Predictive Analytics in Higher Education

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Overview

1. Introductions
2. Definitions
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Predictive, what?

**Analytics** is the analysis of a college or university’s data to answer questions about the college and its students.

**Predictive analytics** is the analysis of a college or university’s historical data to make predictions about what may happen in the future.
Predictive Analytics in Action

• Recruit, admit, and offer aid to new students (enrollment)

• Identify students at-risk of failing (early alerts)

• Offer students guidance on course and degree plans (recommender systems)

• Help students reach course learning goals (adaptive technologies)
Campus-based Examples

• Georgia State University
  – Atlanta, Georgia
• University of South Florida
  – Tampa, Florida
• Austin Peay State University
  – Clarksville, Tennessee
• Central Piedmont Community College
  – Charlotte, North Carolina
Predictive Analytics In Higher Education: **Five Guiding Practices For Ethical Use**

1. **Have a Vision and Plan**
   - Convene key staff to make important decisions.
   - Consider the purposes, unintended consequences, and outcomes to measure when developing the plan.

2. **Build a Supportive Infrastructure**
   - Communicate the benefits of using predictive analytics and create a climate where it can be embraced.
   - Develop robust change management processes.
   - Assess institutional capacity.

3. **Work to Ensure Proper Use of Data**
   - Ensure data are complete and of high enough quality to answer targeted questions.
   - Ensure data are accurately interpreted.
   - Guarantee data privacy.
   - Monitor data security.

4. **Design Predictive Models and Algorithms that Avoid Bias**
   - Design predictive models and algorithms so that they produce desirable outcomes.
   - Test and be transparent about predictive models.
   - Choose vendors wisely.

5. **Meet Institutional Goals and Improve Student Outcomes by Intervening with Care**
   - Embed predictive-driven interventions into other student success efforts.
   - Communicate to staff and students about the change in intervention practices.
   - Recognize that predictive-driven interventions can do harm if not used with care.
   - Carefully communicate when deploying interventions.
   - Train staff on implicit bias and the limits of data.
   - Train students to use their own data.
   - Evaluate and test interventions.

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