The Current State of Learning Analytics…
and where to go from here
What we’ll cover

- Why is learning analytics so important right now?
- The current state of learning analytics overall and as a tool to increase equity
- Guiding principle and strategies for institutions
- Examples to learn from
- Conversation on how to advance the practice and outcomes of learning analytics
The pandemic is accelerating equity gaps that existed pre-pandemic, learning analytics have the potential to inform and close gaps

- According to Tyton Partners Time for Class COVID edition surveys, instructors teaching at the introductory course level are reporting increase DFWI rates as a result of the pandemic
  - 38% of instructors teaching at the introductory course level are reporting increased failure rates
  - 29% of faculty at 2-year institutions

- National Student Clearinghouse data suggests that overall undergraduate enrollment in fall 2020 is down 3.6%, with the sharpest declines at 2-year institutions

- The trend is starkest for first-time students, in particular poverty-affected students
  - First-time enrollment is down 13.1% vs. 2019
  - FAFSA completions have decreased 12.3% vs. 2019

- Poverty-affected and underrepresented minority students are being hit hardest
  - 40% of Black and Latinx households reported that a resident community college student had cancelled enrollment in October of 2020
“We’ve seen time and again that mathematical models can sift through data to locate people who are likely to face great challenges, whether from crime, poverty, or education. It’s up to society whether to use that intelligence to reject and punish them — or to reach out to them with the resources they need.”

– Cathy O’Neil, Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy
Faculty and administrators believe in the potential of learning analytics, but operationalization lags; 2-years farthest along in both

Belief in learning analytics (LA) potential/Clarity around goals for LA

Survey questions: On the scale below, what best describes your feelings about the use of student data to inform instructional methods and improve student learning outcomes?, On the scale below, how clear are the goals for the use of student data set in place by your institution?, asked to all respondents aware of/using learning analytics; n = 1,006

Methodology: Each institution type was calculated by taking a weighted average of all scores reported in that type

Sources: 2019 ELE Learning Analytics Survey, Tyton Partners analysis

"There is a lot of importance placed on the collection of student data, but it is much harder to implement real, tangible goals for educational outcomes" - Admin, large public 4-year

Only 8% of respondents believe clear goals are defined for use of LA

21% of faculty and 32% of administrators strongly believe in potential of student data
Institutions’ learning analytics maturity is very low

<table>
<thead>
<tr>
<th>Category</th>
<th>0%</th>
<th>10%</th>
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<th>30%</th>
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<th>50%</th>
<th>60%</th>
<th>70%</th>
<th>80%</th>
<th>90%</th>
<th>100%</th>
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</thead>
<tbody>
<tr>
<td>Ability of learning analytics reports and data to help learners understand and optimize learning</td>
<td>30%</td>
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<td>5%</td>
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<tr>
<td>Ability of learning analytics reports and data to help instructors understand and optimize learning and the environments in which it occurs</td>
<td></td>
<td>23%</td>
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<td></td>
<td>11%</td>
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<tr>
<td>Adoption of continuous improvement approaches to optimize learning and the environments in which it occurs</td>
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<td></td>
<td>28%</td>
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<td>3%</td>
</tr>
<tr>
<td>Ability of learning analytics reports and data to help other institutional stakeholders understand and optimize learning and the environment in which it occurs</td>
<td></td>
<td>20%</td>
<td></td>
<td>37%</td>
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<td>2%</td>
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<tr>
<td>Reporting of data about learners and their contexts</td>
<td>11%</td>
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<td></td>
<td>4%</td>
</tr>
<tr>
<td>Measurement, collection, and analysis of data about learners and their contexts</td>
<td>7%</td>
<td>31%</td>
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<td>4%</td>
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- Absent: Lacking or uncoordinated and happening by individuals
- Initial: Limited to a few areas or individuals. In planning and/or pilot stages.
- Developing: Initial work is underway. Learning analytics is being seen as an institutional initiative.
- Established: Tools, policies, training, and adoption of learning analytics are funded and in place
- Optimized: Learners, instructors, and institutional leaders understand and receive significant value from learning analytics

Most advanced: having and reporting data about learners and their contexts.
Largely absent: the ability of learning analytics reports and data to help learners understand and optimize learning.

Source: APLU, EDUCAUSE, Unizin survey, February 2020
Most core elements of a learning analytics program are not yet in place at half or more of institutions

<table>
<thead>
<tr>
<th>Please select the rating that best describes this element with regard to your learning analytics efforts</th>
<th>Absent or slightly in place</th>
<th>Somewhat in place</th>
<th>Mostly or fully in place</th>
<th>Mean (1-5 scale)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senior leadership such as presidents, provosts, and boards exhibit visible commitment to learning analytics</td>
<td>42%</td>
<td>28%</td>
<td>30%</td>
<td>2.85</td>
</tr>
<tr>
<td>The institution has a learning data record store, data lake, or some other major repository for learning data</td>
<td>50%</td>
<td>17%</td>
<td>33%</td>
<td>2.70</td>
</tr>
<tr>
<td>Data privacy rights and responsibilities are defined, understood, and implemented</td>
<td>47%</td>
<td>26%</td>
<td>27%</td>
<td>2.67</td>
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<tr>
<td>Funding is viewed as an ongoing investment toward an ongoing strategic outcome</td>
<td>54%</td>
<td>17%</td>
<td>28%</td>
<td>2.53</td>
</tr>
<tr>
<td>Open standards (e.g., LTI, Calipper, xAPI) are being used for learning data</td>
<td>52%</td>
<td>22%</td>
<td>25%</td>
<td>2.52</td>
</tr>
<tr>
<td>Faculty development and incentives have been revised to incorporate learning analytics expertise and adoptions</td>
<td>79%</td>
<td>12%</td>
<td>9%</td>
<td>1.82</td>
</tr>
<tr>
<td>A mature marketplace of affordable learning analytics products and services with demonstrated success are available</td>
<td>75%</td>
<td>17%</td>
<td>8%</td>
<td>1.82</td>
</tr>
<tr>
<td>Stakeholders understand the algorithms being used for learning analytics</td>
<td>78%</td>
<td>14%</td>
<td>8%</td>
<td>1.79</td>
</tr>
<tr>
<td>Transparent, unbiased, and effective learning analytics algorithms</td>
<td>83%</td>
<td>14%</td>
<td>3%</td>
<td>1.69</td>
</tr>
<tr>
<td>Learners adopt and act on learning analytics</td>
<td>86%</td>
<td>11%</td>
<td>3%</td>
<td>1.58</td>
</tr>
<tr>
<td>Adequate public (e.g., parents, prospective students, the press, legislatures) understanding of the benefits of learning analytics</td>
<td>87%</td>
<td>8%</td>
<td>5%</td>
<td>1.56</td>
</tr>
<tr>
<td>Adequate public (e.g., parents, prospective students, the press, legislatures) understanding of the complexity and expenses of learning analytics</td>
<td>93%</td>
<td>5%</td>
<td>2%</td>
<td>1.39</td>
</tr>
</tbody>
</table>

Source: APLU, EDUCAUSE, Unizin survey, February 2020
Very few institutions have achieved their desired end-state or vision with learning analytics.

To what extent has your institution achieved its desired end-state or vision?

45% reported being 20% or less of the way to achieving their vision.

The median respondent achieved ~25% of desired end-state or vision.

Only 3% reported being 80% or more on the way to achieving their vision.

Six key institution segments guide survey findings and report significantly different states of adoption

**Institution classifications**

1. 10k+ enrollment
   - Large public 4-year
   - Large private 4-year
   - Large public 2-year

2. Less than 10k enrollment
   - Small public 4-year
   - Small private 4-year
   - Small public 2-year

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**To what extent has your institution achieved its desired end-state or vision?**

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**CURRENT STATE**

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**Sources:** 2019 ELE Learning Analytics Survey, Tyton Partners analysis

Survey question: "Do you look at outcome-related data across different student groups to assess equity?", asked to all respondents aware of/using learning analytics, "Which of the following best describe the use of student data at your institution?" asked to all respondents
### Guiding principles for the use of learning analytics to drive equity

<table>
<thead>
<tr>
<th>Equity &amp; Learning Outcomes</th>
<th>Explicitly <strong>set and communicate institution-level goals</strong> to achieve equity in academic outcomes across student groups, including students of color and low income, through the use of learning analytics.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty, Administrator and Student Inclusion and Support</td>
<td>Ensure professional development and ongoing support across stakeholders to implement, analyze, and act on data. A change in institutional and academic culture requires planning processes that create conditions that allow participants to both think and feel positively about change.</td>
</tr>
<tr>
<td>Data Ethics, Privacy and Policies</td>
<td>Establish and communicate institutional data policies surrounding the use of student data (beyond FERPA). Policies should include fidelity and responsible use, consent and privacy, and data transparency.</td>
</tr>
<tr>
<td>Technology &amp; Infrastructure</td>
<td>Ensure that technology and infrastructure eases the ability for users to leverage student data. Outline and communicate procedures for acquiring new education technology to create a seamless integration with existing campus infrastructure.</td>
</tr>
</tbody>
</table>

*Source: Every Learner Everywhere, Tyton partners analysis*
Institutional case studies offer examples to learn from

Note: Tyton partners analysis
Questions?

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Want to read more about the guiding principles and take some self-assessments: https://www.everylearnereverywhere.org/resources/learning-analytics-strategy-toolkit/