It’s Better to Lead Than Lag: How Leading Indicators Can Drive Institutional Change

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Donald Wood, Vice President, Institutional Effectiveness, Odessa College
Exercise

- Name one data point that has made a difference in your life – that has affected you personally
- Was it leading or lagging?
- Report out
Creating a Data-Informed Culture in Community Colleges

A NEW MODEL FOR EDUCATORS

Brad C. Phillips and Jordan E. Horowitz
Leading & Lagging Indicators

- **Leading indicators** are in your control and lead to your hoped-for success.
- **Lagging indicators** are not in your direct control and are influenced by your leading indicators.

**Lagging Indicators** = **Big Goal**

**Leading Indicators** = **Evidence of Progress**
Leading & Lagging Indicators

- Borrowed from the fields of economics and business
- **Leading indicators** are in your control and lead to your hoped-for success
- **Lagging indicators** are affected by what you do to influence your leading indicators
- What is leading and what is lagging depends on where you stand

Persistence Beyond First Term in College
Leading & Lagging Indicators

Completion
Milestones
30 units, Core Curriculum
Term to Term Persistence
Successful Course Grade (A,B,C)
Retained in Class (All non-W's)
Get students enrolled in classes
Get students connected with your institution

Lagging
Low amount of control

Leading
High amount of control
Lagging Indicators for Education

High School Graduation Rates by Student Subgroup for School Year 2014–15

First to Second Year College Persistence

- Public 2-Year: 66% (59%), 60%
- Public 4-Year: 85% (78%), 78%
- Private 4-Year: 90% (78%), 79%
Leading Indicators for Education

- Below 2.0 GPA
- 3.0 to 3.5 GPA

Formative Assessment Cycle:
- Examine Student Work
- Administer Tasks
- Inform Teacher Knowledge
- Inform Instruction
What Is an Indicator and What Isn’t

- Measurable
- Directly related to intended outcomes for the target population
- Can be at the individual or group level
Indicator Relationships

Leading

Lagging
Leading and Lagging Indicators: Relationships
Leading and Lagging Indicators: Relationships

- Eating Habits
- Exercise
- Stress Levels

Healthy Blood Pressure
Leading and Lagging Indicators: Relationships
Leading and Lagging Indicators: Relationships

Attendance → Pass course with a C or better → Persist to next course in sequence → College Completion
Leading and Lagging Indicators: Relationships

- Attendance
- Pass course with a C or better
- Persist to next course in sequence
- College Completion
  - Certification test
  - Capstone project
Leading and Lagging Indicators

Start with the lagging indicators and backward map to the leading indicators.
Recap

- Leading indicators are in your control and lead to your hoped-for success
- Lagging indicators are affected by what you do to influence your leading indicators, they’re your big goals
- What is leading and what is lagging depends on where you stand
- Leading and lagging indicators can relate to each other in multiple ways
- Indicators are measurable on the target population, whether individuals or groups
- Be sure to distinguish between indicators, activities, and objectives
- Start with lagging indicators and backward map to leading indicators
Top Performing College: Odessa College
On the Texas State “recommended for defunding” list
- Poor morale
- Poor fiscal management (before new President arrived)
- Lowest graduation rate in the country (iPeds first-time, full-time)
- Need to compete with oil economy (students/staffing)
- Poor high school graduation rates w/only 50% going on to college
- Population change to ‘minority majority’ in 2007-’08 (Latinx)
- Knew that we needed to improve
- Decided to focus on course retention
- Decided to make college ready for students we had
Research

- **Ultimate Question:** How to improve student outcomes?
- **Previous Research:** Class attendance correlates with outcome
- **Basic Premise:** Can’t teach them if they aren’t there
- **First Step:** Examine patterns of student drops

**Primary Observation:** Basic pattern of student behavior was that after census date they dropped courses more often from some instructors than other instructors.

**Secondary Observation:** Instructors were generally consistent over time as to whether they had relatively high or relatively low student drops related to peers teaching the same course.

**Hypothesis:** Differences in instructor drop rates are the result of differences in the mix of students they teach.
Factors Analyzed in Student Mix

Conclusion: Changing student mix does not turn a relatively high drop instructor into a relatively low drop instructor.
Odessa College
Instructor Interviews
Findings

Different Teaching Methods

Human Relationships
Instructor Interview Outcome

Odessa’s Four Instructional Commitments

- Interact with students by name
- Closely monitor student progress
- One on one meetings
- Masters of paradox
Student Course Retention Rates (Latest Data - 2017)
Significant Increases in Course Retention

First Time Student Course Retention
- Fa 10: 86.3%
- Fa 17: 97.2%

All Students Course Retention
- Fa 10: 87.5%
- Fa 17: 96.0%
**Student Course Success Rates**
(Latest Data - 2017)

**Significant Increases in Course Success**

<table>
<thead>
<tr>
<th></th>
<th>First Time Student Course Success</th>
<th>All Students Course Success</th>
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<tbody>
<tr>
<td></td>
<td>Fa 10</td>
<td>Fa 17</td>
</tr>
<tr>
<td></td>
<td>61.8%</td>
<td>77.1%</td>
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Odessa’s Administrative/Student Services Commitments

- Varies by department
- Must make commitments to engagement
- Commitments are tracked
- Sample commitments:
  - Commit to making eye contact, smiling, saying hello, acknowledge students
  - Commit to recognizing good or vulnerable behavior – celebrate or intervene
  - Commit to engaging with students – establishing a personal connection
  - Commit to developing clear and coherent practices and processes for students – eliminating barriers.
Students Completing (Graduating) Increased by 166%
The Odessa College 2014 Cohort has the Highest 3-year Graduate Rate in Texas - more than 20 percentage points above the Texas Average.
The Persistence Project
Persistence Project’s Guidelines for the First Three Weeks

- Setting clear, high academic standards, but not having policies that easily doom students
- Learning students’ names and having students learn one another’s name
- Giving feedback on an assignment or quiz
- Holding 15-minute one-to-one conferences in order to get to know students
Commitments for the Rest of the Semester

- Acquainting students with resources and opportunities at Oakton
- Attending at least one co-curricular event with students
- Contacting students who are struggling in class and offering them help
- Talking with students about completing an associate degree or certificate
- Participating in assessment activities for the project as a whole
Immediate Reactions and Rapid Growth

- The amazing transformation of classes
- Responses from students
- Decision to expand as rapidly as possible
- Customization by departments to meet the needs of their disciplines
- Six semesters......Over 200 faculty members......22 departments and programs......Face-to-face and online classes
Participation in Fall 2016 at about 25%

One quarter of students enrolled in at least one course section participating in the Faculty Initiative for Student Persistence

- Participated (n = 2,388)
- Not-Participated (n = 7,024)
Fall 2016 to Spring 2017 Persistence Rates Increase: New Students Enrolled in Fall 2016

- Participated (n = 715): 82.70%
- Not-Participated (n = 1,954): 58.60%

Increase: 24.1%
Fall 2016 to Spring 2017 Persistence Rates Increase: New Students Enrolled in Fall 2016 by Race and Ethnicity

Fall 2016: 85.20% Participated, 15.30% Not-Participated
Spring 2017: 78.90% Participated, 26% Not-Participated

New Students Enrolled in Fall 2016 by Race and Ethnicity:
- Asian: n = 189, 85.20% Participated, 15.30% Not-Participated
- Black: n = 38, 80.60% Participated, 26% Not-Participated
- Latinx: n = 185, 83.50% Participated, 19% Not-Participated
- White: n = 330, 80.60% Participated, 26% Not-Participated
- Other: n = 327, 51.90% Participated, 48.10% Not-Participated

Total Fall 2016: n = 929
Total Spring 2017: n = 375

Persistence Rates Increase:
- Asian: 69.90% to 85.20%
- Black: 45.90% to 78.90%
- Latinx: 59.40% to 78.40%
- White: 57.50% to 83.50%
- Other: 51.90% to 80.60%
### Lake Washington Tech: Equity

#### Pass Rates by Race/Ethnicity

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<th>Race/Ethnicity</th>
<th>2014-2016</th>
<th>n (duplicated)</th>
<th>2016-2017</th>
<th>n (duplicated)</th>
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<tbody>
<tr>
<td>African American</td>
<td>71%</td>
<td>319</td>
<td>90%</td>
<td>189</td>
</tr>
<tr>
<td>Alaska Native, American Indian, Pacific Islander</td>
<td>79%</td>
<td>117</td>
<td>95%</td>
<td>97</td>
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<tr>
<td>Asian</td>
<td>92%</td>
<td>941</td>
<td>93%</td>
<td>594</td>
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<tr>
<td>Hispanic</td>
<td>86%</td>
<td>388</td>
<td>91%</td>
<td>251</td>
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<tr>
<td>Not Reported, Other</td>
<td>87%</td>
<td>850</td>
<td>89%</td>
<td>508</td>
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<tr>
<td>White</td>
<td>91%</td>
<td>3764</td>
<td>94%</td>
<td>2032</td>
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Quote from a Faculty Member

“I signed up because we need better retention, and I want to re-energize my work as a teacher.”

Greg Weyer, Welding Professor, LWTech
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