A New Perspective on Student Success

Why Don't Students Complete?

Despite Efforts, Root Cause of Attrition Remains Frustratingly Elusive

Thousands of pages of task force recommendations

Hundreds of new student success administrators

Hours spent in campus meetings and town halls

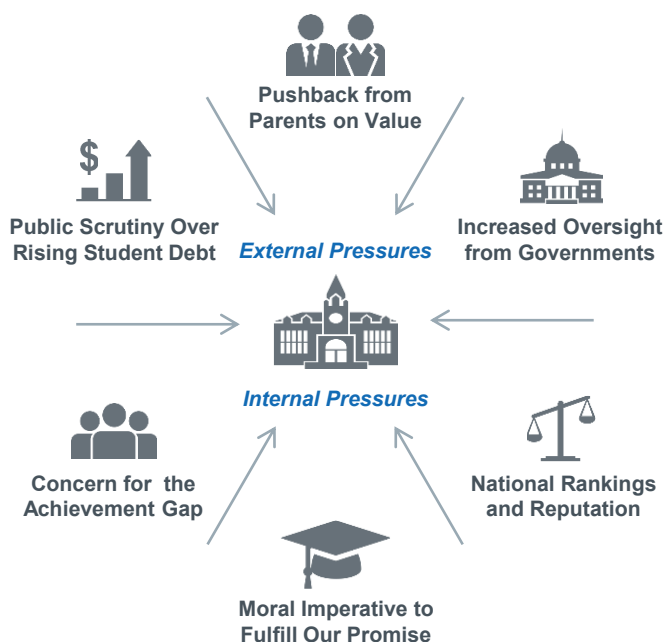Countless presentations on improving completion

> "In my interviews with students, I have found that the biggest reasons for a delay in graduation are that students *switch majors, fail out of courses, cannot get required courses, do not qualify for their intended majors; they have to work to pay for their living expenses, do not think there are any jobs for them after graduation, pursue double majors, do not receive adequate advising, have medical problems and personal issues.*
>
> *Faculty Member,*
> *Large Public Research University*

Feels Like the Stakes Have Never Been Higher

Intense Pressure to Improve Coming From All Sides

Pushback from Parents on Value

Public Scrutiny Over Rising Student Debt

External Pressures

Increased Oversight from Governments

Internal Pressures

Concern for the Achievement Gap

National Rankings and Reputation

Moral Imperative to Fulfill Our Promise

A Public Crisis of Confidence

$1 trillion
Total amount of student loan debt across the nation

44%
Underemployment rate for recent college graduates

32%
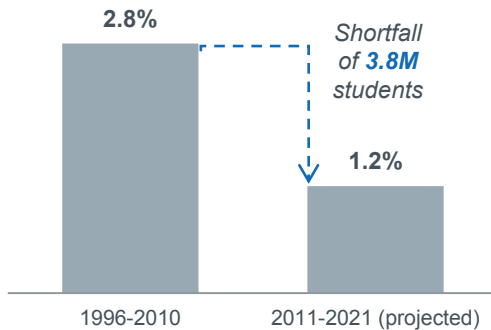Americans who say that college is worth the investment

Source: Wall Street Journal, "Public University Costs Soar", 3/16/2013; Federal Reserve Bank of New York.; Survey of 1,006 adults nationally was conducted by the Robert Morris University Polling Institute (March 2014); http://www.gallup.com/poll/167630/business-leaders-doubt-colleges-prepare-students.aspx; Federal Reserve Bank of NY.
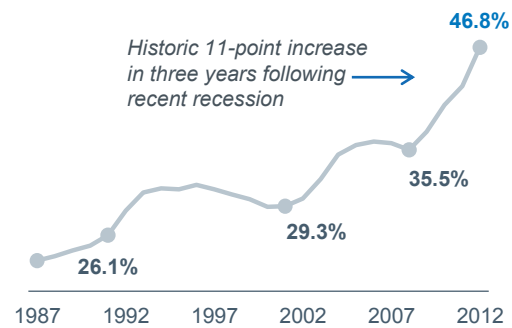
Facing a Tough Enrollment Environment

Slowing Growth and Emerging Alternatives Ratcheting Up Competition

Undergraduate Enrollment Annual Growth

2.8% (1996-2010)

Shortfall of 3.8M students

1.2% (2011-2021 (projected))

Tuition as a Percentage of Educational Revenues for Public Universities

46.8%

Historic 11-point increase in three years following recent recession

26.1% (1987)
29.3% (2002)
35.5% (2007)

1987 1992 1997 2002 2007 2012

No Shortage of Alternatives Competing for Students' Attention

LONE STAR COLLEGE — Community colleges

Southern New Hampshire University — Online programs

University of Phoenix — For-profits

edX — MOOCs(?)

Source: SHEEO, "State Higher Education Finance FY 2012"; NCES, Projections of Education Statistics to 2021," Jan 2013; NCES, "Table 214," *Digest of Education Statistics*; Education Advisory Board interviews and analysis.
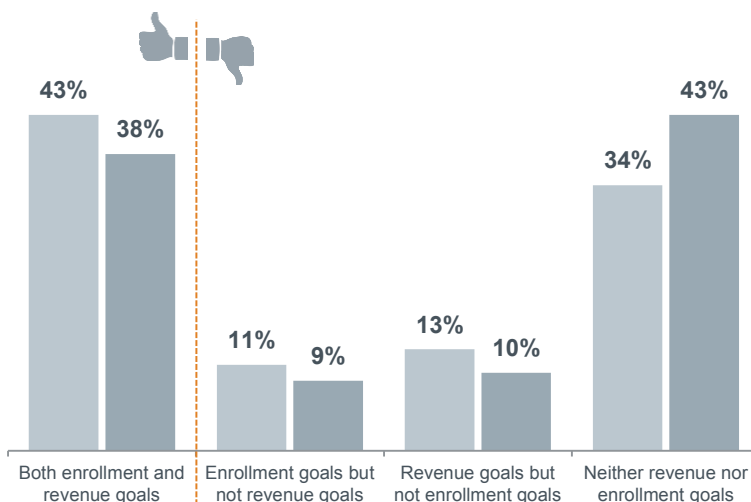

The Enrollment Crisis Hits Hard

Three-Fifths of Institutions Missed 2014 Enrollment or Revenue Targets

Percent of Institutions Meeting Goals

■ American Association of State Colleges and Universities
■ Council of Independent Colleges

- Both enrollment and revenue goals: 43% / 38%
- Enrollment goals but not revenue goals: 11% / 9%
- Revenue goals but not enrollment goals: 13% / 10%
- Neither revenue nor enrollment goals: 34% / 43%

The Chronicle of Higher Education

"Goals for Enrollment and Tuition Revenue Elude Many Colleges"

October 13, 2014

57% of surveyed public institutions missed target

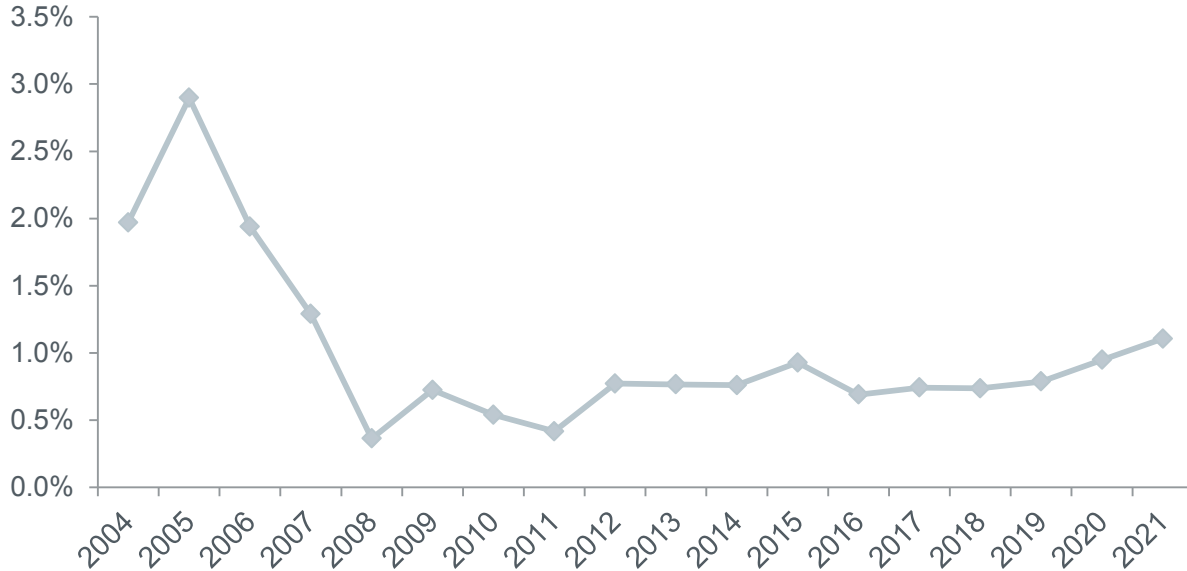**62%** of surveyed private institutions missed target

Source: Chronicle of Higher Education, ""Goals for Enrollment and Tuition Revenue Elude Many Colleges" 10/13/2014

Georgia Not Immune

Slowing Growth Presents Ramifications for Years to Come

YOY Growth in PK-12 Enrollment, Georgia Public Schools
(Actual and Projected)

Source: NCES Projections of Education Statistics to 2012
http://nces.ed.gov/pubs2013/2013008.pdf

The VPEM's Dilemma

Bolstering Enrollment Hurts Margins, Reduces Graduation Rates
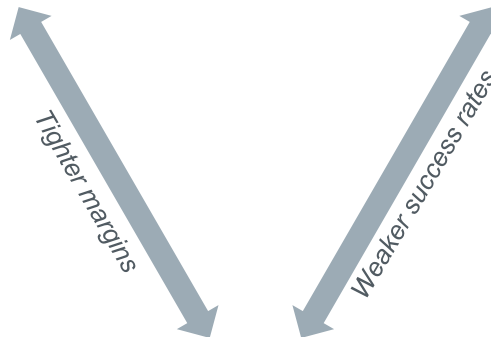
**How Do We Break the
Enrollment "Iron Triangle"?**

Raise Selectivity
Lower Enrollment,
Lower Price
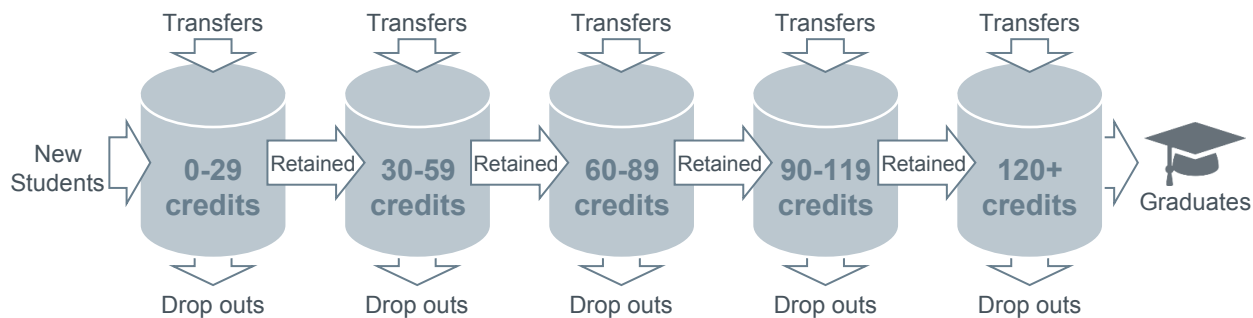
Raise Price
Lower Selectivity,
Lower Enrollment

Tighter margins

Weaker success rates

Raise Enrollment
Lower Price,
Lower Selectivity

Source: Education Advisory Board interviews and analysis

Retention Is a Growth Strategy

Modeling Enrollment Changes

EAB's Enrollment Revenue Calculator

New Students → | Transfers ↓ | Transfers ↓ | Transfers ↓ | Transfers ↓ | Transfers ↓ |
0-29 credits — Retained → **30-59 credits** — Retained → **60-89 credits** — Retained → **90-119 credits** — Retained → **120+ credits** → Graduates

Drop outs ↓ | Drop outs ↓ | Drop outs ↓ | Drop outs ↓ | Drop outs ↓
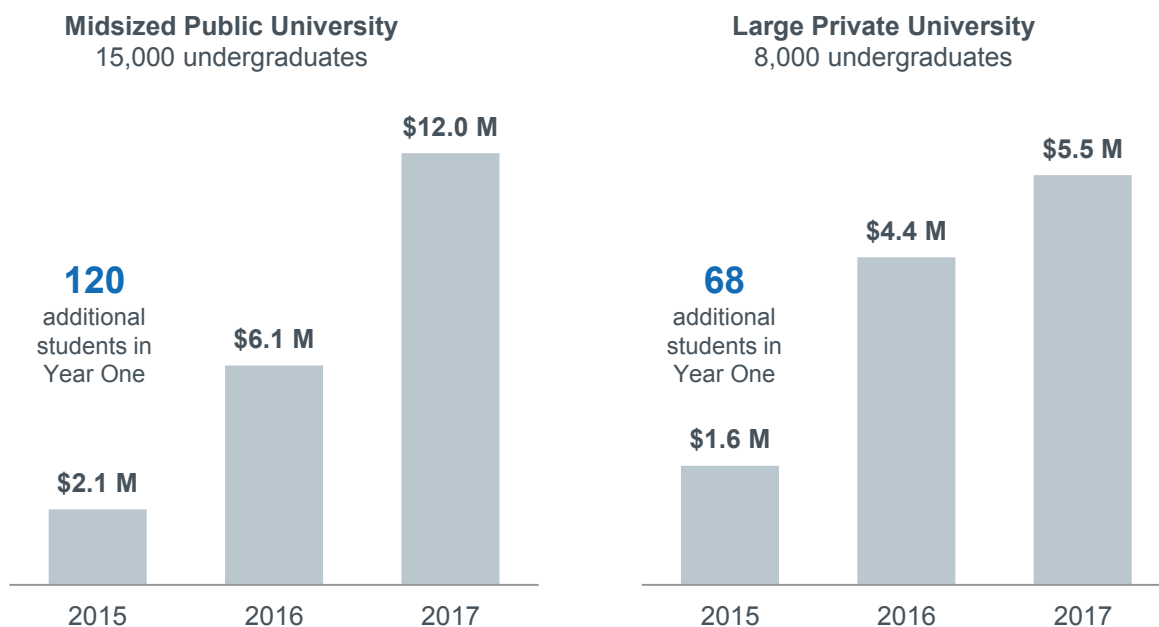
28 Enrollment, flow rate, and revenue inputs

Doing Well by Doing Good

Retention Improvements Promise Meaningful Revenue Gains

Revenue Gains from an Annual 1% Improvement in Institution-Wide Retention Over Three Years

Midsized Public University
15,000 undergraduates

Large Private University
8,000 undergraduates

Midsized Public University:
- **120** additional students in Year One
- 2015: $2.1 M
- 2016: $6.1 M
- 2017: $12.0 M

Large Private University:
- **68** additional students in Year One
- 2015: $1.6 M
- 2016: $4.4 M
- 2017: $5.5 M

The Student Success Collaborative

Bringing Universities Together Around a Shared Best Practice Solution

SSC

- Best Practice Research
- Analytics & Technology
- Change Management Consulting

Diversity of Schools Working Together

- AAU Members
- Hispanic-Serving Institutions
- Historically Black Colleges & Universities
- Institutes of Technology
- Liberal Arts Colleges
- Private Research Universities
- Public Flagships
- Religious Affiliates
- State Systems
- Urban Universities

150+
Member Institutions

38
States Represented

5,900
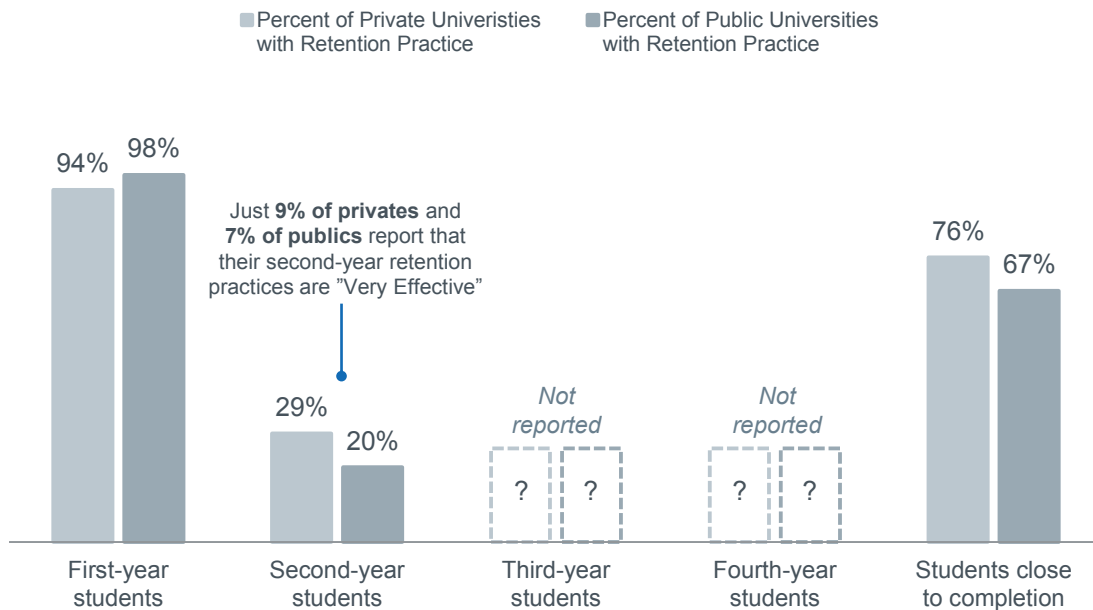Total End Users

6M+
Student Records

250M+
Course Records

Where Are Schools Investing in Success?

Current Practices Focused Very Early and Very Late, Not in the Middle

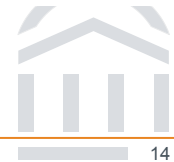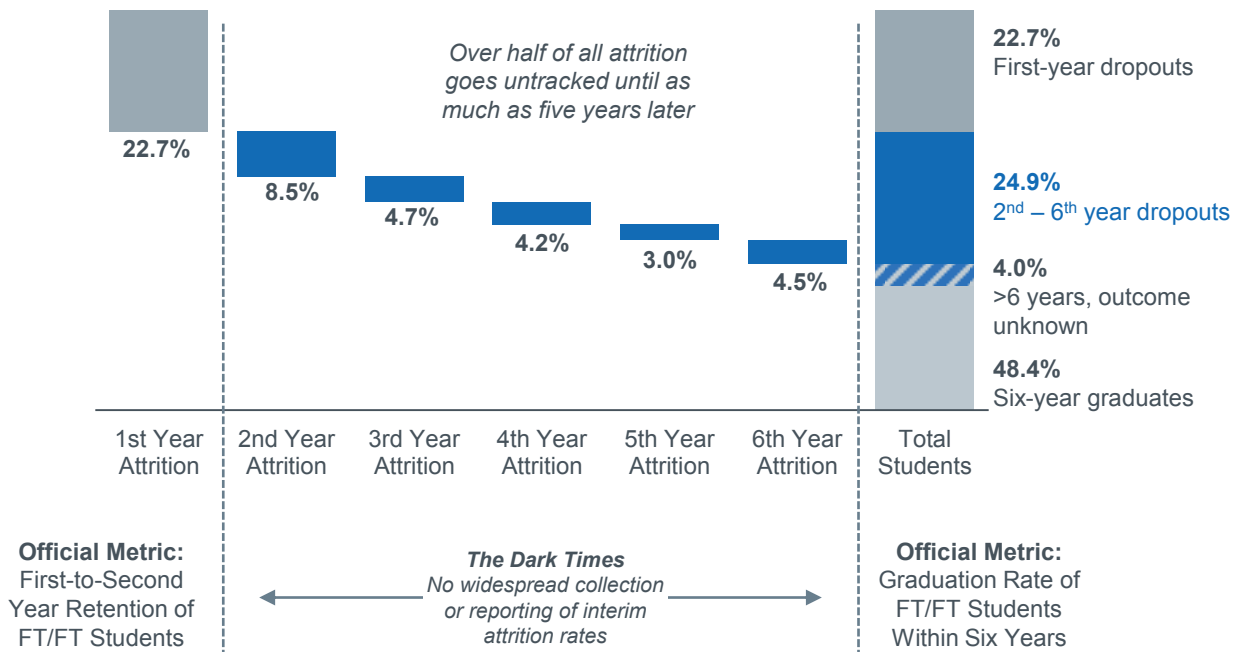**Prevalence of Retention Practices Targeted to Specific Students**

- ■ Percent of Private Univeristies with Retention Practice
- ■ Percent of Public Universities with Retention Practice

Just **9% of privates** and **7% of publics** report that their second-year retention practices are "Very Effective"

	First-year students	Second-year students	Third-year students	Fourth-year students	Students close to completion
Private	94%	29%	Not reported ?	Not reported ?	76%
Public	98%	20%	?	?	67%

Noel-Levitz "2013 Student Retention and College Completion Practices Report for Four-Year and Two-Year Institutions". http://www.noellevitz.com/BenchmarkReports

Missing Most of the Story

Student Success Practice Poorly Aligned to Real Attrition Patterns

Timing of Dropout
SSC National Data Set

Over half of all attrition goes untracked until as much as five years later

22.7%

8.5%

4.7%

4.2%

3.0%

4.5%

| 1st Year Attrition | 2nd Year Attrition | 3rd Year Attrition | 4th Year Attrition | 5th Year Attrition | 6th Year Attrition | Total Students |

22.7%
First-year dropouts

24.9%
2nd – 6th year dropouts

4.0%
>6 years, outcome unknown

48.4%
Six-year graduates

Official Metric:
First-to-Second Year Retention of FT/FT Students

The Dark Times
No widespread collection or reporting of interim attrition rates

Official Metric:
Graduation Rate of FT/FT Students Within Six Years

A New Way Forward?

Students Returning for a Second Year May Be Easier to Inflect

Predominant First-Year Attrition

Attrition in the Second-Year and Beyond

Academically Adrift

Severe academic difficulties, may need remediation and time to mature before completing

Poor Fit for Campus

Not well-matched to campus culture and offerings, will likely transfer to another school

Unknown Causes

Academically qualified and well-matched to campus, causes of attrition poorly understood

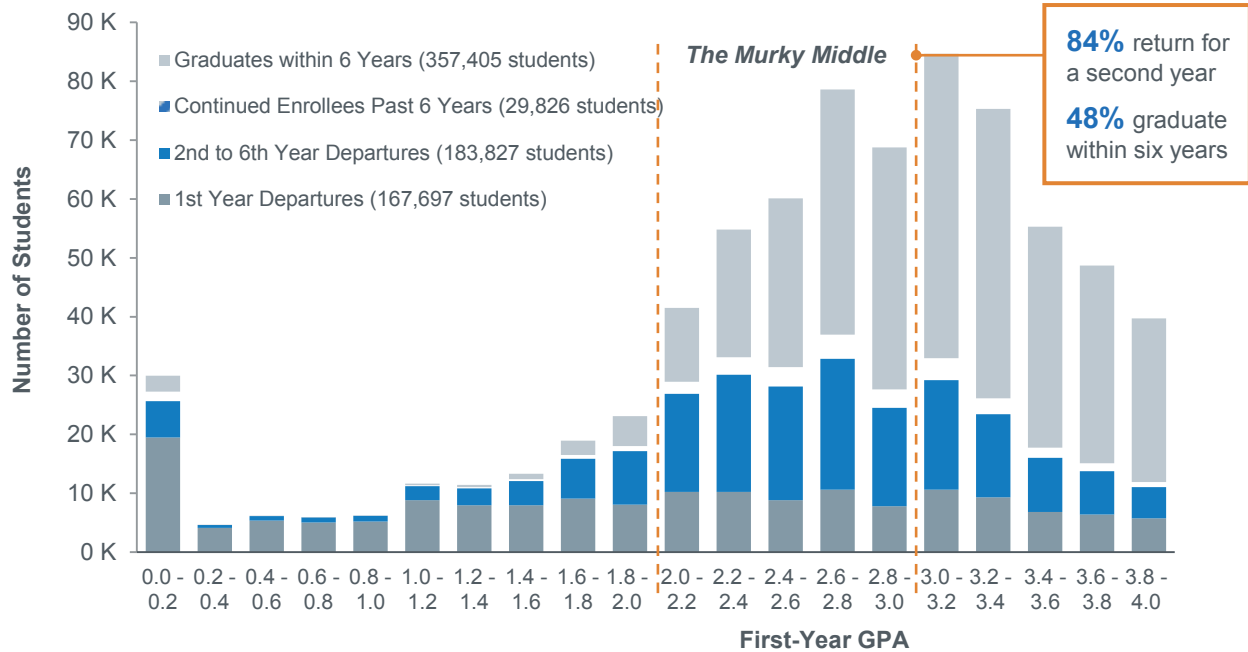**Too costly to remediate?**

Too difficult to engage?

Best chance for ROI?

Uncovering an Untapped Opportunity

Large Numbers of "Murky Middle" Students Leaving Later in College

Histogram of All Students by First-Year GPA
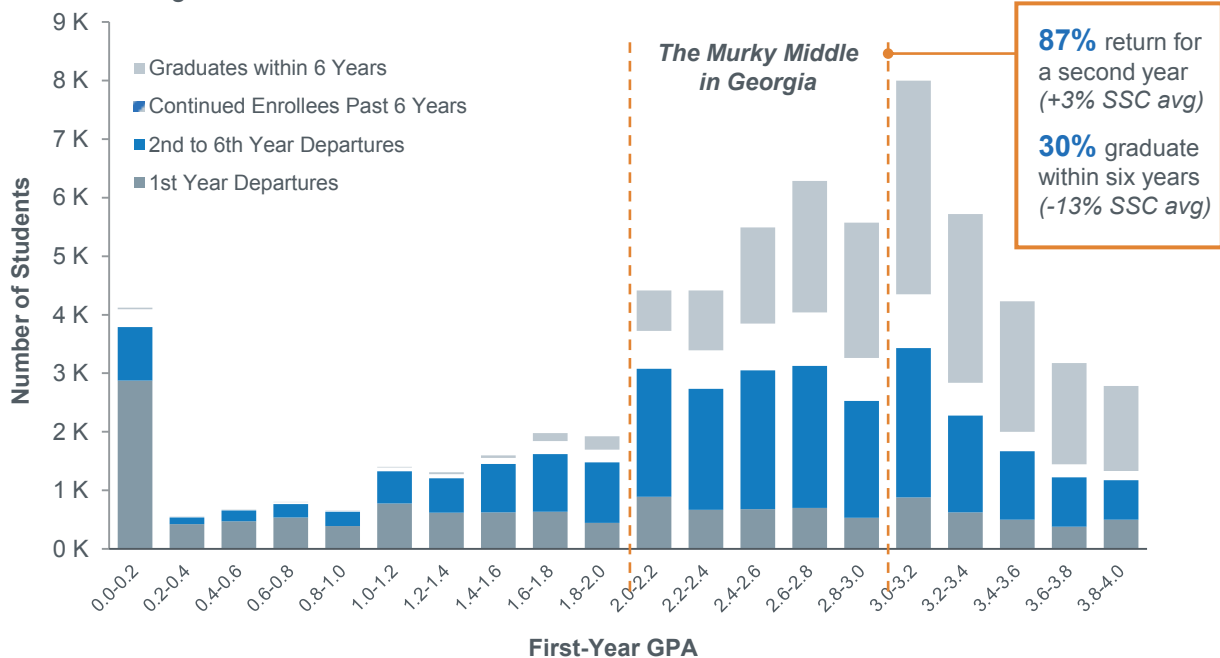SSC National Data Set

The Murky Middle

84% return for a second year

48% graduate within six years

Legend:
- Graduates within 6 Years (357,405 students)
- Continued Enrollees Past 6 Years (29,826 students)
- 2nd to 6th Year Departures (183,827 students)
- 1st Year Departures (167,697 students)

Y-axis: Number of Students (0 K – 90 K)
X-axis: First-Year GPA (0.0–0.2 through 3.8–4.0)

Source: Education Advisory Board interviews and analysis

Taking a Look at the Murky Middle in Georgia

Opportunity Could be Even Larger for USG Schools

Histogram of All Students by First-Year GPA
SSC Georgia Data Set

The Murky Middle in Georgia

87% return for a second year *(+3% SSC avg)*

30% graduate within six years *(-13% SSC avg)*

Legend:
- Graduates within 6 Years
- Continued Enrollees Past 6 Years
- 2nd to 6th Year Departures
- 1st Year Departures

Y-axis: Number of Students (0 K – 9 K)
X-axis: First-Year GPA (0.0-0.2 through 3.8-4.0)

Breaking Down Attrition Patterns in Georgia

Attrition Beyond the First Year More Common than National Average

**Timing of Dropout
Georgia Institutions**

21.8%

15.6%

8.0%

5.2%

3.8%

3.5%

| 1st Year Attrition | 2nd Year Attrition | 3rd Year Attrition | 4th Year Attrition | 5th Year Attrition | 6th Year Attrition | TOTAL |

21.8%
First-year dropouts

36.2%
2nd – 6th year dropouts

10.8%
>6 years, outcome unknown

31.2%
Six-year graduates

Source: Education Advisory Board interviews and analysis
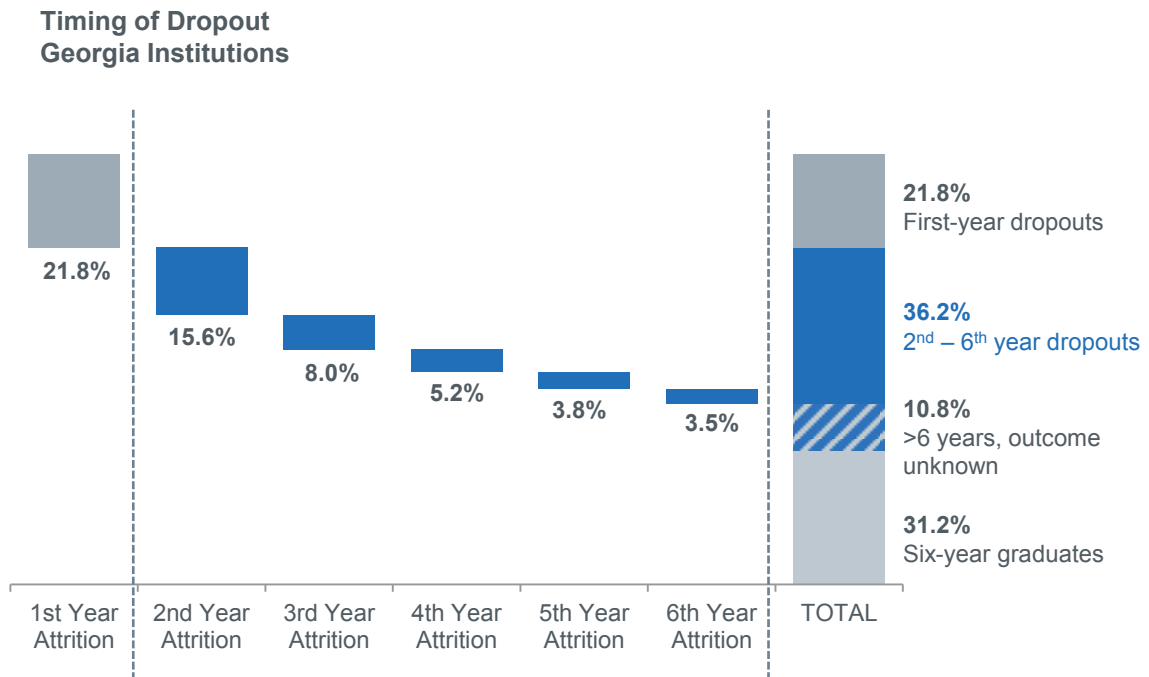
Kicking the Can Down the Road?

Georgia Doing Well in the First Year, but Gains Are Short-lived

Yearly Attrition as a Percent of All Attrition

National Data

47.7%

18.0%

65.7%
Total over first two years

| First Year | Second Year |

Georgia Data

37.5%

27.0%

64.5%
Total over first two years

| First Year | Second Year |
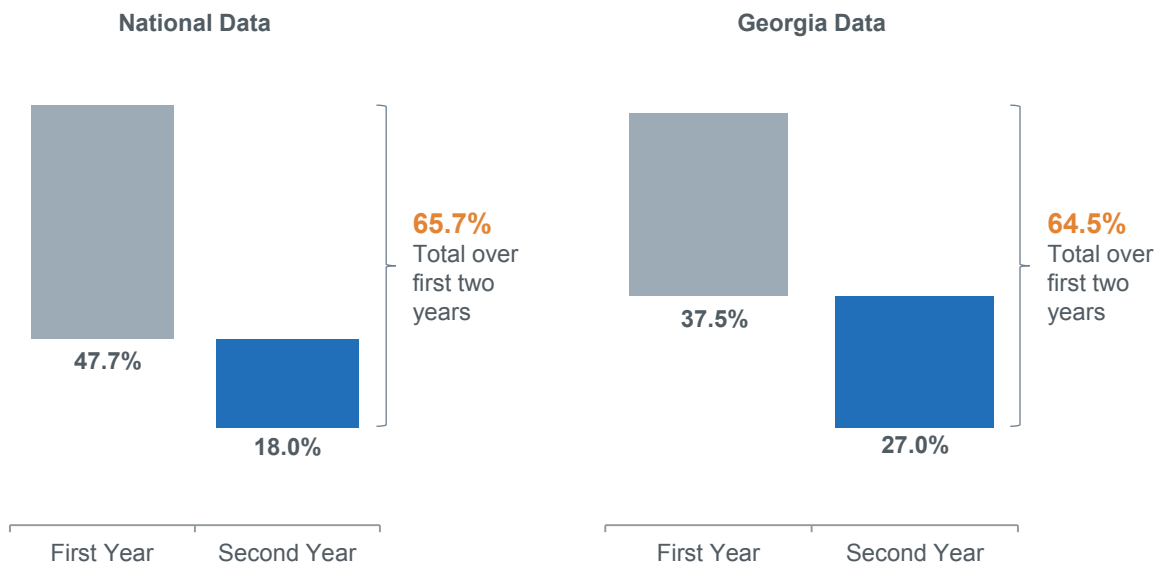
Academic Indicators of Distress

Early Performance Can Indicate Risk of Dropout Years in Advance

First Term Credit Completion Ratios
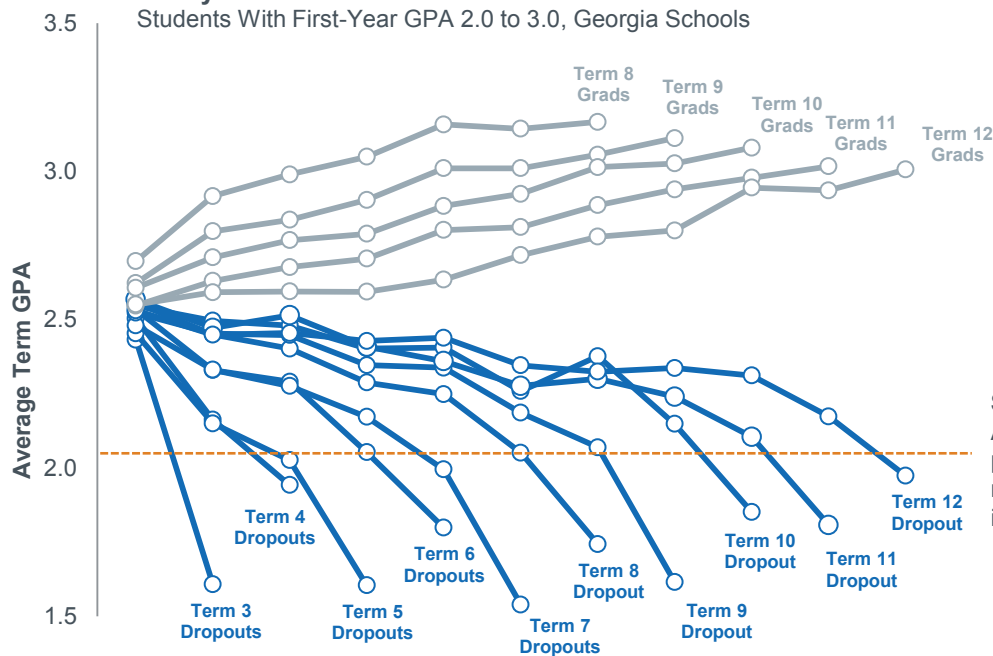SSC Schools in USG

0.56	0.69	0.70	0.73	0.74	0.71	0.90
Yr1 Dropouts	Yr2 Dropouts	Yr3 Dropouts	Yr4 Dropouts	Yr5 Dropouts	Yr6 Dropouts	Graduates
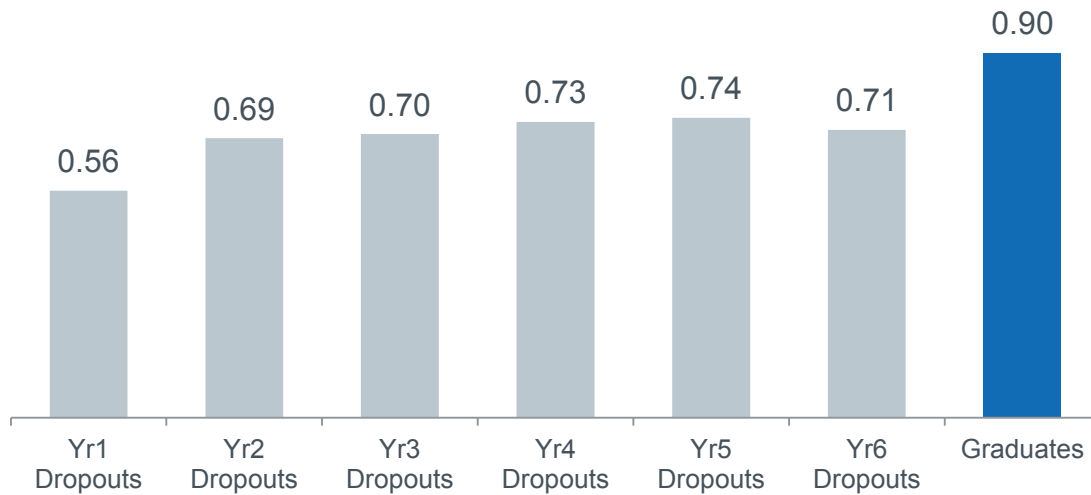
Long, Slow Decline Evident in GPAs

Many Murky Middle Dropouts Will Stay Enrolled and Struggle for Years

Murky Middle Term GPA Trends Over Time
Students With First-Year GPA 2.0 to 3.0, Georgia Schools

Average Term GPA

Term 8 Grads
Term 9 Grads
Term 10 Grads
Term 11 Grads
Term 12 Grads

Term 3 Dropouts
Term 4 Dropouts
Term 5 Dropouts
Term 6 Dropouts
Term 7 Dropouts
Term 8 Dropout
Term 9 Dropout
Term 10 Dropout
Term 11 Dropout
Term 12 Dropout

Surprise finding:
Academic probation policies won't catch many dropouts until it's too late

Enabling Data-Driven Advising

SSC Arming Advisors with Tools to Spot Hidden Risk Trends
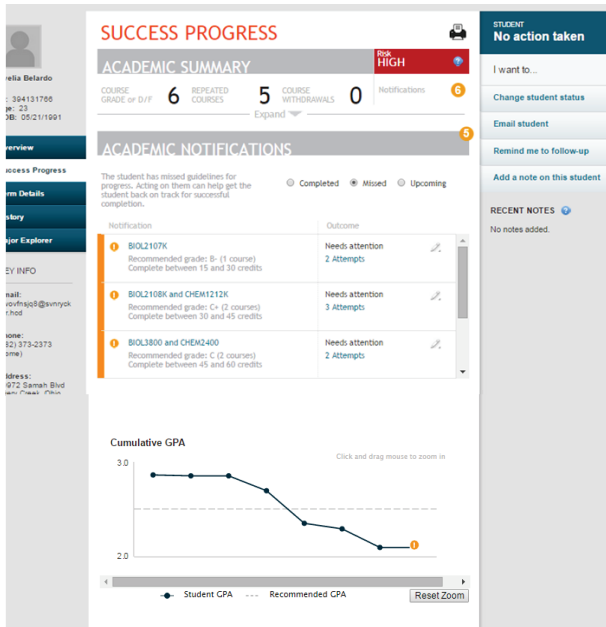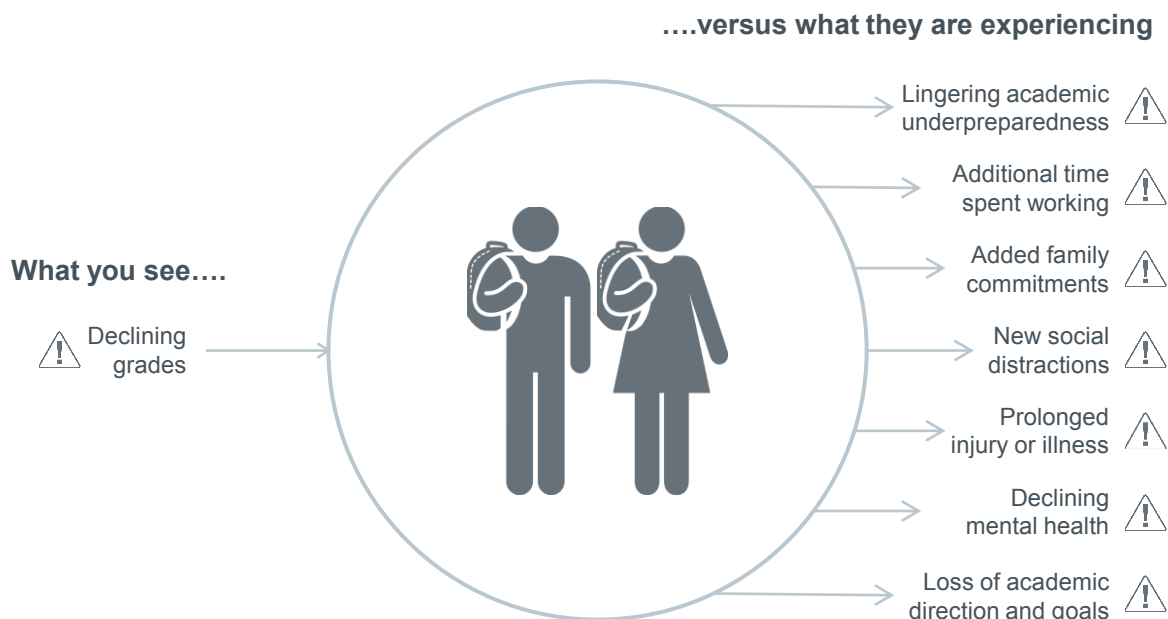

Inside the SSC Advising Platform:

- Failed Courses
- Withdrawn Courses
- Critical Course Completions
- Critical Course Grades
- GPA Trends
- Credit Trends
- Risk Scores

But What is Really Going Wrong?

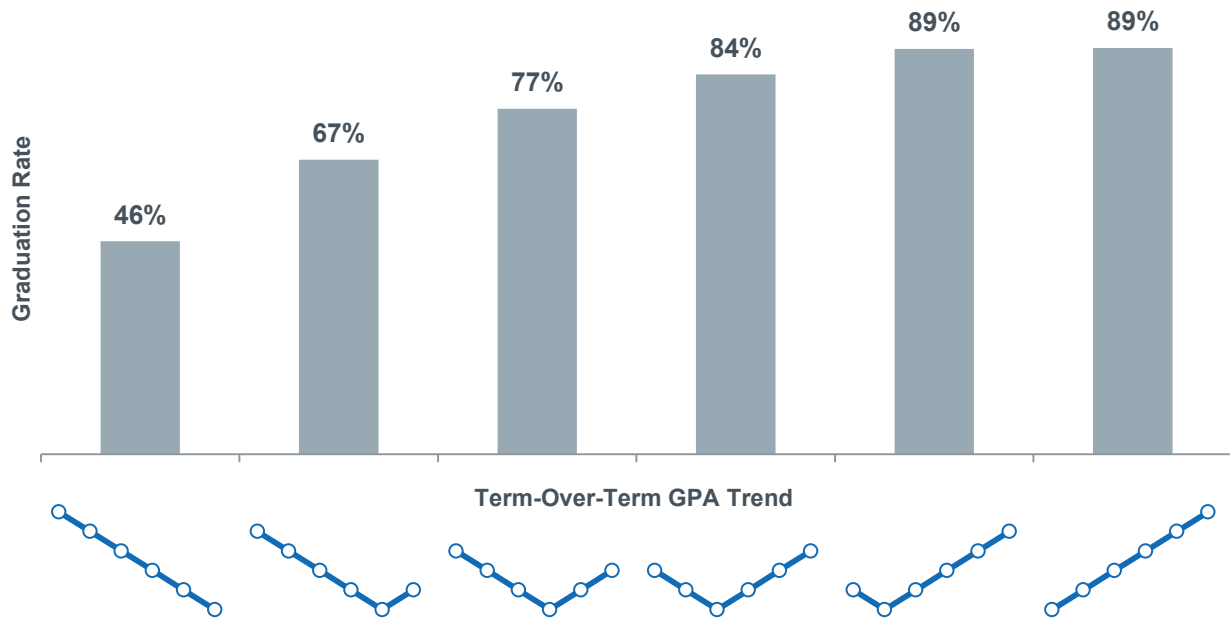## GPA Trends Merely Indicate a Diverse Set of Underlying Risk Factors

….versus what they are experiencing

What you see….

⚠ Declining grades

- Lingering academic underpreparedness ⚠
- Additional time spent working ⚠
- Added family commitments ⚠
- New social distractions ⚠
- Prolonged injury or illness ⚠
- Declining mental health ⚠
- Loss of academic direction and goals ⚠

Hope on the Horizon

Outcomes Dramatically Improve If Downward Trend is Reversed

Term GPA Trends vs. Graduation Outcomes
Murky Middle Students Who Complete At Least Six Terms

Graduation Rate

46%   67%   77%   84%   89%   89%

Term-Over-Term GPA Trend

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Source: Education Advisory Board interviews and analysis

A New Perspective on Student Success

Old Approach		New Approach
Target resource intensive support services and staff to highest risk students		*Recognize "murky" middle students as attrition risks with opportunity for improvement*
Focus efforts and programs on first year students to boost retention		*Address sophomore and upper division attrition and emphasize persistence to graduation*
Monitor academic progress to identify students at risk of probation		*Apply a holistic risk model with academic and non-academic factors to identify students at risk of withdrawal*

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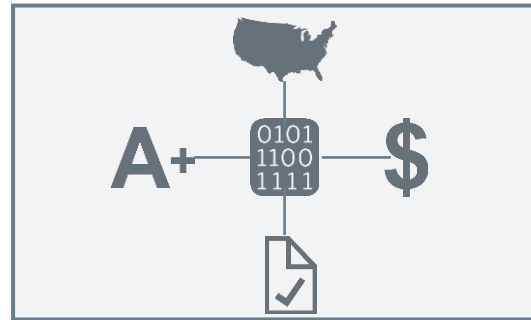# A More Holistic Definition of Risk

The Old Thinking

Use available admissions data to identify most academically underprepared students prior to matriculation
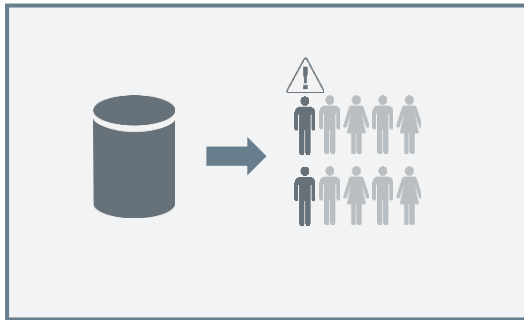
The New Thinking

Develop holistic model to predict likelihood of withdrawal based upon historical analysis of academic and attrition risk
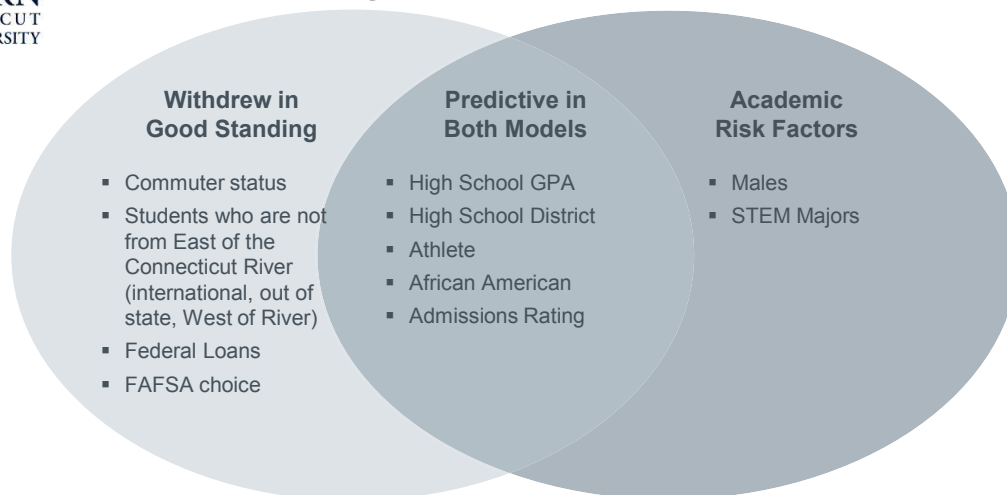

Holistic Assessment of FY Attrition Risk

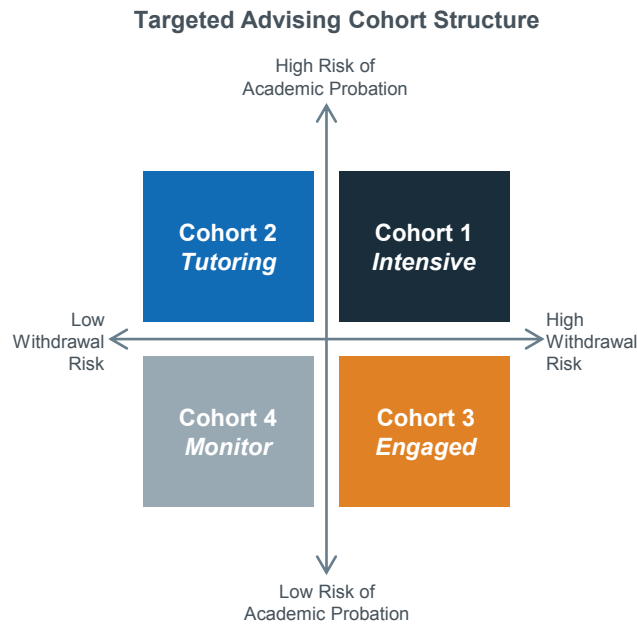Step 1: Identify Historical Patterns of Student Attrition

EASTERN
CONNECTICUT
STATE UNIVERSITY

Isolating Characteristics Associated with Higher Risk of Withdrawal

Withdrew in Good Standing

- Commuter status
- Students who are not from East of the Connecticut River (international, out of state, West of River)
- Federal Loans
- FAFSA choice

Predictive in Both Models

- High School GPA
- High School District
- Athlete
- African American
- Admissions Rating

Academic Risk Factors

- Males
- STEM Majors

Source: EAB interviews and analysis.

Assessing Risk of Incoming Class

Step 2: Create an Initial Risk Profile Based on Pre-Enrollment Data

Targeted Advising Cohort Structure

High Risk of
Academic Probation

Cohort 2 *Tutoring*	**Cohort 1** *Intensive*
Cohort 4 *Monitor*	**Cohort 3** *Engaged*

Low Withdrawal Risk ← → High Withdrawal Risk

Low Risk of
Academic Probation

Active Ingredients

- Students assigned to cohorts based on attrition risk and forecasted academic performance. Initial placement can be adjusted based on student behavior

- Interventions are targeted to students differently based upon their assignment. Professional advising staff prioritize interaction frequency based on a student's assigned risk cohort

- Caseload model facilitates tracking of student performance to advisors
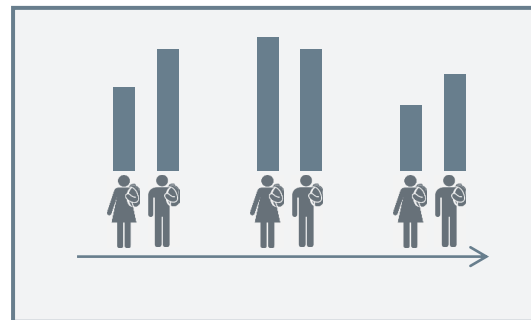

Student Risk Changes Over Time

The Old Thinking

Assigned risk level remains static after initial assessment at matriculation
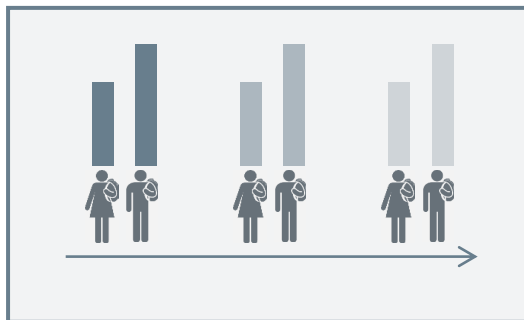
The New Thinking

Student risk is dynamic and changes over time based upon behaviors

A Proxy for Grit

Step 3: Calibrate Risk Based on First Week "To Dos"

Welcome to ABC University!
Fall Freshmen To Do List

Week One

- ☐ Pay Registration Fees
- ☐ **Pick up ID Card**
- ☐ Purchase Books
- ☐ **Schedule Meeting with Academic Advisor**
- ☐ Verify Meal Plan
- ☐ **Attend Mandatory Library Orientation**
- ☐ Complete Online Alcohol Prevention Program
- ☐ Purchase Parking Permit

Week One Leading Indicators

To Do List Serves as Proxy for Grit, Readiness

1 Collection of ID Card

Failure to pick up ID card during the first week of class may signify a lack of connection to the institution, inattention to detail, or disengagement.

2 Scheduled Meeting with Academic Advisor

Proactive scheduling of an advising appointment is indicative of a student's commitment to their academic success and planning.

3 Attendance at Library Orientation

Failure to attend a mandatory on-campus event is an early sign that a student may not be taking his or her academic commitments seriously. Schedule these sessions through Banner to allow to simplify tracking and quickly identify "no shows".

Source: EAB interviews and analysis.

Other Commonly Used Proxies for Grit

Institutional Commitment	*Campus Engagement*	*Health and Well-Being*
Pre-enrollment campus visit	Club and activity attendance	Dining hall card swipes
Visiting the campus website	Athletic event attendance	Visits to campus gym
Payment of housing deposit	On campus leadership role	Participation in intramurals

Right Student, Right Intervention, Right Time

The Old Thinking

"One size fits all" approach to advising first year students

The New Thinking

Predicted risk dictates individual student intervention frequency and type

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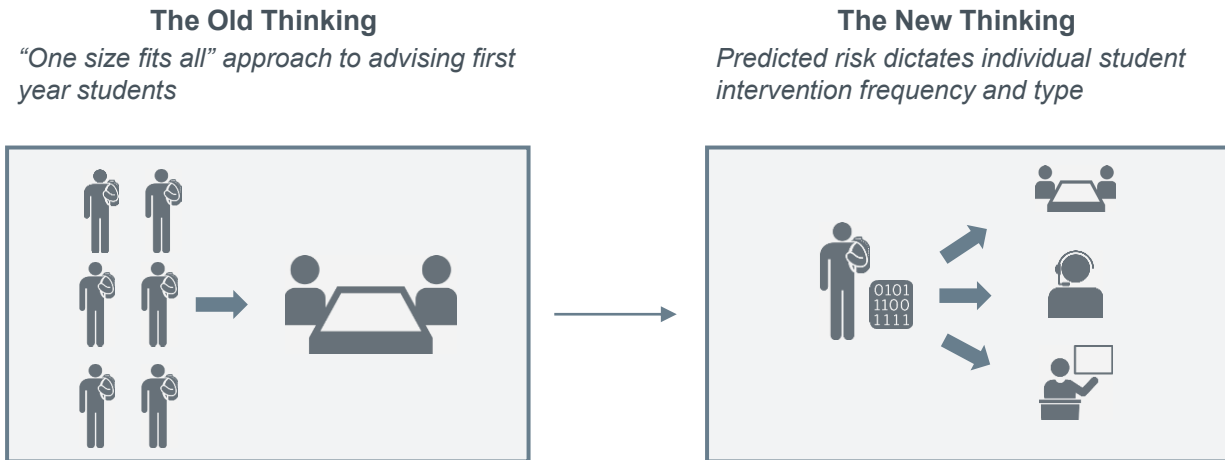
Scaling Personalized Intervention

Step 4: Provide FY Advisors Intervention Strategy For Each Cohort

High Academic Probation Risk

Students who did not participate in library orientation are reassigned to Cohort 2.

Cohort 2
Tutoring
n=171
Academic risk; receive intensive tutoring

Cohort 2a
n=45

Cohort 1
Intensive
n=211
Academic and attrition risk; receive targeted tutoring, intrusive advising, and engagement services

Intervention focused on academic support, supplemental instruction, remediation.

Low Withdrawal Risk ←————————————————→ High Withdrawal Risk

Cohort 4
Monitor
n=320
High likelihood of persistence; monitor engagement and first term performance

Cohort 3
Engaged
n=232
High flyer population; increase campus engagement but realize likelihood of transfer

Intervention focused on engagement in the department, co-curricular and extra-curricular learning.

Low Academic Probation Risk

Source: EAB interviews

Retention Increases Across Cohorts

Cohort	% Change	2011 % Retained	2012 % Retained
Cohort 1: Intensive	.5%	67.3%	67.8%
Cohort 2: Tutoring	2.6%	74.9%	77.5%
Cohort 3: Engaged	4%	71.9%	75.9%
Cohort 4: Monitor	1.3%	83.7%	85%
Total	1.6%	75.5%	77.1%

Four Types of Major on Campus

Tracking Student Flow In and Out of Programs

Donor Majors

Students flow out of these majors more often than they flow in

Example: Computer Science

Static Majors

Students who initially declare this major rarely switch; few students flow in

Example: Nursing

Acceptor Majors

Students flow into this major but few students flow out

Example: Social Work

Pivot Majors

Equal flow of students in and out of the major

Example: English

Source: EAB interviews and analysis.

Visualizing Student Flows Between Majors
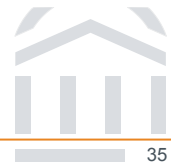
USG Student Major-Switching Analysis
Groupings of Majors from the EAB Student Success Collaborative

Rate of Student Flows In and Out of Major (y-axis)

Percentage of Students in a Major Who Switched into the Major (x-axis)

Music Education

Acceptor Majors — Sociology

Spanish, Political Science, History, Management

Marketing, Math, Business Info Systems

Criminal Justice, Social Work, Special Education

Static Majors

Mass Communications, Pivot Majors, Theatre

Art, Acounting, English

Early Childhood Education, Computer Science, Donor Majors

Biology, Chemistry, Music, Nursing

Net Receivers of Students

Net Donors of Students

20%   40%   60%   80%

Multiple Applications Across Campus

Accountability Metrics by Major

Retention and graduation targets; weighting importance of DFW rates, service course availability

Course Capacity Planning

Forecast demand for lower and upper division courses and sections by term and year

Coordinating Prerequisites

Maximize credit transfer and minimize time to degree implications of major switching

Guiding Advising Caseloads

Optimize advising assignments to student best fit major pathways

Promoting Continuity in Academic Advising

The Old Thinking

Advisors assigned based upon institutional structures and departments; often requiring reassignments for major switching

Advisor A

Degree Plan   *Advisor B*
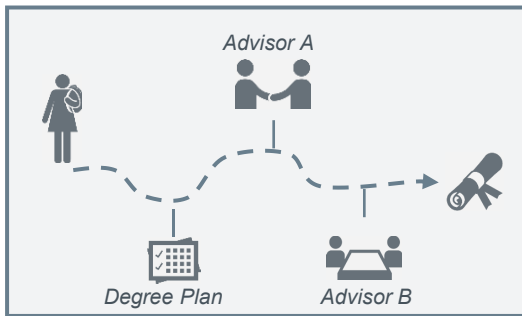
The New Thinking

Student movement through the institution dictates advisor caseloads; optimizing consistency despite major switching

Advisor A
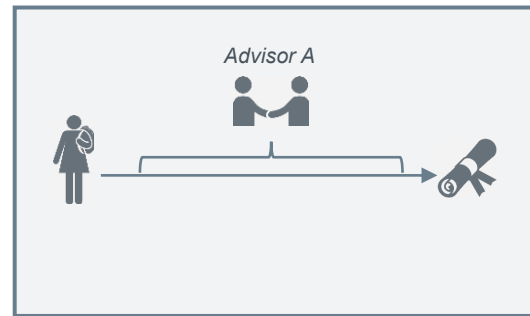
Mapping Student Pathways to Degree

How do students flow in and out of majors at the institution?

Map Historical Paths to Degree

- Analysis of first and last major for 5 years of student records reveals significant student migration across the institution

65% Of students graduate in 1 of 10 majors

75% Of students switch majors at least once

Categorize Majors by Student Flow Patterns

- Four types of major identified based on student flow patterns:
  - **Donor Majors:** Students exit these programs and few enter
  - **Acceptor:** Students enter these majors from other programs
  - **Pivot:** Students equally enter and exit these majors
  - **Static:** Very few students enter or exit

Assign Advisors to Major Clusters

- Advisors trained in set of thematically-related majors and a sub-set of common destination majors
- Goal: 80% of students remain with the same advisor despite major switching

Next Steps

Examine requirements for majors in clusters to promote coordinated prerequisites

Source: EAB interviews and analysis.

Personalization Despite Major Switching

UTSA Redeploys Academic Advising to Match Student Flow

Life and Health Sciences Cluster

Marketing

Communication

Primary Majors

Mathematics

Chemistry

Biochemistry   Public Health

Secondary Majors

Biology   Kinesiology

Health

Psychology

Management

Interdisciplinary Studies
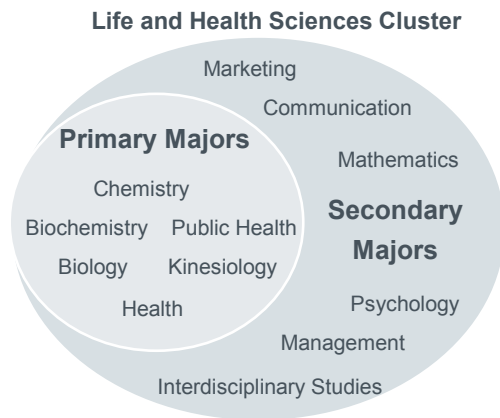
82%

Percent of students will remain with one advisor

12

Average number of majors an advisor is responsible for

Active Ingredients

- Students assigned to an advisor based on first major declared

- Advisor cross-trained in 10-14 programs of study based on student major switching patterns

- Goal is that >80% of students can maintain relationship with 1 advisor despite switching majors

- Advisors organized in clusters reporting to a central director who reports to the provost

- Special cluster for undeclared students to assist with exploration and placement

Source: EAB interviews and analysis.

Migrating from Departments to Clusters

UTSA Implementation Timeline

Advising Restructuring Plan announced

Advisors submit top 3 cluster preferences

Confirmed placement of advisors in new structure

Opened new advising office to students

Summer 2013

Summer 2014

Executive Director of Advising appointed

Task forces oversee implementation

Deployed training sessions for all advisors
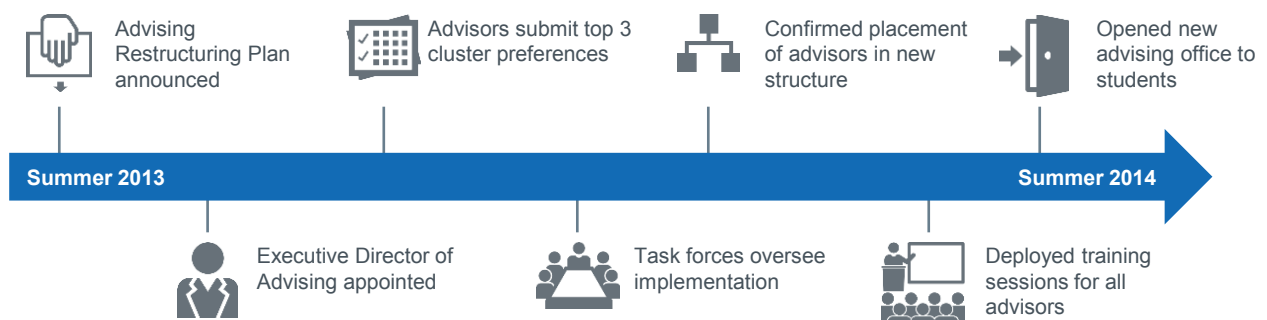
Implementation Advice

✓ Invite advising staff to participate on taskforces to provide input on future state operations and garner buy-in

✓ Allow advisors to state cluster preferences, but communicate placement will ultimately be dictated by student enrollments

✓ Confer management responsibilities to advising supervisor with central oversight

Source: EAB interviews and analysis

Continuous Monitoring of Student Behavior

Harnessing the Power of Technology to Intervene Just in time

Rio Salado College

LMS, Digital Courses

Student log-ins, completion of online assignments, discussion board posts, lecture capture interactions, downloading online course materials

UNIVERSITY OF NORTH·TEXAS

Swipe Card Data

Tracking check-ins at advising, tutoring and writing centers, career services, financial aid, lectures, symposia, dining hall, parking garages, gym

UK UNIVERSITY OF KENTUCKY

Mobile Micro-Surveys

Apps and student portal micro-surveys prompt behaviors such as purchasing textbooks, registering for classes, or assessing stress

Source: EAB interviews

Actionable Checklists >> Service Tutorials >> Personalized Alerts >> *Engagement Feed*

A Data-Driven Lesson in User-Centered Design
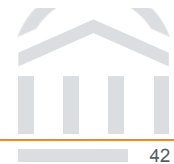
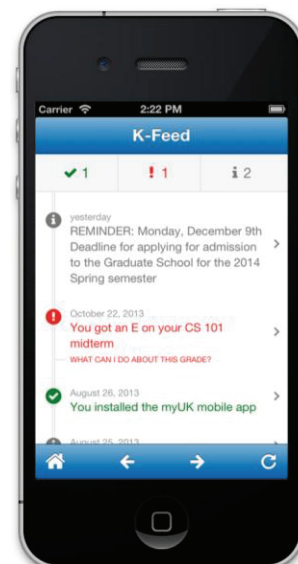Innovative Mobile App Reflects and Inflects Holistic Student Experience

UK

From a Score…
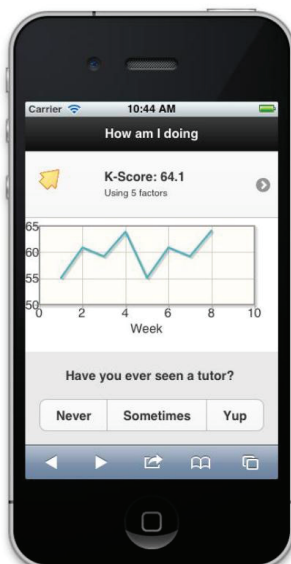
To a Health Indicator…

…To a Personalized Feed

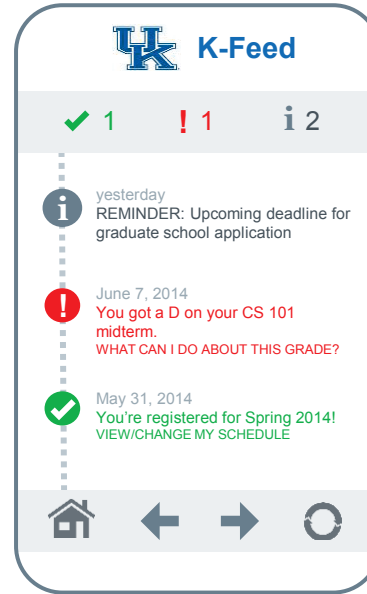Source: Vince Kellen, various presentations (www.slideshare.net/vkellen).
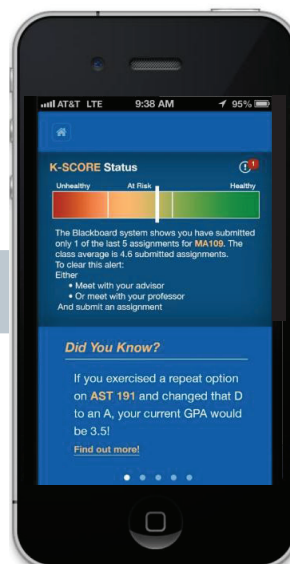
Calibrating Messages With Analytics

Microtargeting Enables Bigger Impact and Deeper Analysis

Easy to Get Lost in Sea of Messages from Administration, Clubs, Friends, and Family

An abundance of platforms…

A cacophony of voices…

Analytics Behind K-Feed Enable Personalization and Ensure Relevance

UK K-Feed

✔ 1   ! 1   ℹ 2

ℹ **yesterday**
REMINDER: Upcoming deadline for graduate school application

❗ **June 7, 2014**
You got a D on your CS 101 midterm.
WHAT CAN I DO ABOUT THIS GRADE?

✅ **May 31, 2014**
You're registered for Spring 2014!
VIEW/CHANGE MY SCHEDULE

Flexible Platform
Campus units opt in; not an administrative mouthpiece

Smart Curation
IT/Analytics group can tailor feed according to usage metrics

Micro-Surveys
Institution and feed gain valuable data from targeted user input

Parent Opt-In
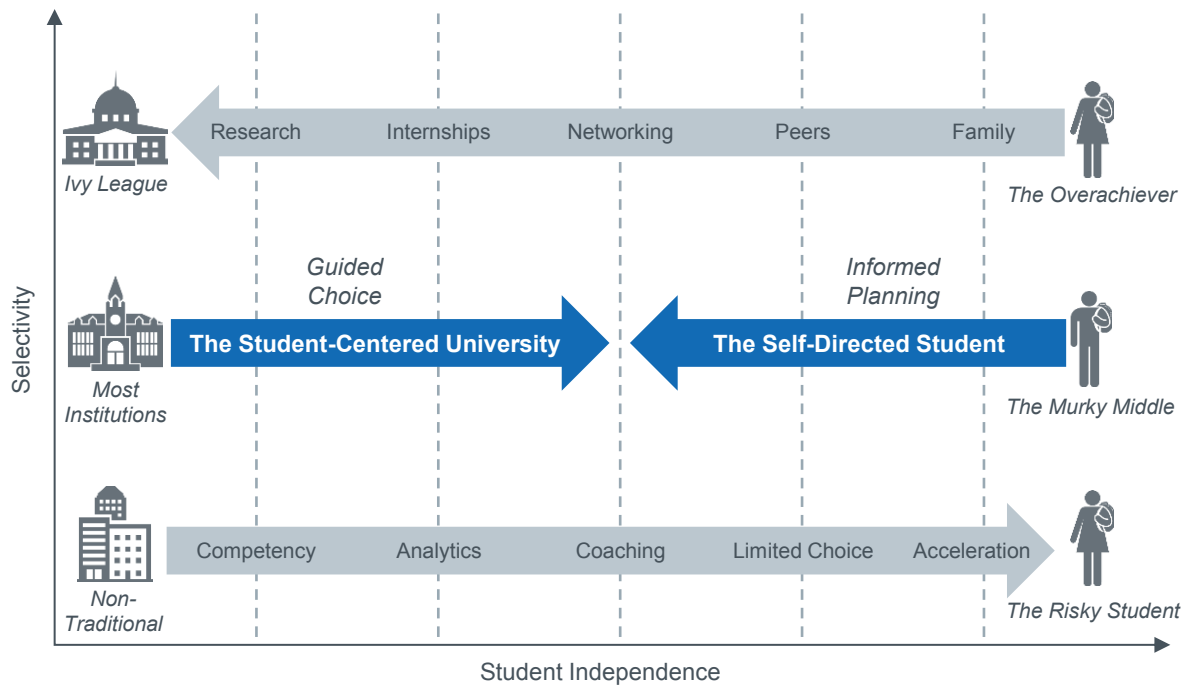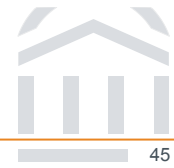Students can allow parents to view feed to aid awareness

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Behind the Scenes

Timely, Personalized Feedback Requires Advanced Infrastructure

Static Risk Score

Demographic Information

Campus Units

User analytics   *Input queries, design rules*

Activity Score

Bb LMS

Advising Activity

⚠ Alert System

Swipe Cards

Clickers

A+ Tutoring Attendance

Echo 360

Dynamic Risk Score

Degree Progress

Central Analytics Platform

Micro-survey results, transactions   *Notifications based on score, activity*

14,000+
Active app users

UK Mobile App

100,000+
Micro-survey responses in last academic year
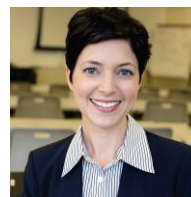
Meeting Students Halfway

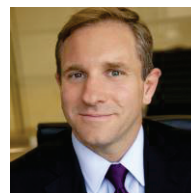Navigating Between Extremes in Student Success

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EAB Contact Information
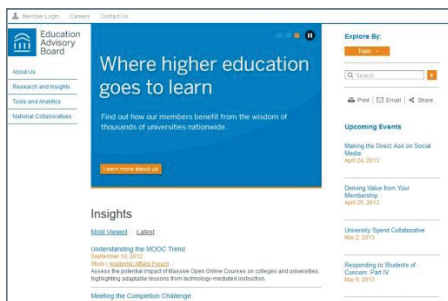
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