

University of Florida

*Putting Data to Use: Using Institutional Data to Understand the Factors Related to Persistence of Online Undergraduate Students and to Make Recommendations for Next Steps for Advisors, Programs, and Administrators*

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**UF** ONLINE  
UNIVERSITY of FLORIDA

UFONLINE.UFL.EDU

# Today's discussion:

- UF Online's history and model
  - Established by statute in 2013; launched in Spring 2014
- Data Conversation
- Strategies
- Next steps

# The UF Online model

- Students learn from the same UF Faculty that teach on campus.
- Students earn the same UF degree that's regionally and nationally accredited.
- We apply the same UF admissions standards.
- UF students – residential and online – are supported with a rich student experience.

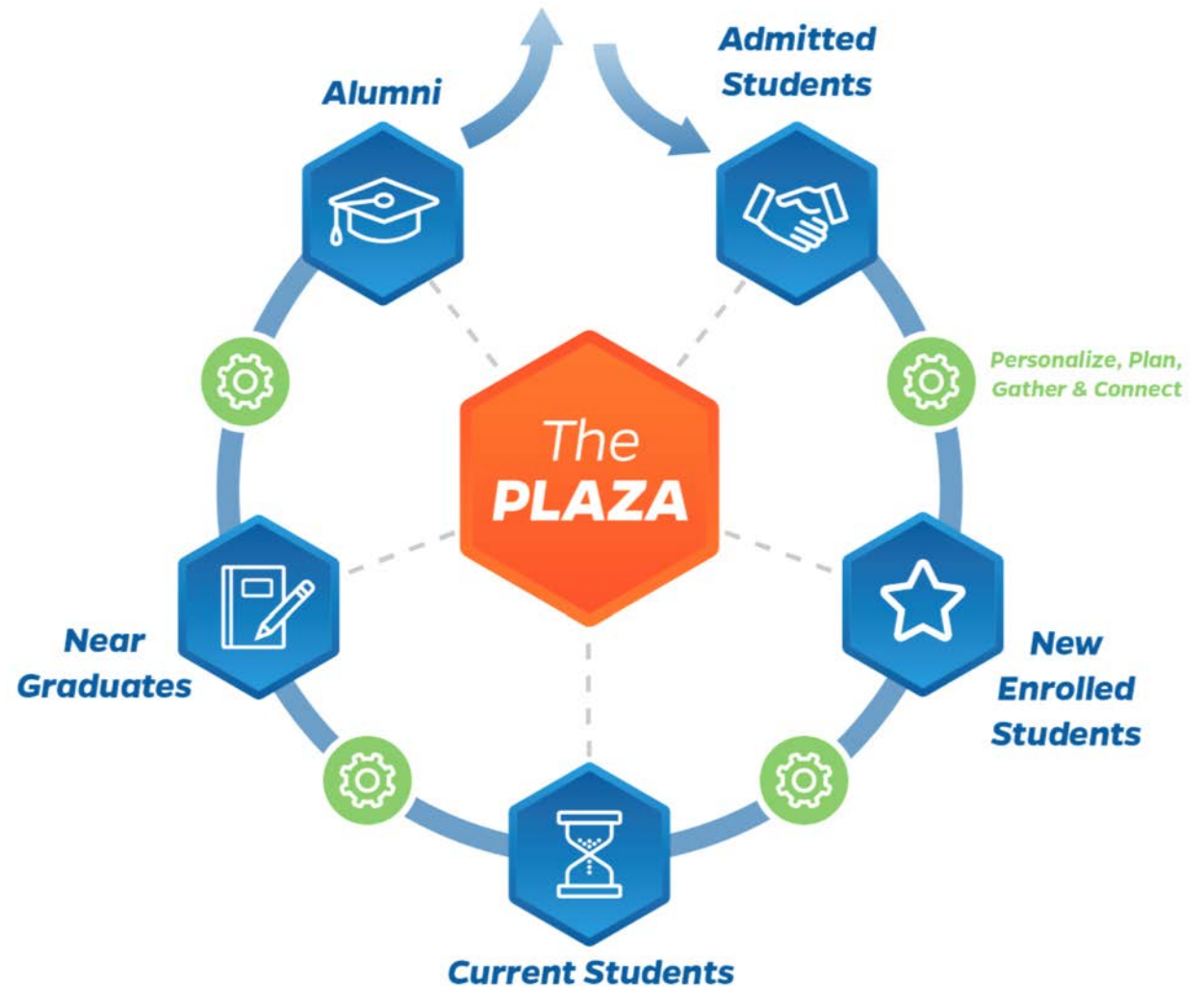
## *Plus*

- A Dedicated Academic Advisor for each online student. All in their own virtual campus.
- Cutting edge courses + experiential learning programs
- Reduced tuition: 75% in state; market rate for out of state (\$500/SCH)
- Reduced fees: only 3 fees: No DL Fee. Students may select an Optional Fee Package.
- A tailored and customized experience for each and every student.

# UF Online

## *Eyeing Student Success through a Dynamic Lens*

- Serving students during their academic stage, life stage.
- Guiding students on their own personalized, academic path.
- Social connections: alumni, their peers, faculty and staff.
- Remaining agile to welcome students back, out, back again.
- Celebrations of academic milestones and graduates.



# UF Online Academic Advising Model

- The role expanded in 2016 and absorbed the duties of the third party Program Coaches
- Maintained the key elements of the UF Online Advising Philosophy
  - Assigned Advisor model
  - Must complete LINKS (online Orientation) prior to first advising session
  - Mandatory advising session prior to first term registration
  - 250:1 advisee to advisor ratio
  - Individual advising sessions with each student
  - Aware of non-traditional population and different needs

# Majors By Start Date

	College Code	Major Code	Major Name (Degree)	Joined UF Online	141	148	151	158	161	168	171	178	181	PaCE Major	Major Count (181)
1	BA	IBA	Business Administration (BS)	141	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	564
2	LS	CJ	Criminology (BA)	141	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	182
3	AG	IS	Environmental Management (BS)	141	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	47
4	HH	HEB	Health Education & Behavior (BS)	141	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	120
5	HH	SPM	Sport Management (BS)	141	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	145
6	LS	BIO	Biology (BA)	148		Y	Y	Y	Y	Y	Y	Y	Y	N	63
7	LS	CSC	Computer Science (BS)	148		Y	Y	Y	Y	Y	Y	Y	Y	Y	156
8	LS	GY	Geology (BA)	148		Y	Y	Y	Y	Y	Y	Y	Y	Y	42
9	LS	PSY	Psychology (BA)	148		Y	Y	Y	Y	Y	Y	Y	Y	N	118
10	JM	TEL	Telecommunication: Media & Society (BS)	148		Y	Y	Y	Y	Y	Y	Y	Y	Y	111
11	LS	APY	Anthropology (BA)	158				Y	Y	Y	Y	Y	Y	Y	58
12	LS	GPY	Geography (BA)	158				Y	Y	Y	Y	Y	Y	Y	28
13	LS	SY	Sociology (BA)	158				Y	Y	Y	Y	Y	Y	Y	122
14	NR	NSG	Nursing (BS)	161					Y	Y	Y	Y	Y	N	166
15	JM	PR	Public Relations (PR)	168						Y	Y	Y	Y	Y	125
15	BA	GBA	Business Administration (BA)	171							Y	Y	Y	Y	201
17	BC	FES	Fire and Emergency Services (BS)	178								Y	Y	N	131
18	AG	MCB	Microbiology and Cell Science (BS)	178								Y	Y	Y	112
19	HP	CMS	Communication Sciences & Disorders (BS)	178*								Y	Y	N	0

\*CMS joined UF Online fall 2017; however, only FTIC students will be admitted in UF Online until fall 2019. Beginning fall 2019 both FTIC and Transfer students will be admitted to CMS in UF Online.

# The Six Core Principles of Improvement by Carnegie Foundation for the Advancement of Teaching

## 1. Make the work problem-specific and user-centered.

It starts with a single question: “What specifically is the problem we are trying to solve?”

## 2. Variation in performance is the core problem to address.

The critical issue is not what works, but rather what works, for whom and under what set of conditions. Aim to advance efficacy reliably at scale.

## 3. See the system that produces the current outcomes.

It is hard to improve what you do not fully understand. Go and see how local conditions shape work processes. Make your hypotheses for change public and clear.

## 4. We cannot improve at scale what we cannot measure.

Embed measures of key outcomes and processes to track if change is an improvement. We intervene in complex organizations. Anticipate unintended consequences and measure these too.

## 5. Anchor practice improvement in disciplined inquiry.

Engage rapid cycles of Plan, Do, Study, Act (PDSA) to learn fast, fail fast, and improve quickly. That failures may occur is not the problem; that we fail to learn from them is.

## 6. Accelerate improvements through networked communities.

Embrace the wisdom of crowds. We can accomplish more together than even the best of us can accomplish alone.

*From: <https://www.carnegiefoundation.org/our-ideas/six-core-principles-improvement/>*

# Program Improvement Cycle





# Data: Lets look at what we measured and why

Remember #4: We cannot improve at scale what we cannot measure.



# Where did we start?

1. Literature review can help inform our analysis.
2. Basic foray into the data.
  - Patterns of progression can be identified for overall UF online students as well as for individual programs.
  - The profiles for active, graduated and dropped students are unique and can help us in the strategizing process.
3. Further analysis
  - Logistic Regression can help identify behavior that also will help in the planning intervention process.

# Key Points from Literature Review

- Online Students – Often non-traditional students. Stoppers, Swirlers, Shoppers, & Succeeders. Impact of life challenges, academic-related skills, student background, and commitment to succeed.
- Previous academic behavior from a community college can predict attrition from four-year online institution (Nadasen & List, 2016). Can learner behavior at current institution predict attrition? Course Efficiency as a factor.
- Importance of first semester GPA

*Allen, Seaman, Poulin, & Straut, 2016; Angelino, Williams, & Natvig; 2007; Berge & Huang, 2004; Carr, 2000; Hart, 2012; Layne, Boston, Ice, Nadasen & List, 2016; Rovia, 2003; Xenos, 2004*

# Data: Effective student success efforts are dependent on having the right information

1. Benchmark
  - A. Establish what student success indicators will be measured.
  - B. Determine starting level.
2. Ask the following questions:
  - A. What does the program/institution have the power to change or do differently?
  - B. What are the key 'watershed' moments that can impact the student success indicators?
  - C. Who can impact these moments? Advisors, staff, faculty, peers?

# Data

## Data Collection:

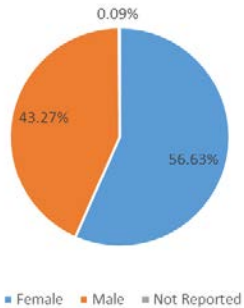
- All admissions data & student demographics
- Student grades & academic progression

## Analysis:

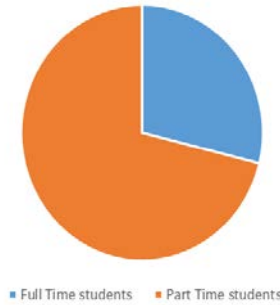
- Individual student progression
- Program
- Groups of Students

# Snapshot of UF Online Students – Spring 2018

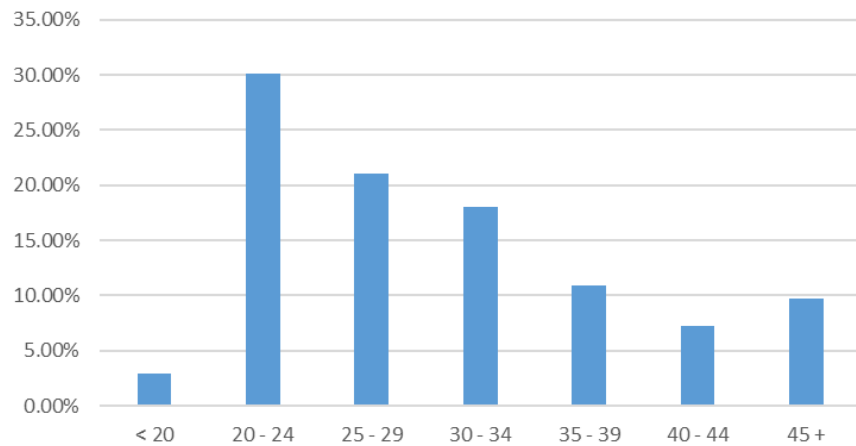
Gender of UF Online Students



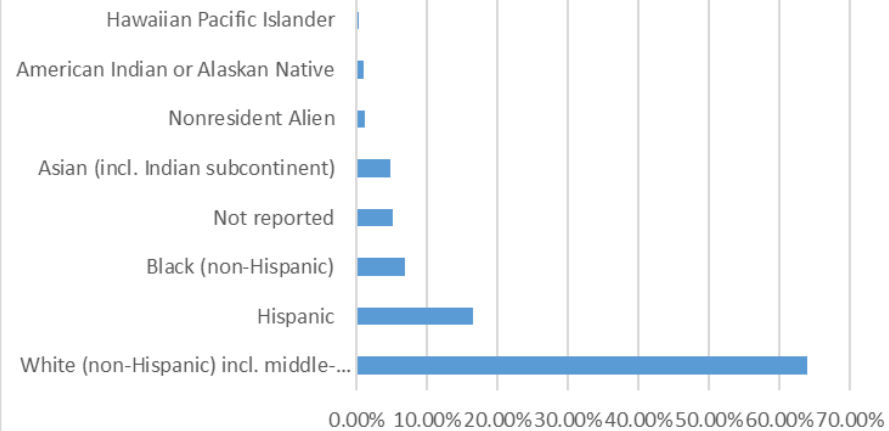
Full & Part time students



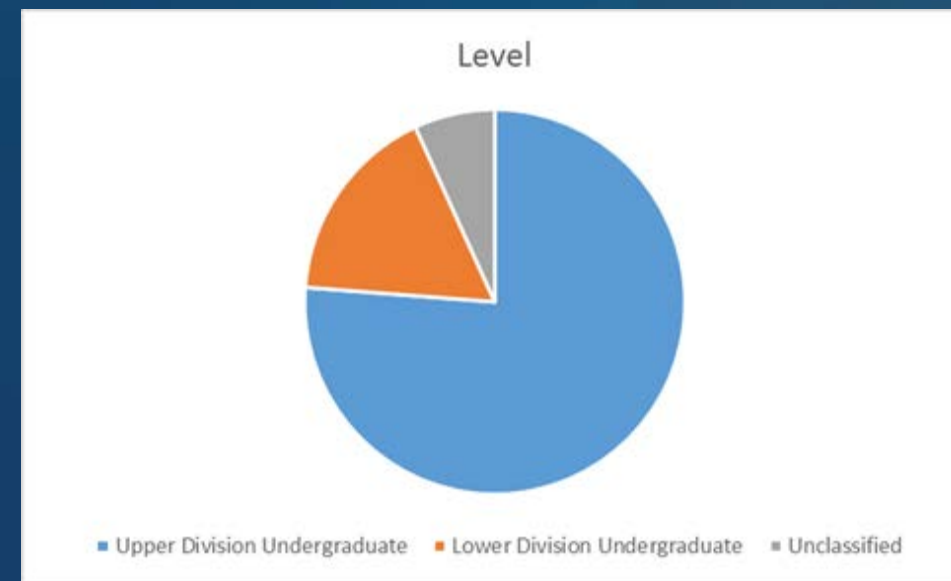
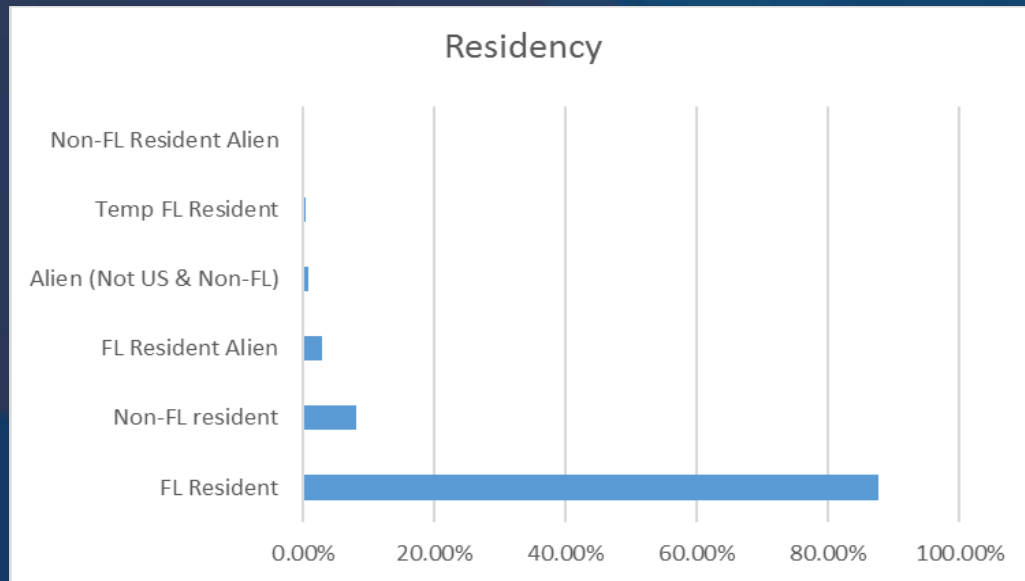
Age of UF Online Students



Race/Ethnicity



# Snapshot of UF Online Students – Spring 2018

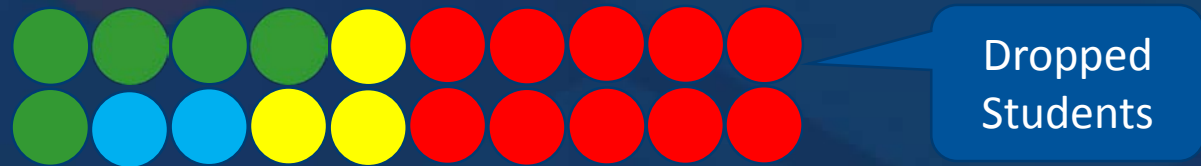
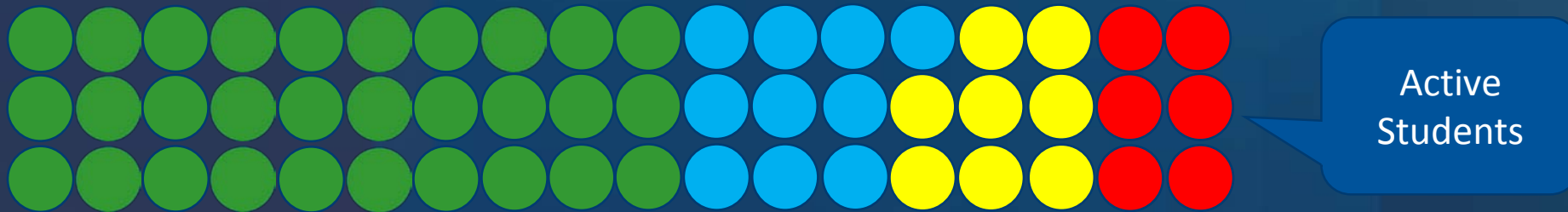
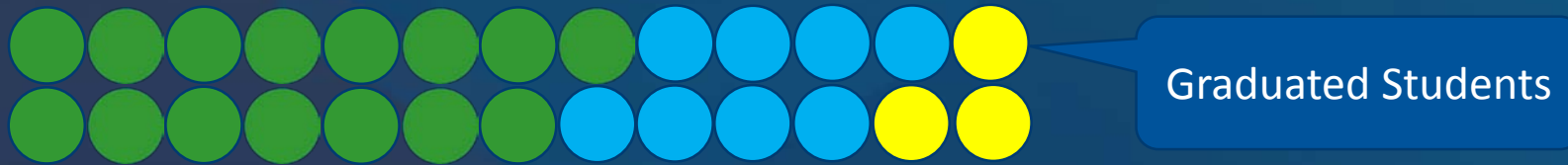


Matric Cohort*	Enrollment	Mean Admit GPA	Mean UFGPA - first semester	Age	Residency		Credit level		Gender		Graduation Year						Active	Drop
											2012 - 2013	2013 - 2014	2014 - 2015	2015 - 2016	2016 - 2017	2017 - 2018		
Before 2010	317	3.6	2.7	34	In-state	289	L	194	F	144	0.32%	1.89%	8.20%	8.20%	7.89%	6.94%	48.90%	17.67%
					Out of state	28	U	123	M	173								
2010 - 2011	90	**	2.7	**	In-state	85	L	23	F	34	13.33%	11.11%	25.56%	11.11%	3.33%	3.33%	17.78%	14.44%
					Out of state	5	U	67	M	56								
2011 - 2012	196	3.3	2.9	**	In-state	190	L	37	F	83	3.06%	19.39%	27.04%	8.67%	7.65%	2.55%	15.31%	16.33%
					Out of state	6	U	159	M	113								
2012 - 2013	260	3	2.8	29	In-state	246	L	32	F	138	7.31%	29.62%	16.92%	6.92%	3.08%	16.54%	19.62%	
					Out of state	14	U	228	M	121								
									X	1								
2013 - 2014	336	3.1	2.7	29	In-state	313	L	39	F	168	7.74%	23.81%	14.88%	5.06%	18.15%	30.36%		
					Out of state	23	U	297	M	168								
2014 - 2015	617	3.3	2.8	29	In-state	577	L	100	F	350	8.10%	23.01%	9.24%	28.04%	31.60%			
					Out of state	40	U	517	M	267								
2015 - 2016	1033	3.4	2.7	30	In-state	923	L	269	F	581	0.10%	5.81%	13.46%	51.02%	29.62%			
					Out of state	110	U	764	M	449								
									X	3								
2016 - 2017	902	3.3	2.8	30	In-state	798	L	218	F	503	0.44%	2.00%	84.81%	12.75%				
					Out of state	104	U	684	M	398								
									X	1								
2017 - 2018	542	3.4	2.8	28	In-state	468	L	150	F	315	100.00%	0.00%						
					Out of state	74	U	392	M	227								



# Perspective:

Currently, out of every 100 UF Online students ... 26 have graduated, 54 are working on their degree, and 20 have dropped out.



**Color Guide:**  
Students with UF GPA = > 3.0;  
Students with UF GPA < 3.0 and > 2.5;  
Students with UF GPA between 2.5 and 2.0;  
Students with a UF GPA < 2.0

# Relevant data points, charts & tables

- Average time to graduation – 3.4 years. This varies for each program.
- Profiles of active, graduated, and dropped students.
- Course Efficiency distribution varies per program.
- Logistic regression
- Dropped Students

# Student Profiles

## Active Students

N = 2309

Admit GPA

M = 3.33, SD = 1.0

UF GPA

M = 3.0, SD = 0.8

Mean Age: 29

Age Range: 15 – 64

Gender

M – 45%,

F – 55%,

Residency

Instate - 90%

Out of State – 10%

Credits

>=60 – 73%

<60 – 27%

## Graduated Students

N = 1112

Admit GPA

M = 3.35, SD = 1.1

UF GPA

M = 3.10, SD = 0.5

Mean Age: 28

Age Range: 17 – 59

Gender

M – 46%,

F – 54%,

Residency

Instate- 96%

Out of State – 4%

Credits

>=60 – 87%

<60 – 13%

## Dropped Students

N = 873

Admit GPA

M = 3.29, SD = 1.0

UF GPA

M = 1.9, SD = 1.30

Mean Age: 30

Age Range: 14 – 67

Gender

M – 51%

F – 49%

Residency

Instate- 85%

Out of State – 15%

Credits

>=60 – 69%

<60 – 31 %

# Course Efficiency variable: Number of successful attempts of courses/Number of total attempts

	N	Mean	Std. Deviation
All	3516	0.8	0.29
Dropped	617	0.53	0.38
Graduated	915	0.92	0.14
Active	1984	0.83	0.26
APY	53	0.89	0.21
BIO	96	0.76	0.34
CJ	417	0.79	0.3
CSC	144	0.77	0.3
GPY	30	0.79	0.29
GY	68	0.82	0.33
HEB	285	0.87	0.25
IBA	1416	0.81	0.28
IS	84	0.82	0.28
NSG	120	0.87	0.24
PR	39	0.89	0.22
PSY	237	0.76	0.34
SPM	262	0.68	0.33
SY	140	0.81	0.28
TEL	125	0.79	0.28

# Logistic Regression

What characteristics were explored?

- Pre-entry into UF Online academic characteristics: admit GPA, entry educational level, previous institution, and test scores
- Demographic characteristics: age, gender, race/ethnicity, family information and veteran status
- Current academic characteristics: first semester UF GPA, cumulative UF GPA, part-time/full-time in current semester, and course efficiency

What characteristics were not explored?

- Self-motivation
- Out of classroom obligations such as employment and family responsibilities
- Family and employer support
- Comfort with online learning environment
- Previous experience with online learning environment
- Stop out patterns

# Logistic Regression to predict attrition:

$$\log\left(\frac{p}{1-p}\right) = -0.066 + 3.002\text{CourseEfficiency} + 0.179\text{UFGPA1} + 0.005\text{AdmitGPA} + 0.404\text{Residency} - 0.373\text{Race}$$

Predictor Variables	$\beta$	S.E. $\beta$	Wald $\chi^2$	df	p	$e^\beta$
Course_efficiency	3.002	0.26	133.551	1	0.001	20.13
UFGPA1	0.179	0.078	5.297	1	0.021	1.195
AdmitGPA	0.005	0.055	0.009	1	0.925	1.005
Residency (State=1, non-state=0)	0.404	0.17	5.682	1	0.017	1.498
Race (White, Asian = 1, Other = 0)	-0.373	0.128	8.47	1	0.004	0.689
Constant	-0.066	0.085	0.613	1	0.434	0.936

# Lets explore the pattern of dropping more:

When do students drop?

Of the dropped students:

43.75% drop after the first semester

23.96% drop after completing their second semester

14.58% drop after their third semester

17.71% drop after more than three semesters

68%!

# Program Improvement Cycle





# Questions that can help us move to strategies

Questions for us all to ponder:

- How can we encourage commitment (for example - personal goal commitment, on-going commitment)?
- How can continue to enhance integration of necessary support services?
- How can increase personal-institutional fit?
- How can improve student outcomes?

*What questions would you ask?*

# Possible Strategies

- First semester interventions:
  - Getting data in front of college stakeholders
  - Intrusive Advising
  - Mandatory Success Coaches for first year
  - Mentor/mentee program for first year
  - Enhanced student community
  - Student Success Course – to build C<sup>3</sup>: **Comfort, Confidence & Competence** in online learning
- Course Interventions:
  - Online individual tutoring & group online tutoring for courses with high DEW rates
  - Online study groups in student community
- Academic progress:
  - Probation program
  - High performing student programs: leadership, experiential, internships

# Program Improvement Cycle



Questions?