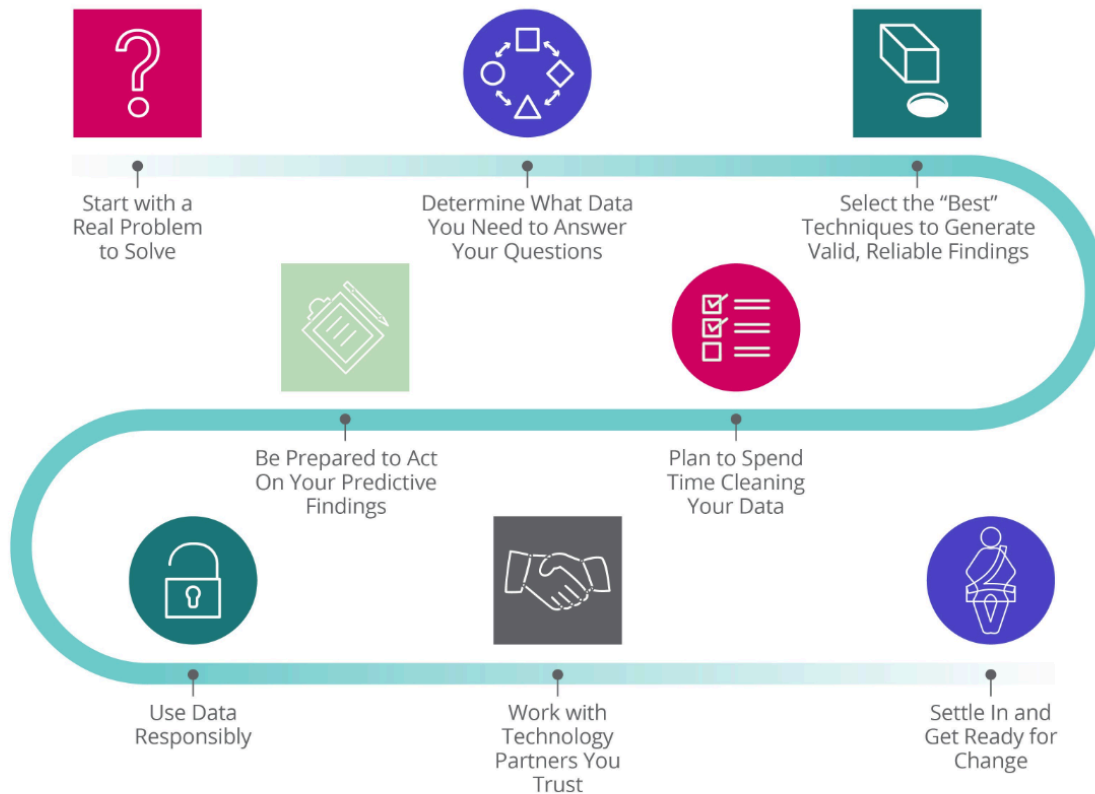**How to Use Predictive Analytics for Student Success**
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https://www.hobsons.com/resources/entry/how-to-use-predictive-analytics-for-student-success

## How to Use Predictive Analytics for Student Success

Start with a
Real Problem
to Solve

Determine What Data
You Need to Answer
Your Questions

Select the "Best"
Techniques to Generate
Valid, Reliable Findings

Be Prepared to Act
On Your Predictive
Findings

Plan to Spend
Time Cleaning
Your Data

Use Data
Responsibly

Work with
Technology
Partners You
Trust

Settle In and
Get Ready for
Change

## WHY PREDICTIVE ANALYTICS?

Predictive analytics have been used in a wide variety of settings, including higher education, to manage finances, inventory, operations, assets and resources. Increasingly, higher educational institutions are turning to business intelligence tools and techniques for enrollment management and student recruitment. The next great wave for predictive analytics adoption in higher education is focusing on institutional performance outcomes and individualized student success.

## WHY SHOULD COLLEGES CARE?
Colleges and universities are being held accountable for accurately identifying students likely to succeed, finding students who can succeed with targeted supports, and achieving specific performance outcomes (e.g., improved student retention, better completion rates for college students.
Here is how your institution can use predictive analytics to enhance your student success strategy.

## START WITH A REAL PROBLEM TO SOLVE
Focus on solving a real problem (What causes students to drop out? Are these causes common in all settings?) or finding a new opportunity (What motivates students to complete courses faster?). Your problem statements and queries will help you focus on finding data sources and selecting techniques for analyses that are likely to reveal the patterns you seek.

## DETERMINE DATA YOU NEED TO ANSWER YOUR QUESTIONS
How will you know which is the right analytics solution to help you address your needs? Where do you want to start? Where will predictive analytics give you the power to anticipate trends, opportunities, problems, risks? How will you know who to believe? You owe it to yourself to be informed about the wide range of possibilities, methodologies, platforms and techniques for deriving maximum value from investments in time, people and technology.

## SELECT THE "BEST" TECHNIQUES TO GENERATE VALID, RELIABLE FINDINGS
There are many techniques used to conduct predictive analyses. Typically one chooses the technique or techniques likely to yield results for the kinds of predictions one wants to make, and then looks for the best tools to achieve the intended goals and outcomes.

Selecting the most appropriate techniques for conducting predictive analyses has a lot to do with knowing the questions that the predictions will help answer, or the performance problems to be solved. Don't force your research design to fit the platform; select the platform you need for achieving the goals you want to achieve.

## PLAN TO SPEND TIME CLEANING YOUR DATA
SAS and other data enterprises have estimated that up to 80 percent of a data project's efforts are spent on data cleansing and quality assurance preparation. You have to ask the right research questions, make sure that data coming from a variety of sources is cleansed, normed and refined, and conduct quality assurance evaluations to yield valid, reliable results.

## BE PREPARED TO ACT ON YOUR PREDICTIVE FINDINGS
Simply knowing who is at risk isn't enough. Your predictions must be actionable. You need to find students at risk, mitigate risks and discover how different students can be

better served with targeted interventions and supports. Predictions without action don't really matter very much to anyone.

Ask yourself: Is the interest in predictives more about a research project, where recommendation for future work is an important step in the process? Or, is this more about a student success improvement initiative, where deliverables and outcomes and improvements are the ultimate test of effectiveness? Be sure you have a plan for applying the insights that predictive findings reveal.

**USE DATA RESPONSIBLY**
Conceptually, predictive analytics could be used to push students of varying predicted skill levels into programs of study based upon test results, rather than on personal passions and interest. On the other hand, big data represents opportunities for groups of students to experience specially targeted interventions with services tailored to their uses and preferences.
Be sure that you have an active plan for how you plan to protect the privacy of student data, the results of your analyses and the steps taken to manage data governance.

**WORK WITH TECHNOLOGY PARTNERS YOU TRUST**
There are a number of companies offering predictive analytics platforms, kits, apps and services to colleges and universities. Each offering has been designed to focus on specific kinds of predictions and use cases. Despite the collective crazy hope that predictive analytics can be a "Magic 8-Ball for Academic Success," there simply is no single one-size fits all predictive analytics solution.

Be sure to ask potential providers about their methods and models. What will the platform actually give you the power to do? How are variables defined? How are data sampled for analyses? What kinds of quality assurance processes are in place to make sure that data has been cleaned and normalized? What do you know about the data warehouse? Which analyses are being used? What protocols for consistent reliable repeatable analysis exist? What kinds of licensing agreements will be in place? Who will be able to actually use the platform? What kinds of privacy considerations are being used? How is data access and data governance handled?

**SETTLE IN AND GET READY FOR CHANGE**
Data readiness means knowing what you want to do and paying attention to what it actually takes to get things done. From security, to user groups, to passwords and shared information, paying attention is critical so that we know what is going on with our data, knowing what and how we are sharing, and with whom. Then we can make decisions based on evidence, because that is the whole point of doing this work.