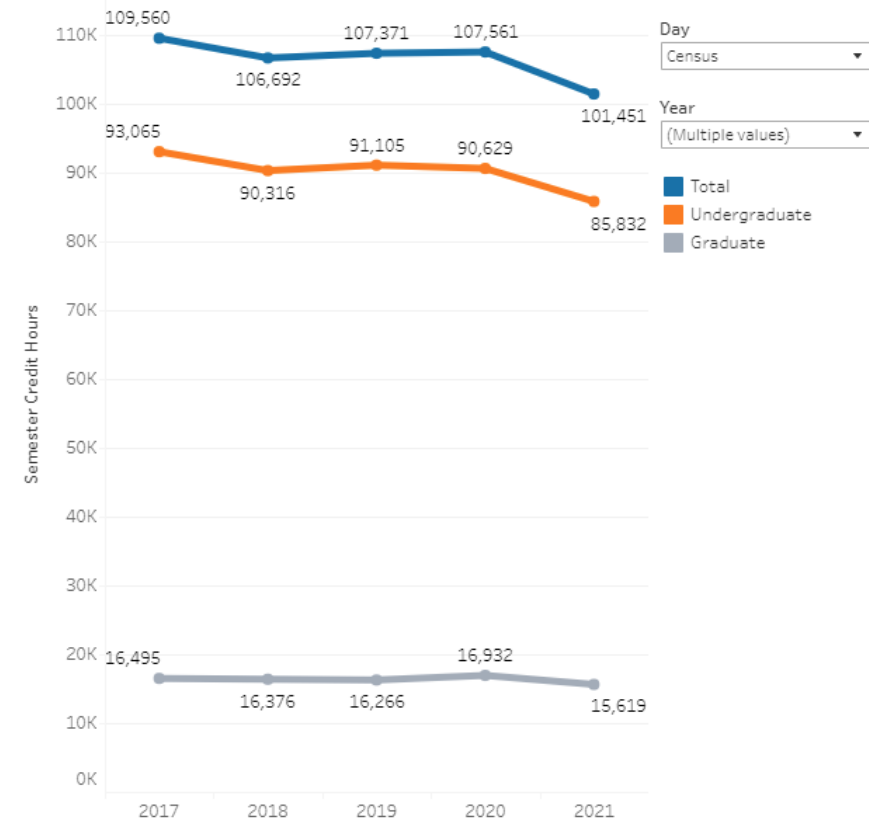
Enrollment Dashboard



Enrollment by Academic Level



SCH by Academic Level



Culture of IE at WT

- Prior to Fall 2018 (the dark ages)
- First Visualizations
- Campus struggles with shift in delivery

Changes in Structure IR to IE

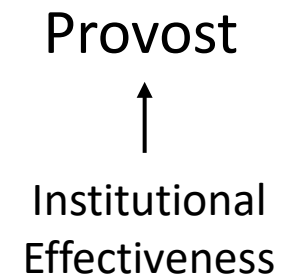
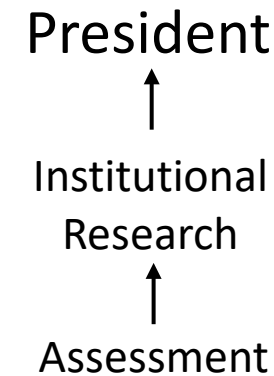
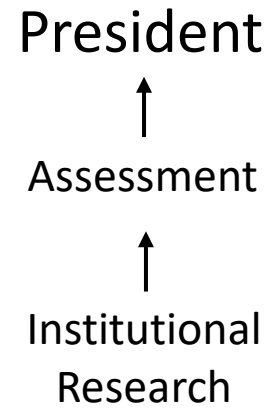
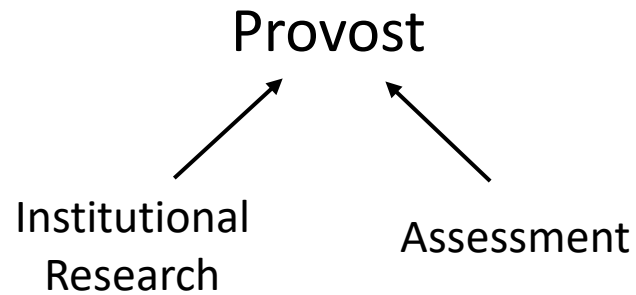


Table Discussion

What is your office doing to impact change on your campus?



Connecting the Dots



Assessment and Strategic Planning



Defining Improvement

Feeding the pigs ... or the Buffaloes?

Fact

**“ A pig never fattens because it was weighed”
-conversely**

**“Students never learn more simply by being
assessed”**

Fulcher, et al (2014)



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But Why Improvement?

Linda Suskie (2018) suggests that building a culture of assessment or even improvement doesn't go far enough. She posits that we should be "building a culture of evidence and betterment which informs change... in curriculum, teaching/learning strategies, learning goals, co-curricular experiences, and even support systems.

WT Breakdown of Institutional Effectiveness

Office of Assessment

1. What have we been doing (Measurement)
2. What will we do to improve in this area? (Planning)
3. Is there real growth happening? (Change)

Office of Institutional Research

1. Identify, collect, analyze and report information needs
2. Plan and Evaluate
3. Serve as stewards of data information
4. Educate information producers, users and consumers

WT Breakdown of Institutional Effectiveness

1. Institutional Research feeds Assessment
2. Assessment feeds Planning
3. Planning seeks Change
4. Change seeks Improvement

Institutional Research + Assessment =

Improvement in Action

Can Strategic Planning = Improvement?

A Provost's Concept

- Ask WTAMU Non-Academic Units to build objectives that fit into the University's Strategic Plan (Includes 7 goals and 22 Strategies)
- Units are expected to provide Action Plans, Key Performance Metrics, Expected Outcomes, and Annual Analyses that contribute to aspects of the Strategic Plan
- Units report on progress of their of their goals and objectives (strategies) on an annual basis.
- Without discussing in general terms, this is actually _____?

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- Over the longitudinal term of the Strategic Plan, this can lead to _____ ?

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WT Institutional Effectiveness

A Three Pronged Approach

1. As a Resource
2. As an Assessor, Facilitator, Planner
3. As a Campus-wide Trainer ???

Training for a Data Culture



Training for a Data Culture – Year 1

- Realizations:
 - Current Dashboard Utilization was low
 - Request for data shown in dashboard
 - Realization people don't know how to navigate the dashboard filters
- Changes:
 - Create in house training videos (COVID Inspired)
 - Learn about marketing



WT Process – 1st Video

1. Dashboard training video's increased engagement
 - Enrollment Dashboard
 - Prior to YouTube no one wanted to use the dashboards
 - After videos (slow climb
 - Day 1 – 11 Views
 - Day 5 – 17 Views
 - Day 12 – 33 Views
2. Improvement Narrative Videos
 - Emailed to a select 69 People (5 months prior to due date)
 - Part 1 – 76 Views
 - Part 2 – 53 Views
 - Additional views 1 week before:
 - Part 1- 17 more views
 - Part 2- 10 more views
3. Strategic Planning Videos

E-mail Sample



Thu 7/15/2021 6:43 AM

DePue, Brooke

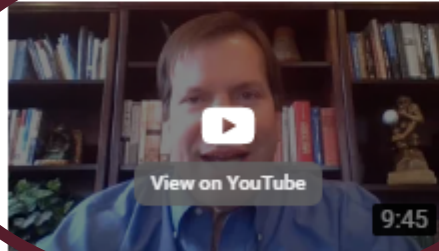
Summer II 2021 - Day 4 Stats

To: Hampton, Jarvis



Summer II 2021 - day 4 SCH.xlsx
51 KB

Please see attached for the Day 1 numbers, or you can view the Enrollment dashboard: (<http://analytics.wtamu.edu/>). Please make sure to check out our [YouTube video](#) that will walk you through the enrollment dashboard and explain each element of the dashboard and how to use it. Reminder, the dashboard updates every day during the first 5 class days of the summer semester, even on days we do not send out a spreadsheet.



Don't forget to bookmark our Enrollment (<http://analytics.wtamu.edu/>) and Semester Credit Hour by College/Department (<http://analytics.wtamu.edu/CourseSCH.html>) Dashboards. The data from both of these dashboards can be download in a variety of formats by using the tool at the bottom of the dashboard circled below.

Phase 2

- Strategic Planning Goal – Data to the People
- Training provided on how to access dashboards
- Still need to engage people who don't need dashboards
- Data Bites Created



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Data Bites

- UNF Presentation by Amanda Kulp on Data Bytes at AIR Conference
 - Mission – to create small bite sized informative data pieces from complex statistical analysis to help people further understand, engage and seek data
- Development and Distribution of Data Bites at WT
 - Supporting our Strategic Planning Initiation:
 - Data to the People



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Data Bites

How Does Dual/Transfer Credit Affect the FTIC Profile?

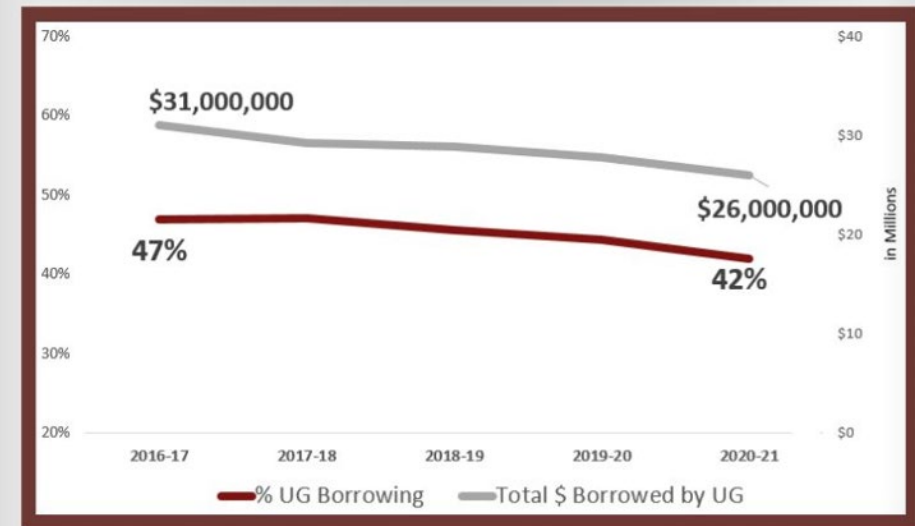


of First-Time, Full-Time
in College Students
Come with Credits
(Fall 2021 Data)



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Less Debt for WT Students



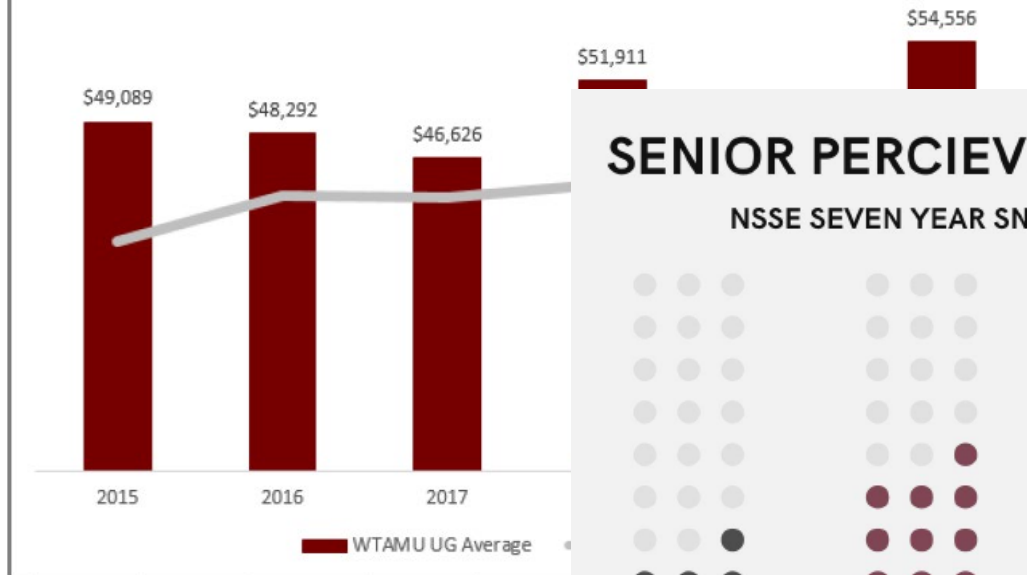
Undergraduate WT Student Debt Trends have been decreasing over the past 5 years by Millions

Data Bites

Employment Earnings for Our Bachelors' Graduates has Steadily Remained Above the National Average

(Data from TWC, Walk Cards and NACE)

(Data Reported in NACE Years - ex: 2020 = August '20, Dec '20, May '21)



SENIOR PERCIEVED GAINS

NSSE SEVEN YEAR SNAPSHOT

NSSE
national survey of
student engagement
*7 Year Averages
2016-2022

76%

Communication

- Critical Analysis
- Working with Others
- Clarity & Effectiveness
- Clear & Effective Speech

69%

Values & Ethics

- Diversity & Inclusion
- Informed & Active Citizenship
- Values & Ethics

64%

Real World Application

- Job Knowledge & Skills
- Problem Solving
- Numeric/Statistical Analysis



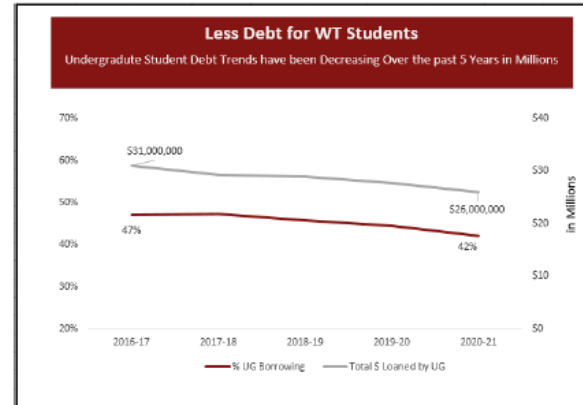
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Behind the Bite

Data Bite # 6 – Student Debt Trend



Reduction of Student Debt:

All Undergraduates :

Progress on all measures - Number of students borrowing declined 3 straight years. % of student body declined and average amount borrowed declined.

Academic Year	Total \$ Borrowed by Undergrads (UG)	# UG Borrowers	Total # of UG	% UG Borrowing	Average Amt. Borrowed
2016-2017	\$ 30,784,162	3,902	8,319	46.9%	\$ 7,609
2017-2018	\$ 29,193,695	3,924	8,332	47.1%	\$ 7,440
2018-2019	\$ 28,856,927	3,803	8,345	45.6%	\$ 7,568
2019-2020	\$ 27,755,773	3,681	8,299	44.4%	\$ 7,540
2020-2021	\$ 25,647,967	3,422	8,138	42.0%	\$ 7,495

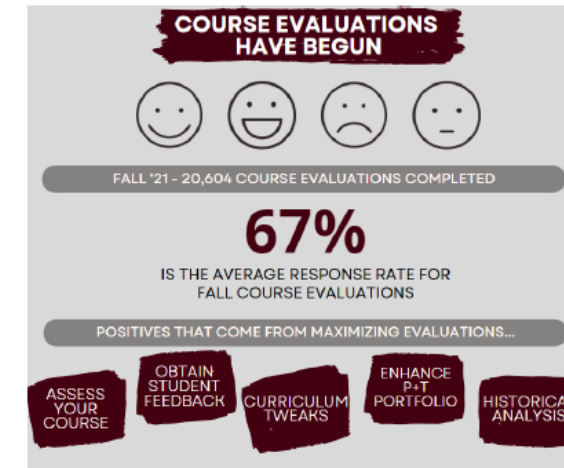
Native Students :

Four straight years' declines in raw number borrowing. Three of four years declines in total borrowed but average student borrowing essentially flat.

Academic Year	# UG Native Students Borrowing	% UG Borrowers	Total \$ Borrowed	Average Amt. Borrowed
2016-2017	2,097	53.7%	\$15,370,221	\$7,330
2017-2018	2,041	52.0%	\$14,338,884	\$7,025
2018-2019	1,928	50.7%	\$13,812,085	\$7,164
2019-2020	1,923	52.2%	\$13,943,066	\$7,251
2020-2021	1,731	50.6%	\$12,257,531	\$7,081

*Green shading indicates progress that year toward reducing student debt

Data Bite # 8 – Course Evaluations



Course Evaluations

WT's course evaluations are processed by a vender, IOTA Solutions. Prior to each semester a schedule is created by Institutional Effectiveness and sent off to IOTA. Each semester there are between 8-10 different sessions based on when a cluster of classes ends.

After the 12th class day an email is sent to all faculty with the link to the Course Evaluation Schedule dashboard - [Institutional Effectiveness \(wtamu.edu\)](https://institutionaleffectiveness.wtamu.edu) . This was created so faculty could check their sessions at the beginning of the semester to ensure that their courses have pulled correctly for evaluation and any needed changes can be done prior to the end of the semester.

Overall engagement from students in completing course evaluations is as follows:

Fall Semester	% Responded	Spring Semester	% Responded
Fall 2021	65.8%	Spring 2022	67.5%
Fall 2020	63.5%	Spring 2021	63.2%
Fall 2019	69.3%	Spring 2020	62.7%
Fall 2018	70.0%	Spring 2019	69.2%
Fall 2017	63.5%	Spring 2018	69.8%
Fall 2016	68.8%	Spring 2017	59.3%
Fall 2015	70.3%	Spring 2016	65.2%

Data Bites

- Significant Engagement from Campus
 - Every bite had requests from faculty and staff for more data specified to their area

	Data Bite 1	Data Bite 2	Data Bite 3	Data Bite 4	Data Bite 5	Data Bite 6
Open Rate %	40.60%	39.90%	41.87%	45.5%	44.0%	43.4%
Open Rate #	580	565	582	1096	1056	1046
Click Rate	24	33	39	203	246	284
Behind the Bite Views	85	152	149	890	1263	1354
Unsubscribes	0	1	0	2	0	0



Data Bite Feedback

“I need some data to determine eligibility for grant funding, I found some in a data bite, I LOVE These”

“This information was a tremendous help for me, currently working with a donor and helped give him more information”

“I LOVE THESE DATA BITES, can you pull the same information for my college to compare?”

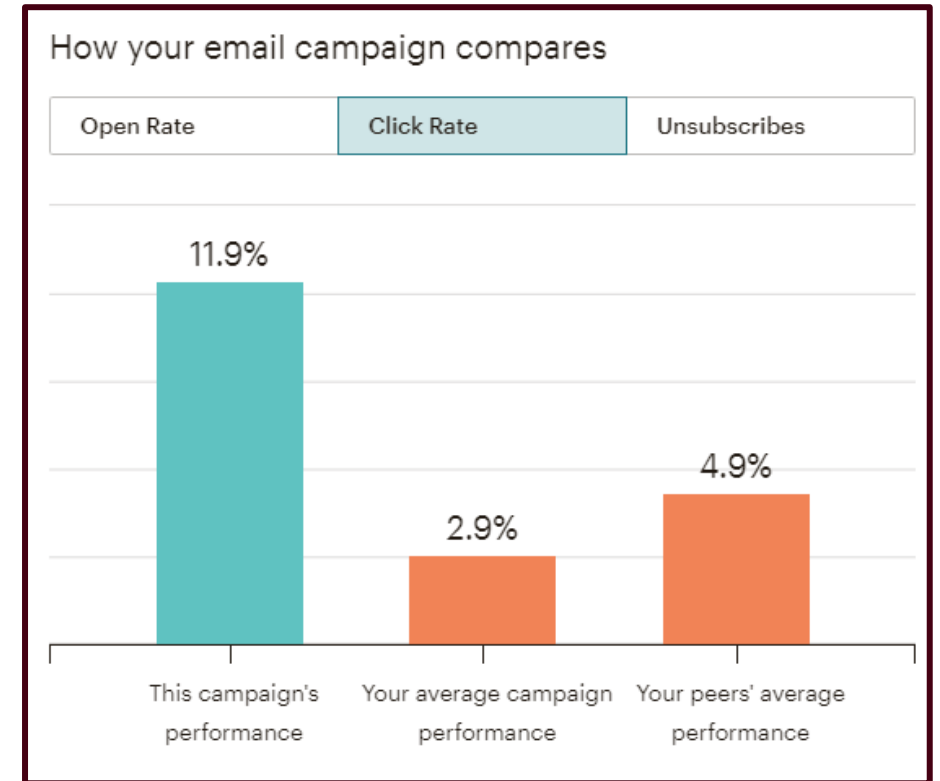
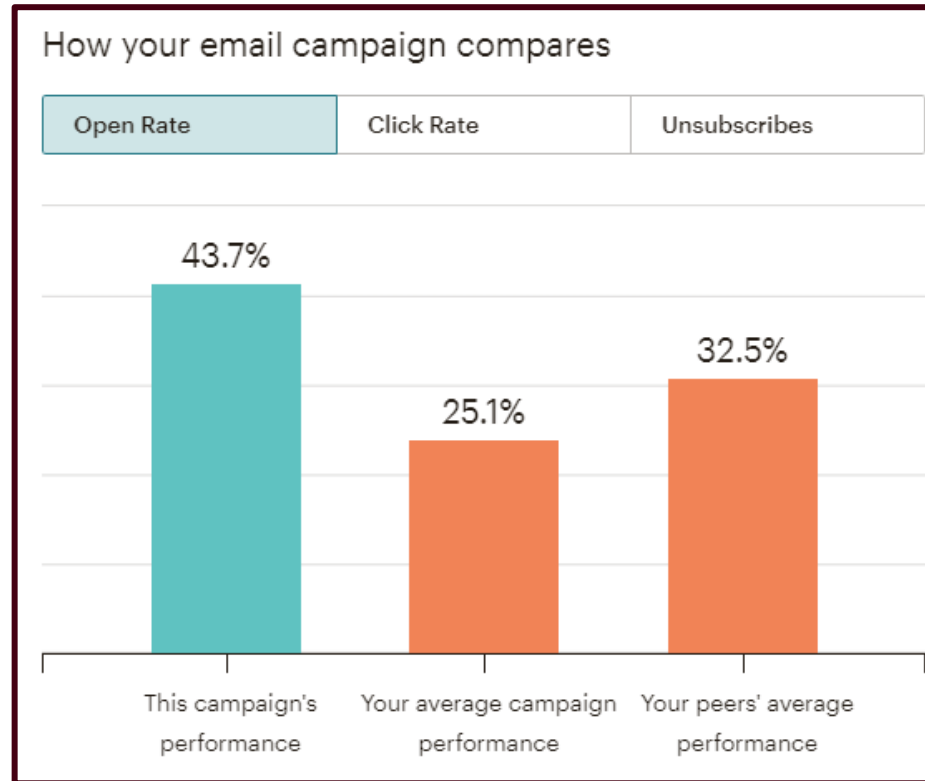
“These are interesting numbers to plug into my press release, thanks!”



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Data Bites

- Comparison of Data Bite emails to other Newsletters sent out through Mail Chimp



WT Process – Realizations

- **Tableau** →
 - Could also use
 - Power BI
 - Create an interactive dashboard through Pivot Tables in Excel
- **Canva** → used for graphics / marketing and mini video intro (Free Online Accounts)
- **Camtasia** → Used for training recording and editing,
 - Could also use:
 - Zoom or Teams recordings (we do this for internal training)



Going Beyond – Private Dashboards



WT Process – Confidentiality

Discovered not all data can go online

- Increased Server utilization
- Creating buy in on the server
 - SACSCOC 5th year report
 - 7 new dashboards developed
 - All Deans, Assistant Deans, Direct Supervisors, VPs and Provost Office added to server

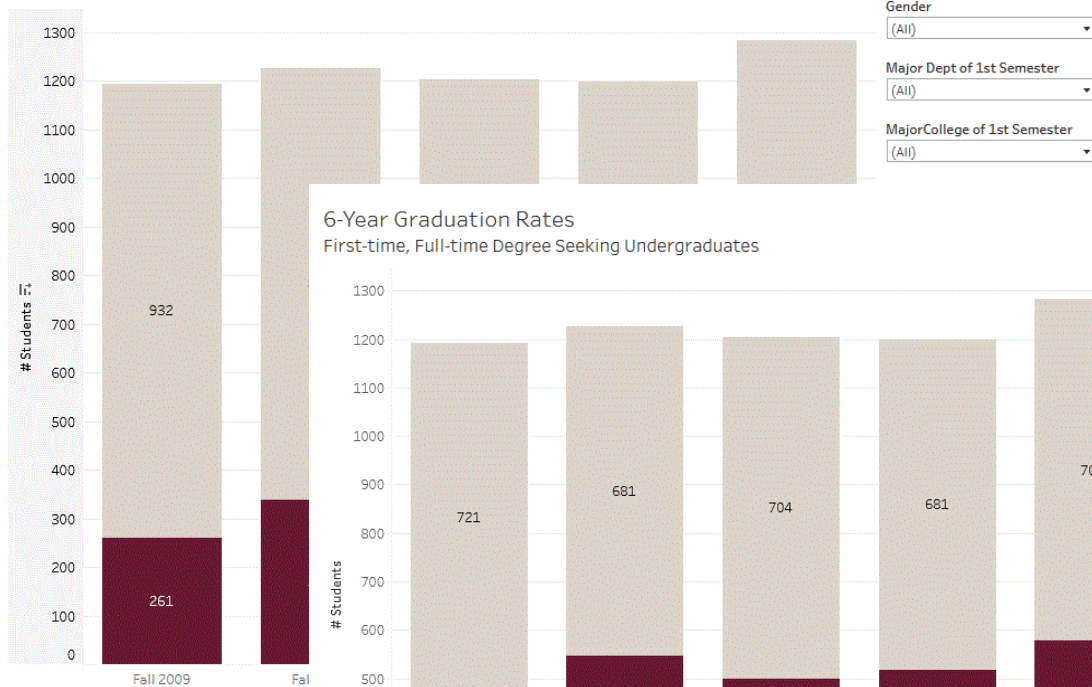


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WT Process – Server Dashboards for 8.1

4-Year Graduation Rates

First-time, Full-time Degree Seeking Undergraduates

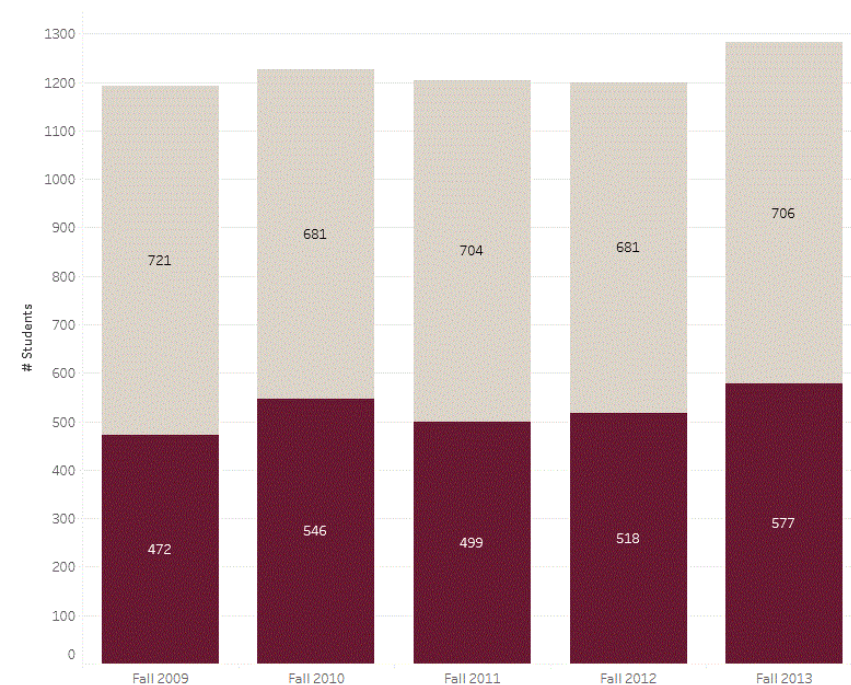


% Graduating in 4 Years



6-Year Graduation Rates

First-time, Full-time Degree Seeking Undergraduates

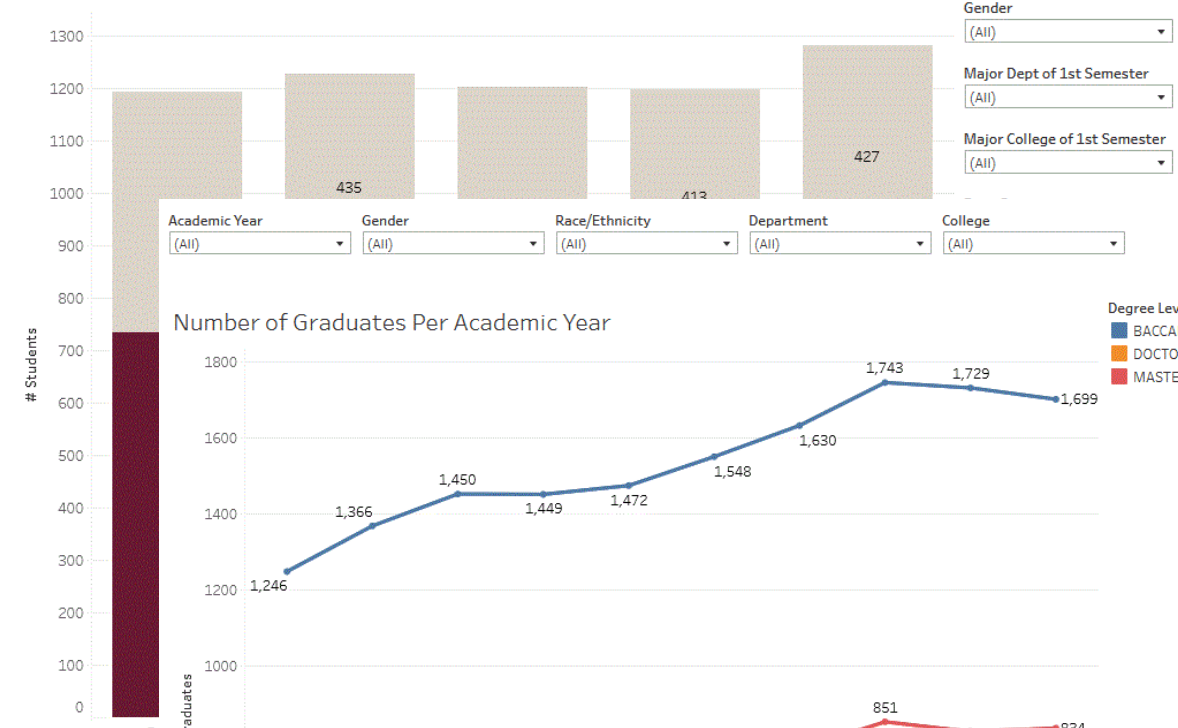


% Graduating in 6 Years

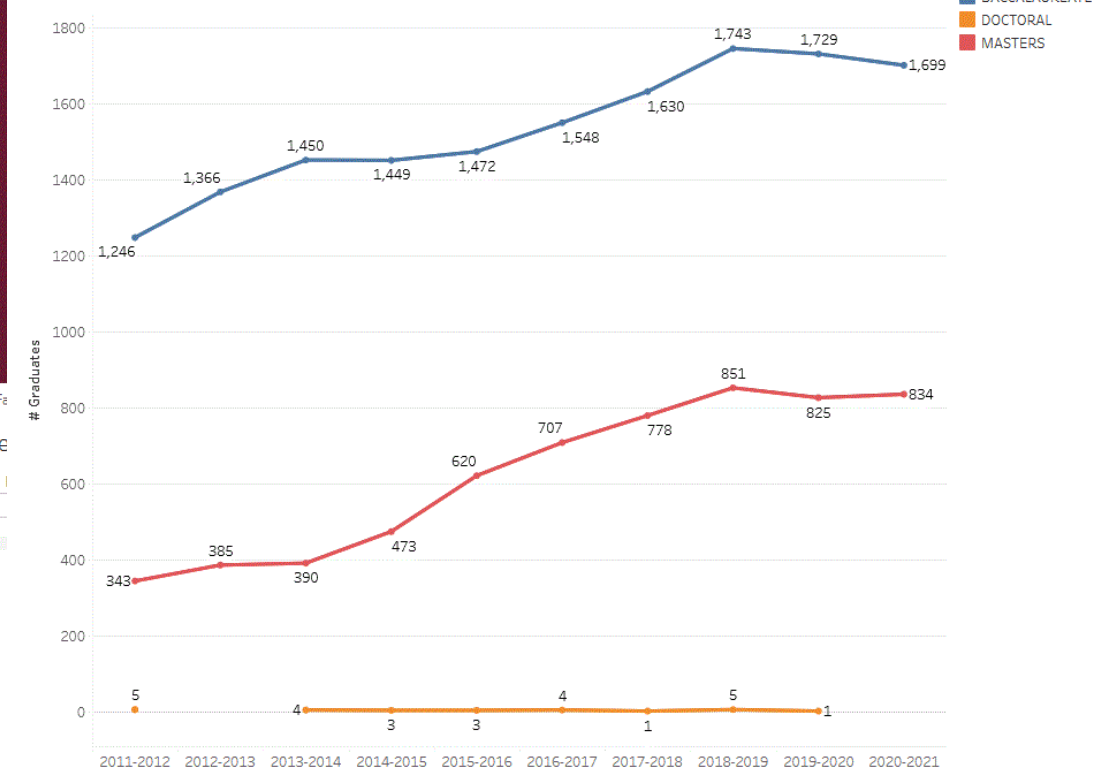


Fall to Fall Retention

First-time, Full-time Degree Seeking Undergraduates



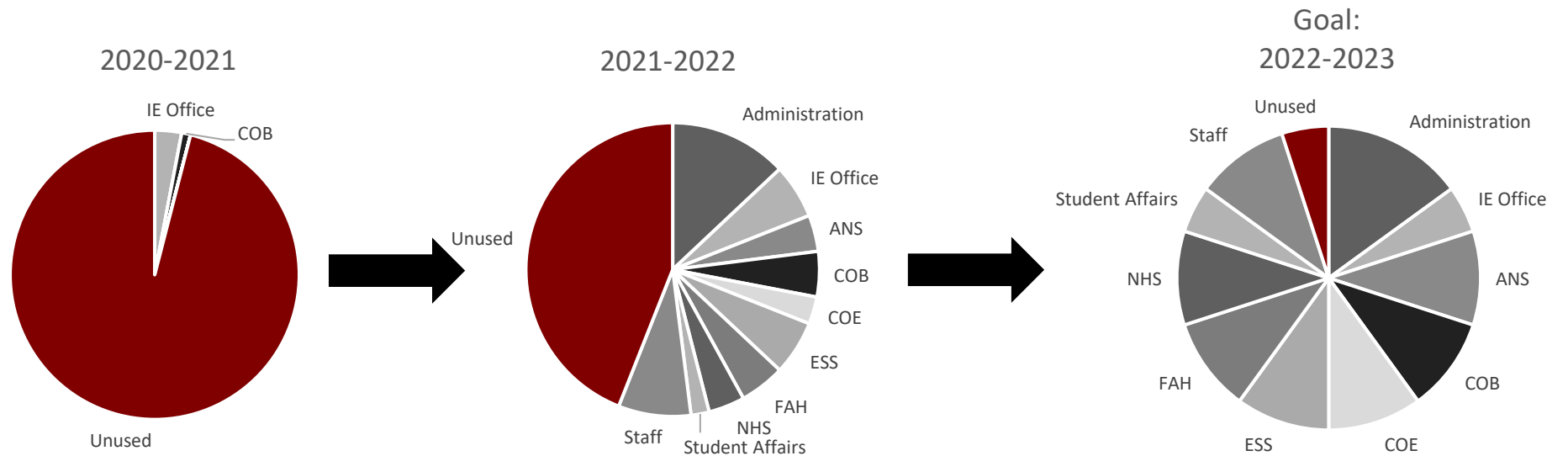
Number of Graduates Per Academic Year



Institutional Effectiveness

Server License Growth Plan

- Increase Server licenses to add college staff members (increase buy in)



Improvements Seen



Improvements

- Introduction to creation of a more data informed culture
- Assessment as an ever-increasing action and planning tool
- Stronger campus-wide data analysis
- Better decision making through assessment of data

Questions?



References

Suskie, L. (2018). *Assessing Student Learning; A Common Sense Guide*. (3rd Edition). Jossey-Bass Publishers.

Fulcher, K.H., Good, M.R., Coleman, C. M., & Smith, K.L. (2014) *A simple model for Learning Improvement: Weigh Pig, Feed Pig, Weigh Pig*. Occasional Paper #23. NILOA, <https://eric.ed.gov/?id=ED555526>.

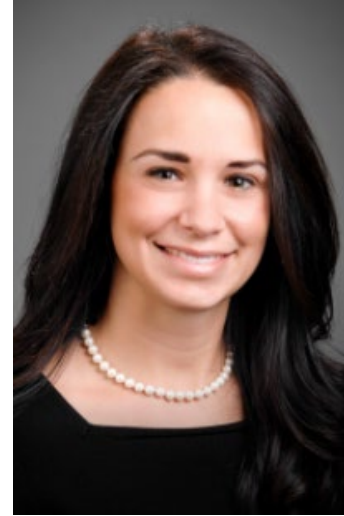


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