

Building a Data Institute:

**Leveraging Research Resources
Within the Institution**



Introductions



Deseree Probasco
Director, Institutional Reporting



Dr. Jae Jung
Sr. Analyst, LSC-Montgomery

Presentation Outline

- About Lone Star College
- About Analytics and Institutional Reporting
- What is Data Institute?
- The “One Big Thing”
- Planning Process
- Syllabus and Resources Required
- 2018 Cohort Assessment and lessons learned
- 2019 Cohort
- 2020 and on- Continuous Improvement
- Questions



Presentation Objectives

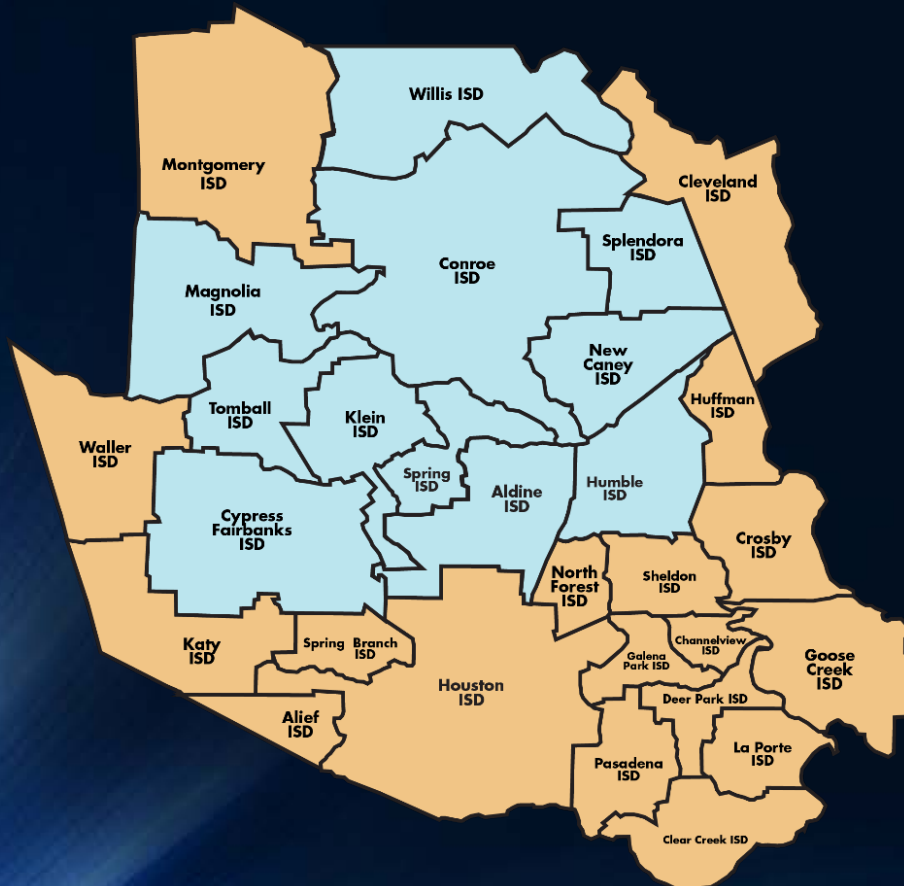
- To understand the basic components of developing a Data Institute training program
- To understand the potential advantages and obstacles of planning an intensive training program for employees outside of the IR department
- Apply the basic concepts to create a similar product at your institution to enhance research, analytics, and data culture.

About Lone Star College



- **89,000 credit students each semester, total enrollment of more than 99,000 (credit and non-credit).**
- **One of the top 3 largest colleges in the nation.**
- **One of the fastest-growing college systems in U.S.**
- **Added 37,656 students fall 2008 to fall 2018, an 73% increase.**
- **11 school districts, 1,400 square miles, population of 2 million.**

About Lone Star College



11 school districts

99,000 students

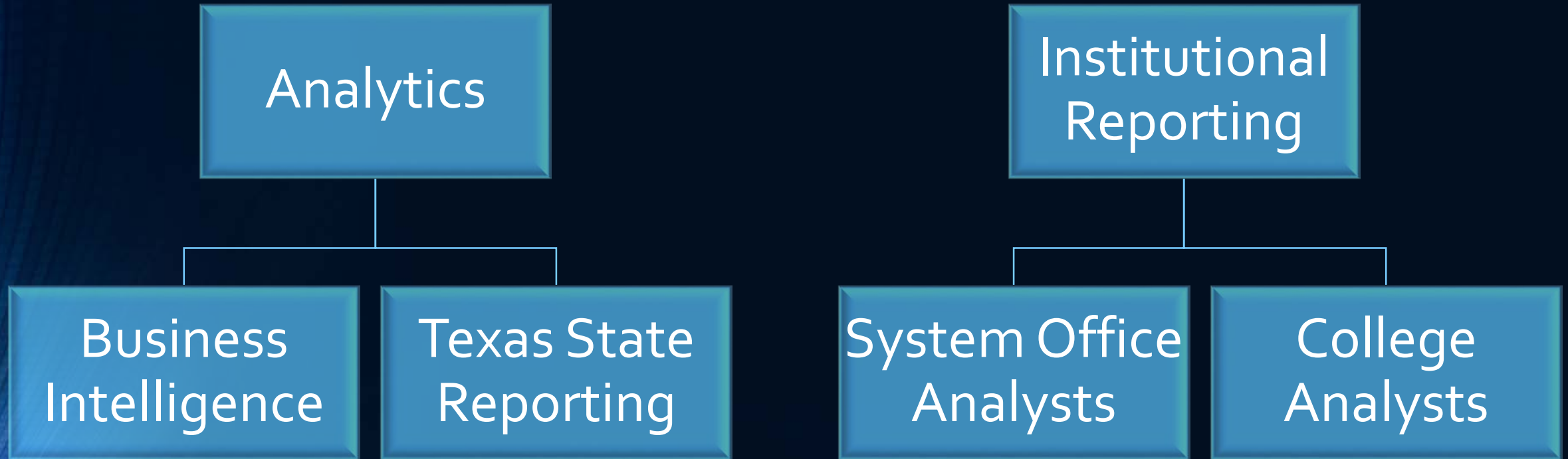
2.1 M population

1,400 square miles

\$347 M operating budget

7,749 employees

Analytics and Institutional Reporting



Data Institute is Born

2014 Created New Analyst Training Program

2016 Produced draft program plan for faculty and staff
research training

2017 Proposed institute to leadership

October- Institute approved

November/December- Applications open and
curriculum development begins

December- First cohort selected

2018 LSC-AIR introduces the “One Big Thing”

2018 Inaugural Data Institute begins

The “One Big Thing”

- LSC-AIR’s Strategic Plan, launched Jan 2018
- Goal: Drive User Adoption of tools and services
- User obstacles
 - Don’t understand how/when to use the tools available
 - Don’t understand data being presented
 - Don’t have time to absorb and learn from the data
 - Are afraid of data or have little experience

Purpose of the Data Institute

- To develop data literacy specific to Lone Star College and enhance data culture.
- To demystify working with institution data and relevant external data sources.
- To create a space where participants can ask questions, test “what-if” scenarios, and explore innovative ideas.
- Reframe conversation about analytics.
- Empower individuals and groups outside of IR to dig into the data and learn to ask the right questions.

What exactly is a “Data Institute?”

Semester-long professional development for full-time faculty and staff

Competitive admission program

Series of workshops on

- Research design
- Data Sources
- Reporting Tools

Completion of a group research/critical thinking project on a topic of institutional interest



Planning Process

- Develop learning objectives and goals of institute
- Develop application process and selection criteria
- Develop syllabus and create access to tools
- Determine topics of interest to Institution



Goals and Learning Objectives

- Enhance participant's research and analytics knowledge and skills
- Enhance familiarity with IR's services, data sources, and tools
- Build a cohort of trained researchers to lead projects and assist decision-makers
- Increase the quality and quantity of research at Lone Star College
- Have participants complete a simple, insightful research study from problem definition through communicating results.

Application Process

- Created online application using [JotForm](#)
- Multiple choice and short answer questions
 - Skills with various tools, Excel, database software, local databases
 - Self-rating on learning and analytical skills
 - Short answers on critical thinking
- Created selection criteria and cut scores
 - Two fellows from each LSC location
 - Full-time faculty or staff
 - No technical experience needed
 - Supervisor approval required



2018 Syllabus

- Session 1: Introduce Research Topic, Introduction to Research Methods, Idea-Clustering
- Session 2: IRB and Human Subjects Research, Project Design and Basic Statistics
- Session 3: Internal and External Data Sources, Design-thinking Introduction
- Session 4: Using PowerBI reports, Group Project Design
- Session 5: Creating PowerBI reports, Develop Data Requests
- Session 6: Using Civitas Illume, Data-focused Decisions Leader Panel
- Session 7: Project work, Data visualization and presentation format
- Session 8: Final presentation and Graduation

Tools and Data Sources

- All tools were locally available without additional cost to the department
 - Microsoft PowerBI and Cloud Reporting
 - On-Demand Reports and Dashboards
 - Civitas Illume Student
 - IR Ad-Hoc Data Requests
- Participants supplied their own (LSC) computer
- Freeware version of SPSS, when needed
- Survey tools
- LSC Call Center
- Sourced texts from AIR, LSC Library, Dept Training Material

Data Sources and Other Resources

- Data Sources
 - iStar Campus Solutions (LSC ERP)
 - THECB and CBM Reports
 - National Student Clearinghouse
 - IPEDS
 - Civitas
- All training done by LSC faculty and staff
- Training provided at central location, LSC System-Office
- Costs to Department- Data Institute is low-cost
 - Staff time for development, prep, and teaching
 - Awards given at graduation
 - Luncheon provided at graduation

Other Resources

- All training done by LSC faculty and staff
- Training provided at central location, LSC System-Office
- Costs to Department- Data Institute is low-cost
 - Staff time for development, prep, and teaching
 - Awards given at graduation
 - Luncheon provided at graduation



2018 Research Topic

- Consulted with Chancellor and Cabinet
- Chancellor's "Top Five"
- Selected "Minority Student Success" from Top Five as broad topic of study
- LSC- Houston North, Lone Star's 7th college opening Fall 2019

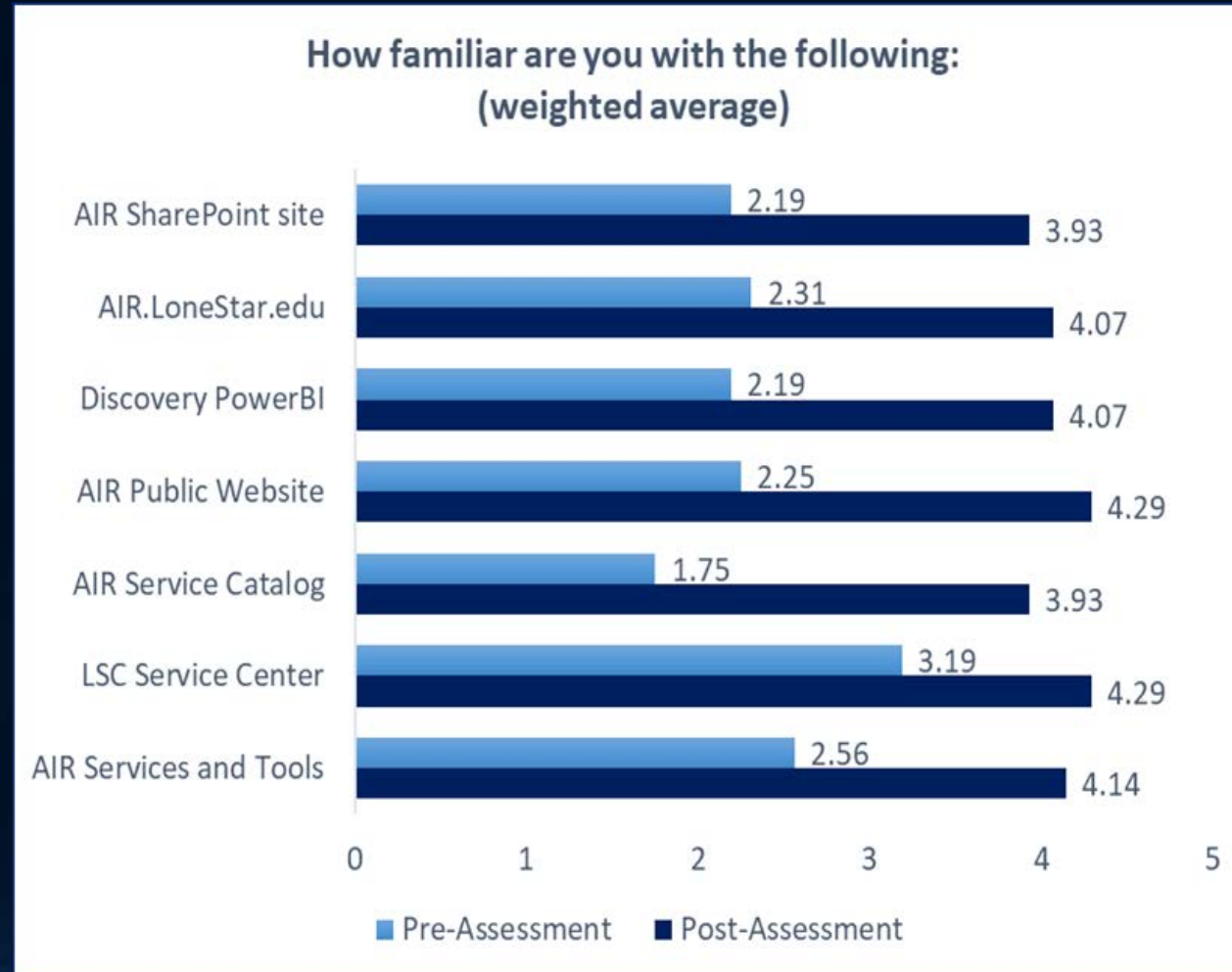
2018 First Cohort

“EDUC-ation” A Tailored Study of The New EDUC 1300 at LSC

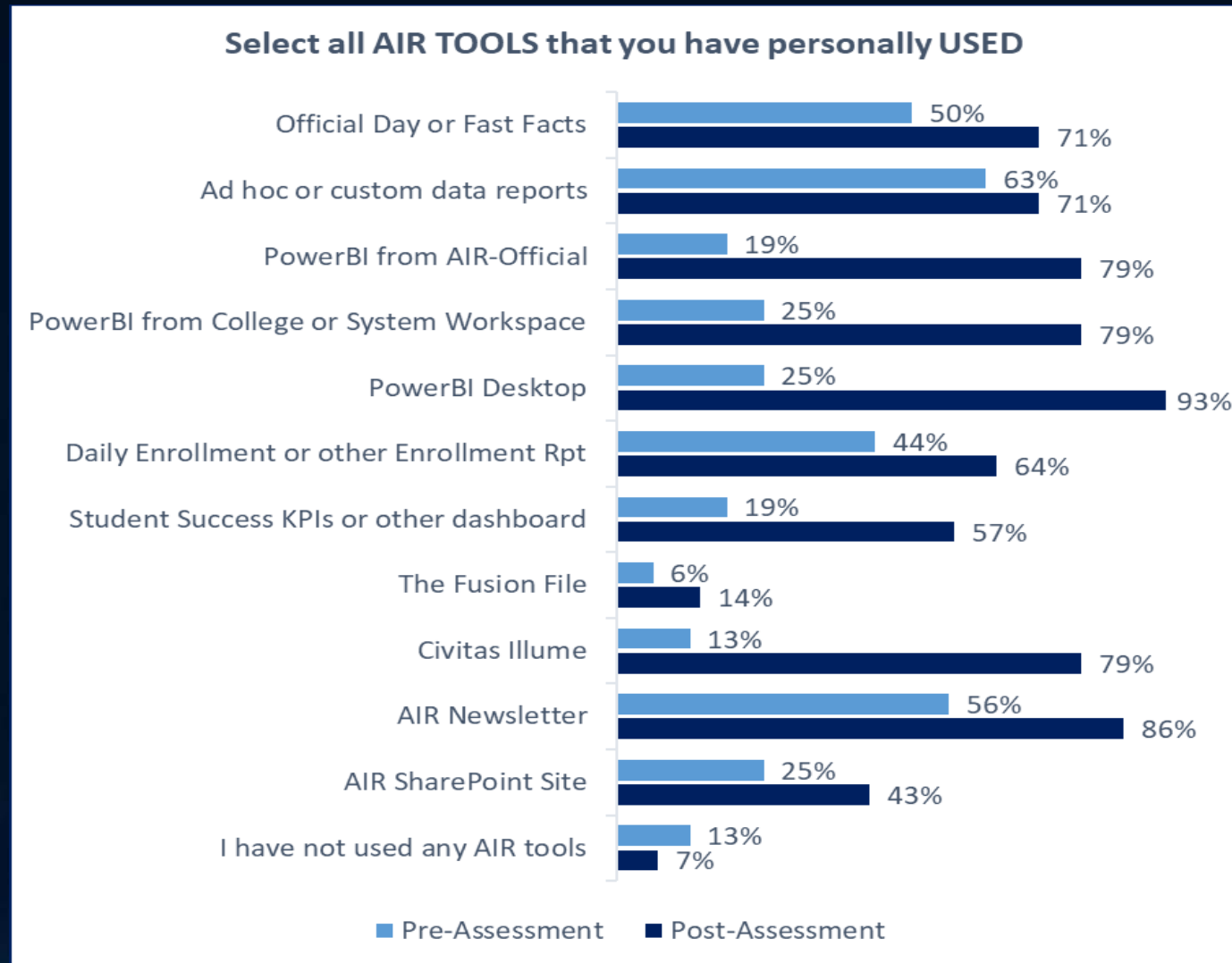
What have been the significant points of changes in the implementation of EDUC 1300 as a required course for FTIC students? Can we identify any statistically significant metrics from a broad view of our data of over 72,000 students? At what level are the effects of EDUC 1300 contributing to student persistence and graduation and are these levels different for African American males? How can we measure the academic success of EDUC 1300 on minimizing the achievement gap for African American college students and what role do those outside of the classroom have in effecting this success?

2018 First Cohort Assessment

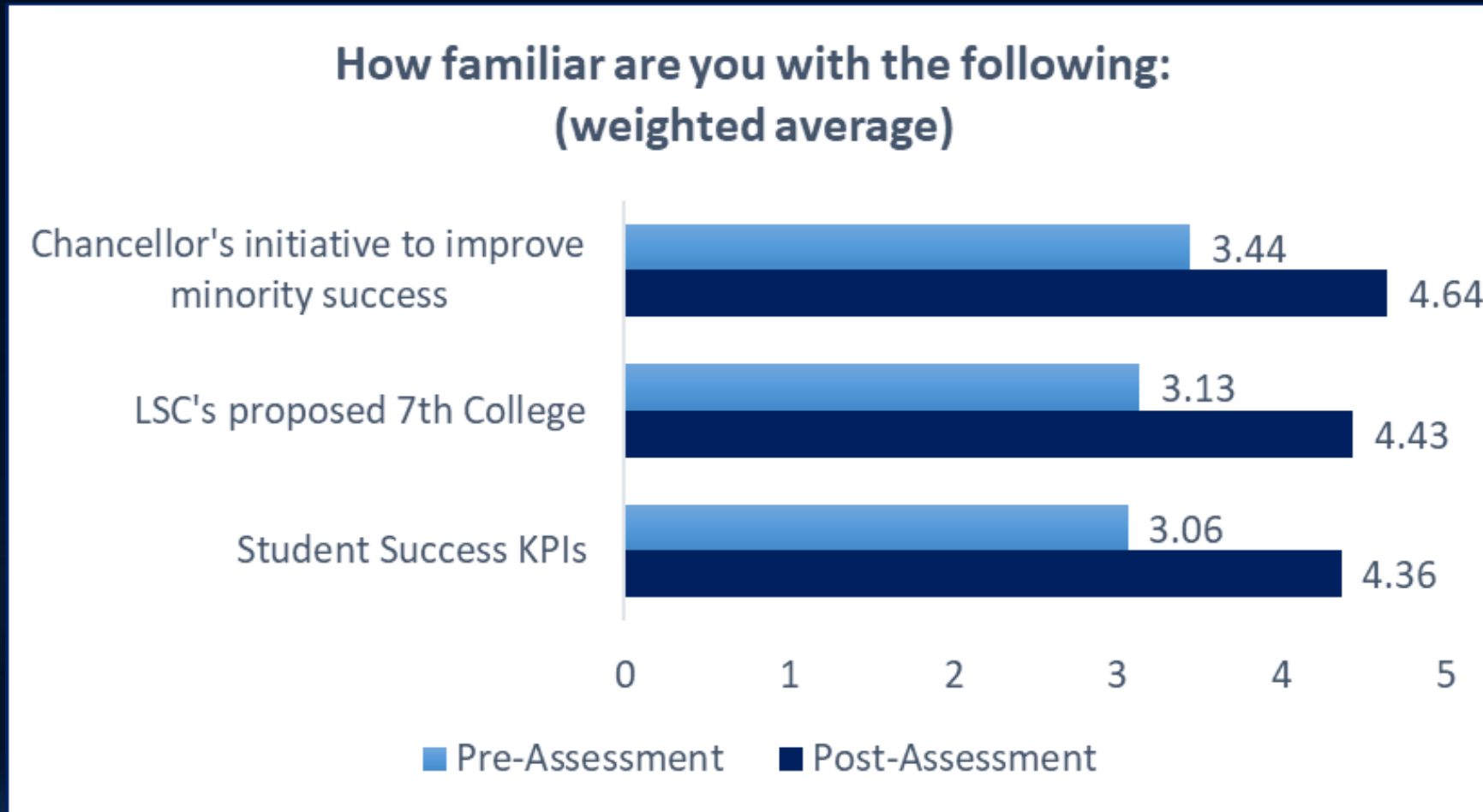
- 16 Fellows selected from 115 applicants



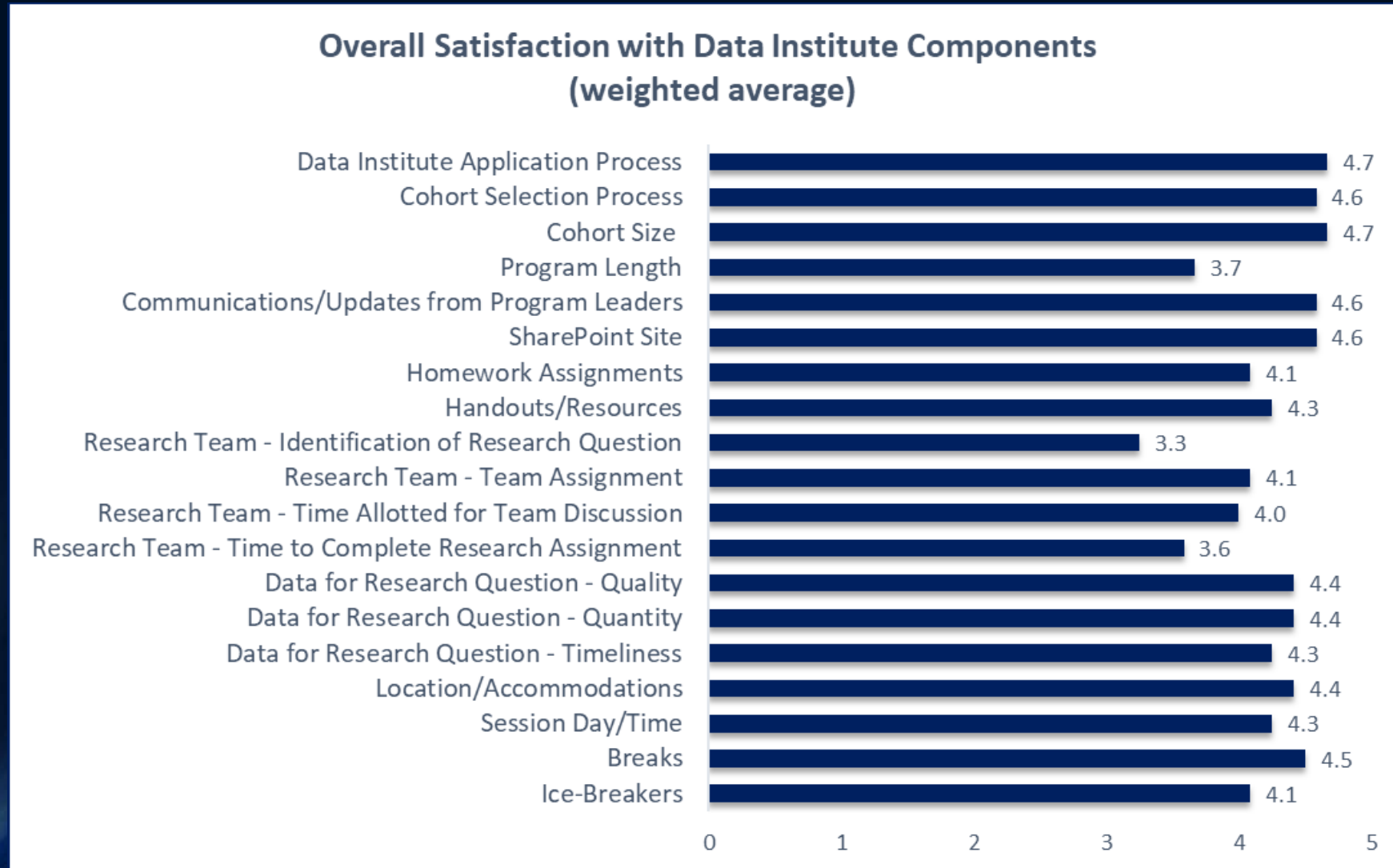
2018 First Cohort Assessment



2018 First Cohort Assessment



2018 First Cohort Assessment



2018 First Cohort Assessment

- 100% of the cohort completed the semester.
- Information generated in final research projects was used in the SACS accreditation proposal for LSC-Houston North, Lone Star's newest college.
- Four research groups asked to present at LSC-Montgomery's Data Camp
- Participants:
 - 1- Submitted proposal to Minority Serving Institution Convening at Richland College
 - 2- Applied for open IR analyst position. 1 was hired as a college IR analyst
 - 1- Started a Doctoral program and credited participation with feeling more confident about working with data
 - 2- Asked to join college data teams

2018 Data Institute Fellows



Lessons Learned

- Too much material
- Not enough “discovery” time for groups
- Not enough sessions/meetings
- Need better digital space for groups
- Schedule conflicts/ absences
- Randomly selected teams did not work as well as hoped

2019 Second Cohort

Based on first cohort feedback

- Revised selection criteria
- Added 3 sessions
- Reduced topics covered
- New selection process for research groups
- Broader research topics

*Current Fellow earning 3 hours of course credit for
Doctoral program through National American University

*Hired current Fellow as IR Analyst

2019 Syllabus

- Session 1: Introduction to Data Institute, Idea-Clustering
- Session 2: Form Research Groups, Internal and External Data Sources, Research Design
- Session 3: PowerBI Beginner and Intermediate Workshops
- Session 4: IRB and Research Ethics, Finalize Group Research Project Plan
- Session 5: Project Timeline and Milestones, Craft Data Request, Pull Data from available sources
- Session 6: Project Work/Discovery, Tutorials on Data Topics: Key Performance Indicators, Data Definitions, SPSS, PBI, Excel
- Session 7: "Putting Data to Work: How Leaders Use Data for Decision-making" Panel, Group Work
- Session 8: Tutorials: Civitas Illume, Group Work
- Session 9: Creating Insights, Data Visualization, Executive Summary, Group Work
- Session 10: Group Work, Finalize and Walk-through Presentations
- Session 11: Final Presentation and Graduation



2019 Second Cohort

Proposed Research Projects

- A. Course Engagement in online courses and GPA
- B. Developmental Co-Req requirements and FTIC progress
- C. Identifying and describing “transient” students
- D. Define STEM student success and key factors at LSC

2020 Third Cohort

- Create Steering Committee
- Develop Data Institute “textbook”
- Continue curriculum development
- Require beginning training in AIR tools and data
- Use data generated in long-term/in-depth studies
- Develop plan for “research teams”
- Develop “AIR-Certified Researcher” program as Professional Development opportunity

Questions?



Contact Me:

Deseree Probasco
Director, Institutional Reporting
Lone Star College

deseree@lonestar.edu

832-813-6641

Thank you!

