Connecting the Dots: Using Insights to Develop Strategies for New Student Enrollment

Welcome and Introductions
IUPUI

- Recently recognized for Undergraduate Teaching (U.S. News)

- Large Urban Public Research University, Indianapolis, Indiana

- Student population of about 30,000 students, which includes centers in Fort Wayne and Columbus

- First-Time cohort just over 3,800 and New External Transfers just over 1,300

- Over 550 degree programs from both Indiana & Purdue Universities

- About 50% of First-Year students live on campus.

BEST COLLEGES
U.S.News & WORLD REPORT
NATIONAL UNIVERSITIES
UNDERGRAD TEACHING
2021

Today's Agenda

1. Our Approach at IUPUI

2. Dissecting the Enrollment Funnel

   – Q & A

3. Essay Analytics

   – Q & A

4. Test Optional

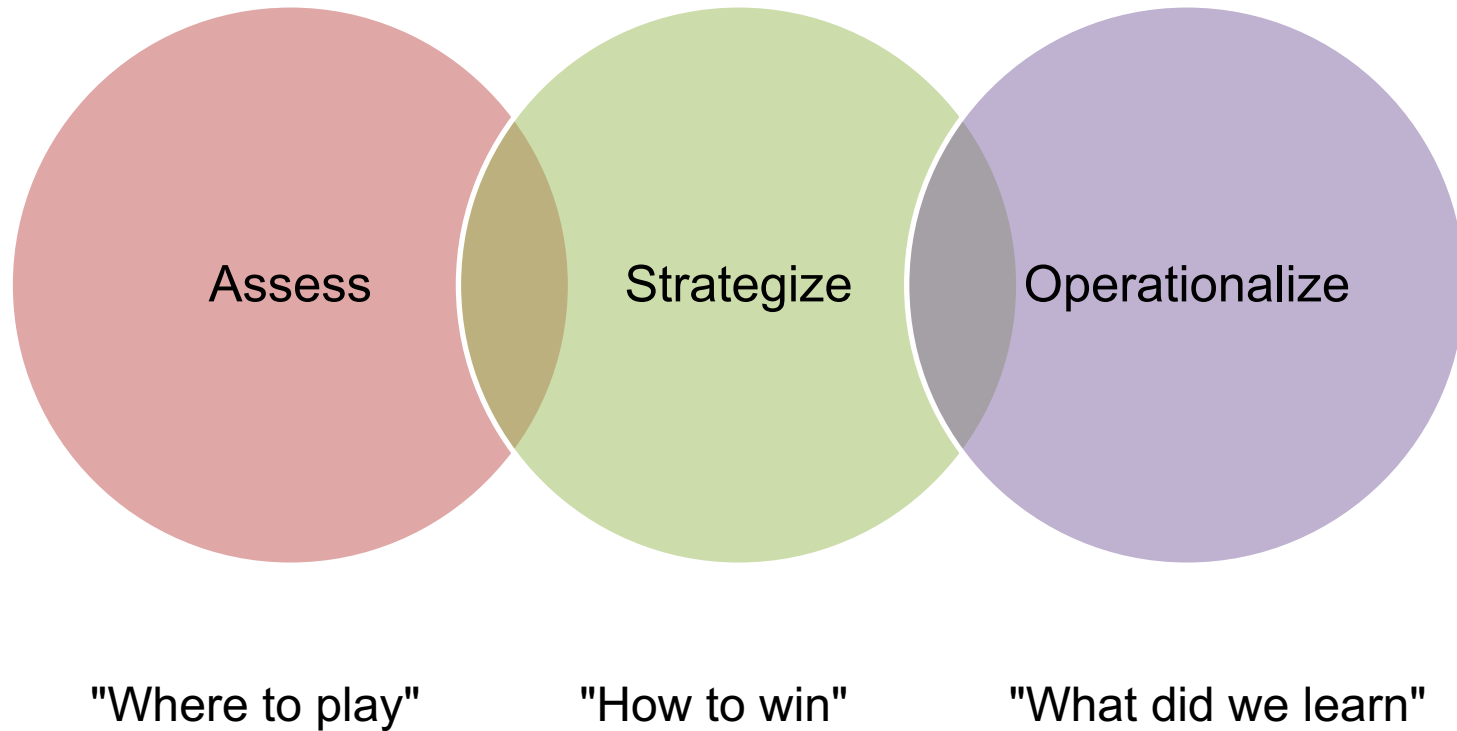   – Q & A

5. Closing Comments

Our Approach at IUPUI

Eduventures Enrollment Management Maturity Model

INITIAL	OPERATIONAL	STRATEGIC	INTEGRATED
Beginning to integrate enrollment functions	Executing on top-down enrollment goals	Informed executive leadership of enrollment	Collaborative executive leadership of enrollment
Recruitment focused	Limited lifecycle approach	Expanded lifecycle approach	Complete lifecycle approach
Building data quality for enrollment	Limited data sharing and integration	Good data sharing and integration	Full data integration and utilization
Identifying enrollment goals	Delegated executive leadership of enrollment	Enrollment strategy within the context of institutional strategy	Enrollment viewpoint in co-creation of institutional strategy

Goal 4: Optimize Our Enrollment Management
(aligned to Strategic Enrollment Plan: https://dem.iupui.edu/strategic/strategic-plan-document/index.html)

Methodology

Assess — "Where to play"

Strategize — "How to win"

Operationalize — "What did we learn"

A Data Driven Process

IUPUI OFFICE FOR ENROLLMENT STRATEGY & INSIGHTS

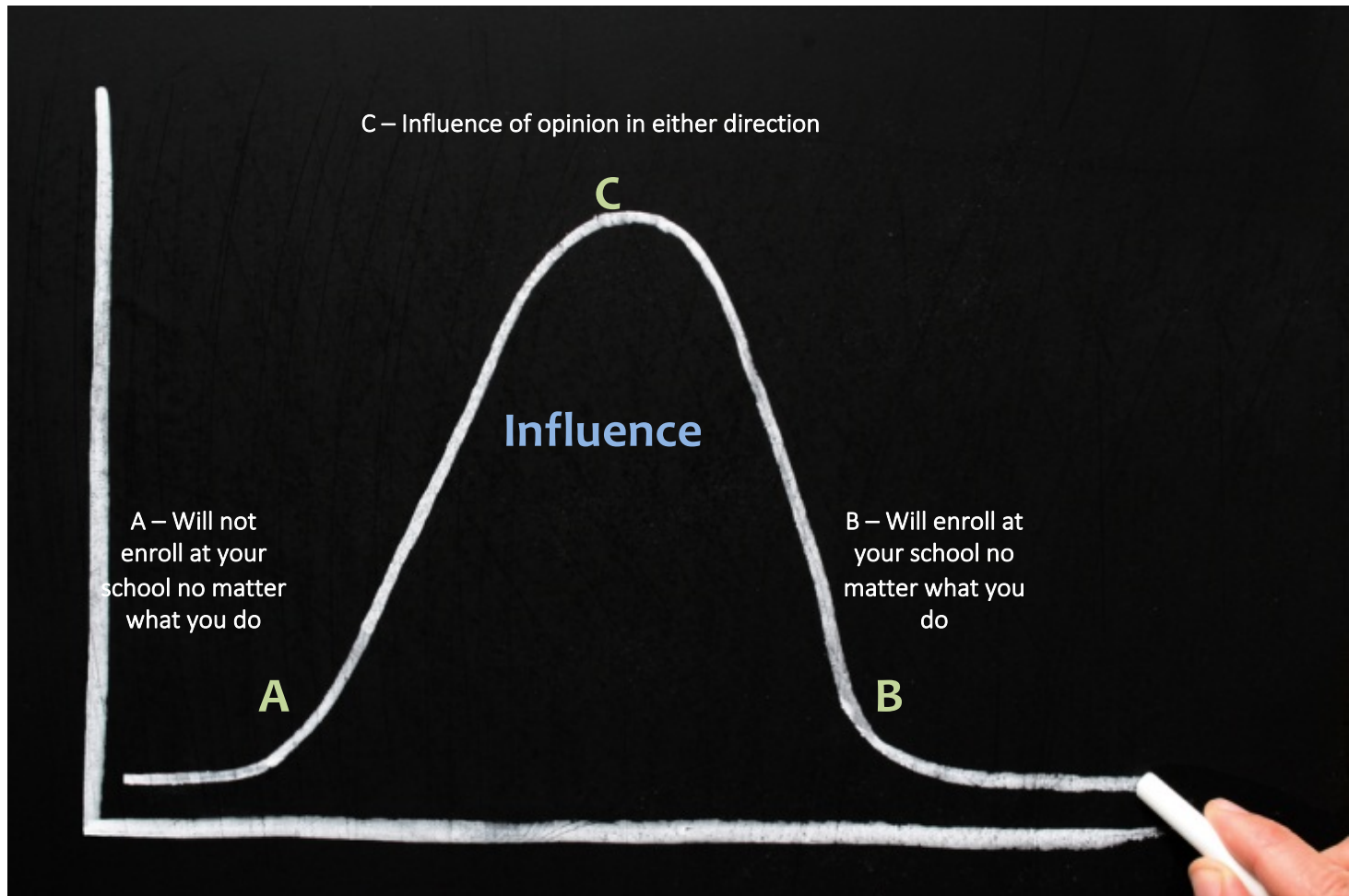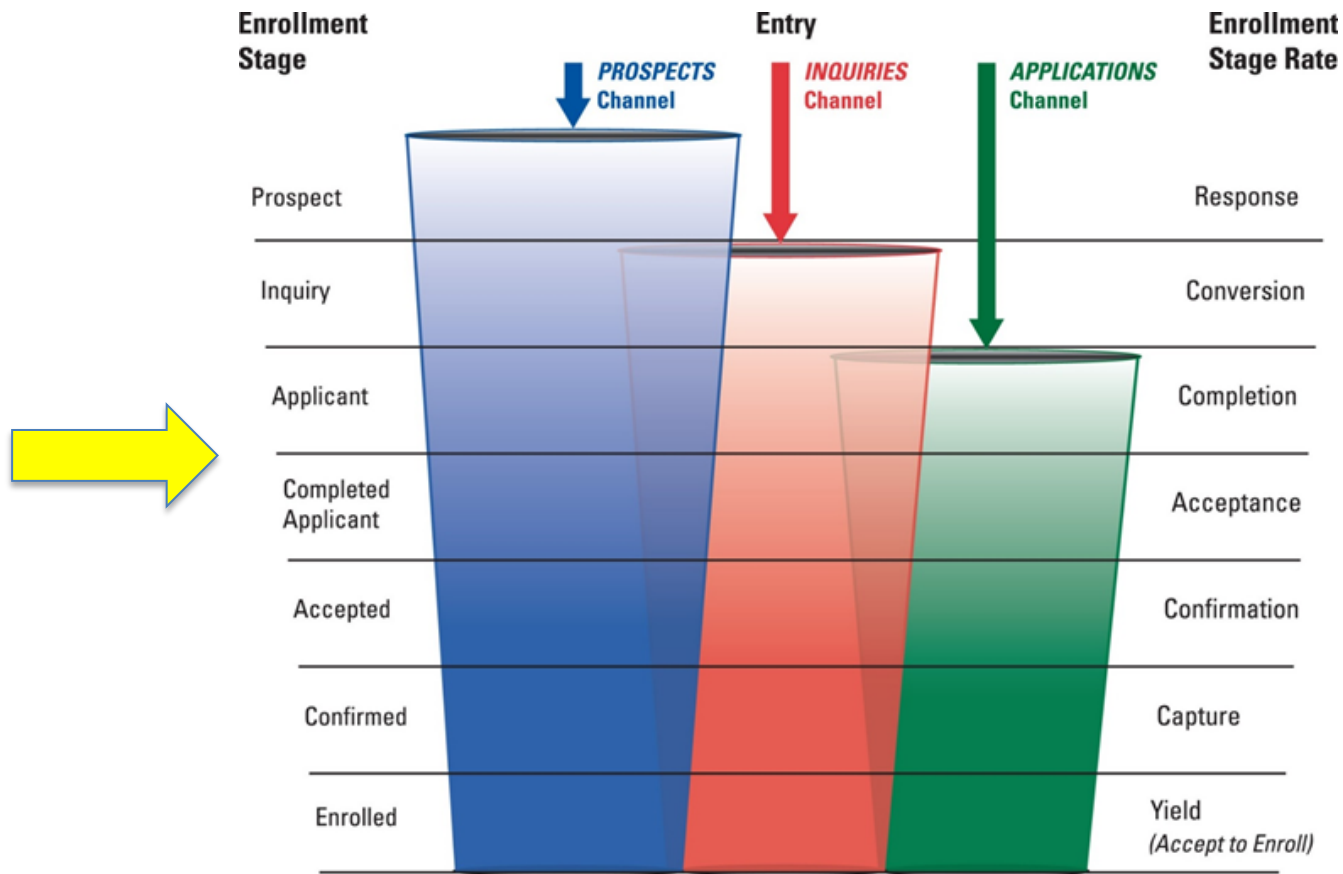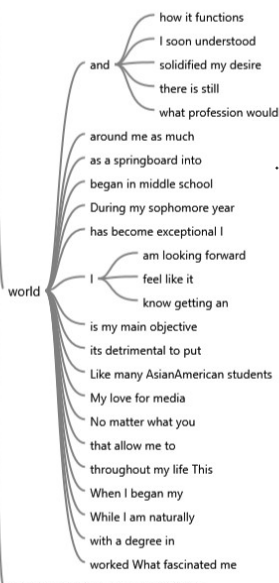| QUESTION IDENTIFIED	PRE-SCREEN MEETING	DISCOVERY MEETING	STRATEGY DELIVERY	STRATEGY ENACTED	DEBRIEFING MEETING	NEXT STEPS, IF NEEDED
It all starts with one of these three questions: *What is the problem you are trying to solve?* *What are you looking to achieve?* *How will this positively impact IUPUI's enrollment?*	Before any project, the ESI partner will fill out a short questionnaire, which will serve to form the agenda of the discovery meeting. This includes providing relevant data involving the question. Upon submission, the partner will meet with an ESI liaison for a 15-minute touch base to confirm the topics.	Projects undertaken by ESI are data-driven and have a basis in the overall campus recruitment or retention strategy. The discovery meeting will be a collaborative space to discuss the facts and needs around this project. It will also be where success is defined in the project.	After the overall direction of the project is agreed upon, ESI will develop a roadmap for the project. The strategic roadmap will be presented to ESI partners during the strategy delivery meeting. Since the direction was previously agreed upon, minor adjustments to the roadmap can be made, so long as they do not overhaul the greater strategy.	After the delivery of the strategy, it is time to operationalize it. ESI will work with the appropriate partners to enact the strategy. Standing meetings with ESI and the operational team will occur, allowing both to have a pulse on the overall project.	Once the project has wrapped, stakeholders will reconvene to debrief on the project. ESI and the partner will evaluate what was successful in the project, and what wasn't, as defined in the discovery meeting.	If needed, stakeholders will restart or revisit the project to enact next steps, if necessary.

IUPUI

Dissecting the Enrollment Funnel

Understanding Student Behavior

C – Influence of opinion in either direction

C

Influence

A – Will not enroll at your school no matter what you do

A

B – Will enroll at your school no matter what you do

B

The Enrollment Funnel

Enrollment Funnel Q & A

QUESTION IDENTIFIED

It all starts with one of these three questions:

What is the problem you are trying to solve?

What are you looking to achieve?

How will this positively impact IUPUI's enrollment?

- Application numbers are not where they need to be, why?

- The top of our funnel seems small, why?

- Our conversion rates on inquires to applicants are below the national norm, why?

- Our applications are up but our yield rate is dropping, why?

- We are getting applications at a record level, but students are not completing them, why?

- We are seeing many stealth applications, why?

Essay Analytics

Essay Text Analytics

- Are there opportunities for us to enhance our marketing and messaging efforts?

- Can we better understand our audience through what they write about in their essays?

- Do we have opportunities to create a more personalized experience for the student?

Ways to Evaluate the Data

Counts of Words

**Term Frequency
Inverse Document Frequency
(TF-IDF)**

Word Combinations

Word Combinations

Business	Dentistry	Education	ENGR & TECH		HHS
Dad/Father	Class	Child	Computer	Dad/father	Service
Indiana	Indianapolis	Future	Field	Achieve	Play
Skills	Art	Possibly	Research	Home	Others

Herron	SoIC	Liberal Arts	Philanthropy	Nursing
Began	Create	Mom/Dad	Earn	Become
Show	Loved	World	Participate	Care
Create	Understanding	Writing	Lives	Life

Fairbanks	SPEA	Science	Social Work	UCOL
Strong	Club	Dad/father	Mom/Dad	Career
Top	Dad/father	Doctor	Others	Everything
Heart	Academic	Question	Struggle	Path

Essay Q & A

- What are some ways your institution uses the application essay? Are there opportunities to incorporate more use at a smaller scale?

- What will you do with the information or insights gleaned from incorporating essay analytics into your recruitment and retention efforts?

- If using the essay isn't an option, are there other ways you can use keyword or sentiment analysis to better understand the mindset of students?

Test Optional

Test Optional decision - context

University of Chicago
- 2018 –test optional admissions

Indiana University
- All Campuses tasked with exploring
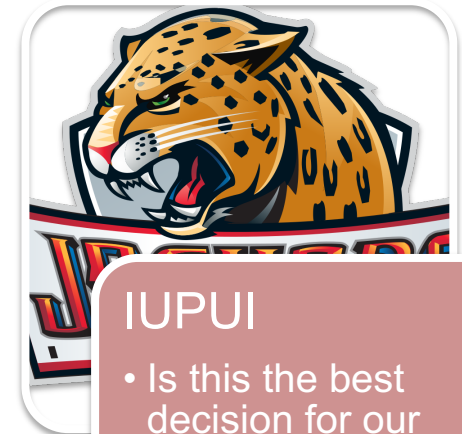
IUPUI
- Is this the best decision for our students?
- How might this effect our campus in unexpected ways.

Test optional decision - context

Indiana University

Individual School Admissions criteria

Enrollment Management Advisory Council

Making the decision

Rothstein (2004)

- Variance in SAT accounted for by school characteristics
- No predictive validity net High School GPA, background variables

Geiser (2017)

- Applied for admission to University of California campus between 1994-2011
- Bias against African American and Latinx students
- "Race-based admissions"

Syverson, Franks, & Hiss (2018)

- Applications and enrollment of URM students increased when test optional policies adopted

Making the Decision

Stepwise logistic regression of admissions variables on Fall-Fall Retention

Variable	Model 1 [1]			Model 2 [2]		
	B	Standard error	Odds Ratio	B	Standard error	Odds Ratio
High School GPA	1.28	0.05	3.61	1.19	0.05	3.27
AP Test Flag	0.43	0.05	1.54	0.32	0.05	1.38
Received Honors Diploma	0.07	0.03	1.08	0.07	0.03	1.08
Best SAT score [a]	--	--	--	0.01	<0.01	1.01
Intercept	-3.63	0.14		-4.22	0.17	

All variables statistically significant at $\alpha \leq 0.05$.

[1] Model statistically significant at $\alpha \leq 0.05$ ($\chi^2 (3) = 1545.21$). McFadden's $R^2 = 0.055$

[2] Model statistically significant at $\alpha \leq 0.05$ ($\chi^2 (3) = 1596.20$). McFadden's $R^2 = 0.057$

[a] Pre-2017 SAT scores converted to current SAT scale. SAT score divided by 10 in order that effects may be interpretable.

Making the decision

Predictive strength of admission measures (raw and adjusted correlations)

Measure	N	Predictive Strength (adjusted correlation)	Predictive Strength (raw correlation)
SAT Tests, HSGPA, Add. Predictors	2,823	0.75	0.55
SAT Tests, HSGPA, Add. Predictors, SAT Subj. Tests	2,823	0.75	0.55
SAT Tests and HSGPA	2,823	0.75	0.55
High School GPA	2,823	0.74	0.54
SAT Tests	2,823	0.49	0.35
SAT ERW Section	2,823	0.46	0.31
Number of Honors or AP courses	2,823	0.46	0.21
SAT Math Section	2,823	0.46	0.32

The numbers in the next table in this appendix represent the prediction equations developed for Indiana University-Purdue University Indianapolis. Each column depicts: 1) a model with a different set of predictors used to formulate an equation for use in predicting Cumulative GPA through first year for applicants whose records contain the variables chosen for this study, and 2) the corresponding sample of students with these predictors.

Developing alternative admissions criteria

Traditional

Today

IUPUI

School-based admissions

What would be a good minimum GPA for "direct admission"?

- Decision trees suggest possible "cut scores"

What populations might be most effected?

- Demographics by criteria suggest
  - More underrepresented and first gen students with high GPA/low SAT
  - Better outcomes for high GPA/low SAT

How do we determine if students are "calculus ready"?

- Using high school transcripts

Continuing Work

Financial aid

- Evaluating/revaluating merit-based aid

Academic Index

- Can we use students' transcripts more effectively?

Confirm and adjust

- Continue to examine

Test Optional Q&A

❖ If you were to consider test-optional admissions (or if you have decided on test optional):

  ○ What data would you need (or did you use) to inform your decision?

  ○ How would you make (or, how did you make) the case, either for or against?

  ○ What consequences might this decision have (or did this decision have) beyond admissions?

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