Driving Toward Greater Postsecondary Attainment Using Data

A TACTICAL GUIDEBOOK

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High-quality, accessible, and actionable data are essential to efforts to drive greater postsecondary attainment. Data help various stakeholders answer key questions about college readiness, enrollment, persistence, completion, cost, and outcomes. Does a local employer want to know who are graduating from her community's postsecondary institutions, and who are qualified for a career in her industry? Does a postsecondary institution want to gauge which enrolled students will benefit from targeted supports to decrease their chance of withdrawing before completion? Do students and their families want to know which postsecondary institutions are doing a better job of helping their students graduate? Data can help answer questions like these, and our responses to this information can drive change.

But sometimes data can be difficult to track down or impossible to access unless others agree to share them. And even if data were right in front of our eyes and willingly shared, we need to know which indicators can help us answer specific questions we have about student outcomes. In an effort to support community-based collaborations on data use among key sectors—education, business, policy, and nonprofit and community organizations—the Institute for Higher Education Policy (IHEP) has developed this tactical guidebook to explain how some communities within the Community Partnership for Attainment (CPA) network have overcome these obstacles and already use data effectively to drive postsecondary attainment.

We hope you will use this guidebook to learn more about different data tools that communities are using to support students and improve educational outcomes, and how you could potentially adopt these tools in your own communities. The tools featured here use both student-level data and community-level data. Our guidebook includes: fact sheets on national and voluntary data collections to learn where data can often be found; interviews* with community leaders about their data tools, including their intended purpose, lessons learned, and tactical advice on implementation and collaborative work; manuals and templates to explain how tools can be implemented and to highlight how they have already been used in other communities; and additional resources with examples of other tools and more information on their implementation.

** Please note that all interviews are summaries of conversations and not verbatim records.*

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Chapter One:

How to Find Data that Help Improve Student Outcomes

As communities work to improve postsecondary attainment, they often encounter a host of questions about which data are available to help them in their efforts: Which data have been collected on postsecondary students and institutions? What is the scope of the data collected? Which data measures should be used to benchmark progress? Additionally, it is often difficult to find data from a few specific sources that cover the entire student experience along the attainment pipeline from K-12 to post-college outcomes. And the data we can find often do not tell us enough about the experiences of underserved students.

This chapter offers guidance on some of these questions and helps community stakeholders identify the critical questions that must be asked in order to determine which indicators and data would best suit their efforts. Stakeholders and decision-makers must have access to data at all points along the attainment pipeline: college readiness, enrollment, persistence, completion, and post-college outcomes. Data need to be disaggregated by key demographics—which will vary by the aims of each local initiative—in order to target resources and support toward closing attainment gaps. Communities must also learn how to put data into context, which includes benchmarking their data against peer communities, the state, or the nation; tracking progress over time; monitoring gaps between population; and calculating the return on investment as communities consider how best to allocate time and money to see the greatest outcomes.

To that end, this chapter begins with an **infographic** that not only identifies critical questions to ask about student outcomes along the attainment pipeline, but also lists the most common indicators that help us answer them.

Next, a selection of **data source fact sheets** allows you to begin mapping the data landscape and tells you where to find the data you need. The Integrated Postsecondary Education Data System (IPEDS), National Student Clearinghouse (NSC), and the National Student Loan Data System (NSLDS) are three large, national data systems that collect a wealth of information on postsecondary students and institutions. Access to Success and Complete College America are two examples of voluntary data initiatives that collect data to help postsecondary institutions improve student outcomes, inform policy, and identify best practices.

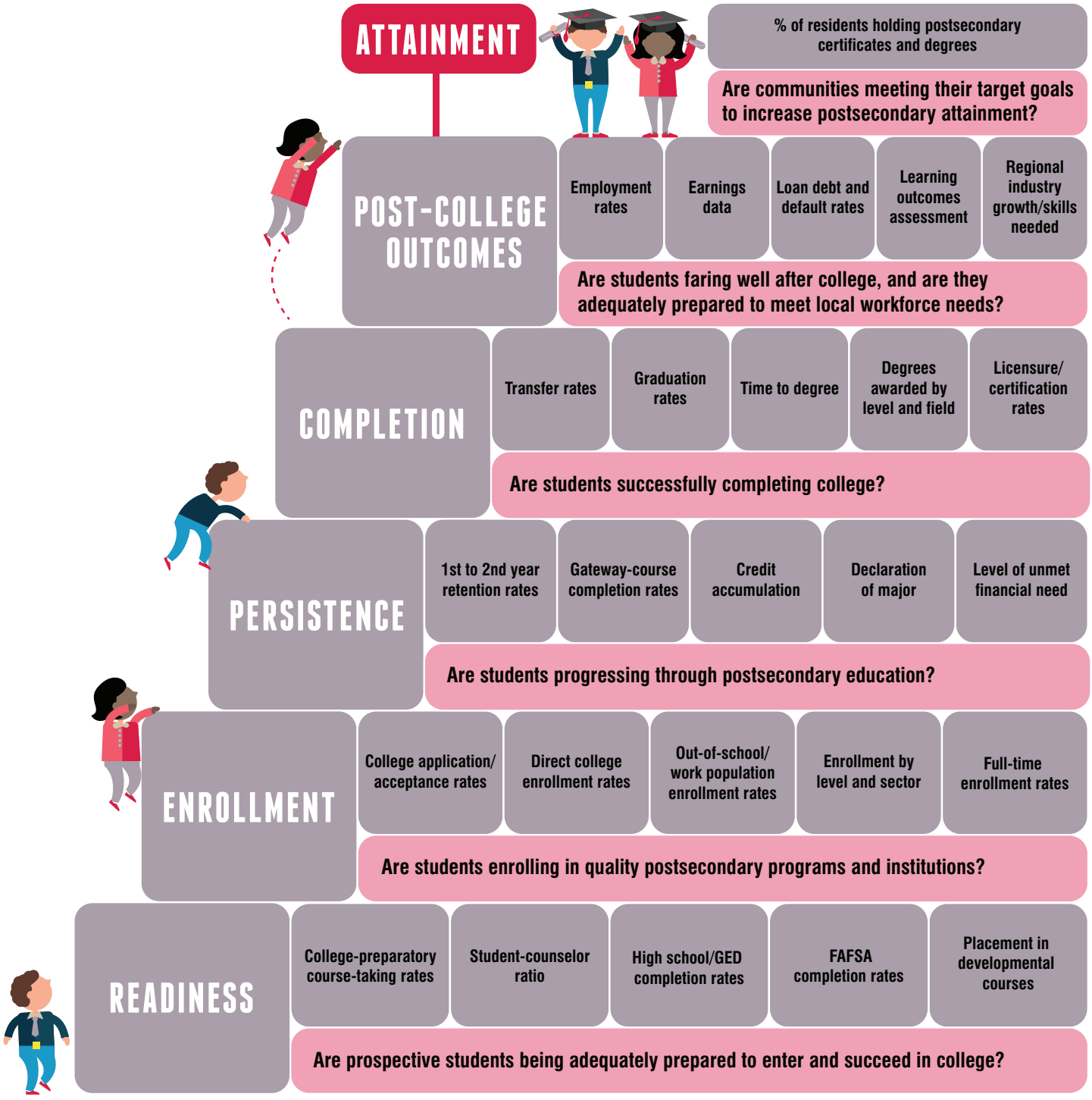
Datasets are very informative, but each has its own set of limitations. For example, in IPEDS, graduation rates currently reflect only first-time, full-time students and not transfer or part-time students; institutions that report to National Student Clearinghouse may choose not to report on certain indicators, like race/ethnicity and degree-seeking status; and NSLDS does not disaggregate its data by race/ethnicity. It is important to keep in mind what every dataset can and cannot provide.

You can find additional fact sheets on over a dozen other voluntary data initiatives at the website for the Postsecondary Data Collaborative (PostsecData), a new IHEP initiative that advocates for high-quality postsecondary education data. Its tools and analyses can also help point you to the most relevant initiatives for your work based on the geographic areas and data measures you want to know about, or the level of information that each initiative collects and publishes.

For more information on PostsecData, please visit http://www.ihep.org/postsecdata.

Finally, this chapter ends with a list of **additional resources** where you can find more information on how to locate data sources, examples of data tools, and how to best meet your data needs.

Asking Key Questions and Identifying Indicators Along the Attainment Pipeline



To target resources and support toward closing attainment gaps, data must be disaggregated by key demographics, such as:

- Race/ethnicity
- Socio-economic status
- Gender
- Age
- First-generation status
- Immigrant status
- Military/Veteran status
- Enrollment status (first-time, transfer)
- Attendance status (full-time, part-time)
- Remedial status

To help communities set and pursue goals and invest wisely in attainment strategies, data must be put into context, which may include:

- Benchmarking to peer communities, the state, or the nation
- Tracking progress over time
- Monitoring gaps between populations
- Calculating return on investment (ROI)

Integrated Postsecondary Education Data System (IPEDS)

Managed by: The National Center for Education Statistics (NCES), U.S. Department of Education
Website: www.nces.ed.gov/ipeds
Data Center: www.nces.ed.gov/ipeds/datacenter
College Navigator: http://nces.ed.gov/collegenavigator/

IPEDS is the most comprehensive publicly-available source of data on the 7,500+ postsecondary institutions in the United States. It allows the public, researchers, and policymakers to identify and compare trends over time across several institutional characteristics. Each year, institutions report data to IPEDS via surveys that are administered during three distinct reporting periods.

Prior to IPEDS, the Higher Education General Information Surveys (HEGIS) collected information on postsecondary education institutions, with many components reflecting current IPEDS data elements.[1] The HEGIS surveys were administered from 1966-67 to 1986-87. IPEDS was phased in between 1985-86 and 1988-89 to streamline data collections and to alleviate institutional burden and duplication across existing systems, including HEGIS, the Survey of Non-Collegiate Postsecondary Institutions (SNPI), and the Vocational Education Data System (VEDS).[2] IPEDS became statutorily required for all colleges and universities that receive Title IV (federal student financial aid) funds through the 1992 reauthorization of the Higher Education Act (HEA). Over time, additional survey components and data items have been added through regulatory, legislative, and agency action, increasing the amount of information available on institutions that receive federal student aid funding.

NCES can only add data items to IPEDS survey components if those items are approved by the Office of Management and Budget (OMB). Changes to the IPEDS data collection come about chiefly by statutory changes to the Higher Education Act (HEA), the Education Sciences Reform Act of 2002 (ESRA) or through Department of Education initiatives.

When changes are proposed to IPEDS data collections, RTI International, the primary NCES contractor for the IPEDS collection, convenes Technical Review Panels (TRPs). The TRPs serve to promote data quality and ensure IPEDS Survey Component questions reflect the diversity of the postsecondary system. TRPs, which are composed of postsecondary professionals, including institutions, data users, and researchers, provide RTI with technical input on IPEDS data collections and mandated changes. The IPEDS National Postsecondary Education Cooperative (NPEC), which participates in TRPs, also informs research and development activities for IPEDS.

CONSUMER INFORMATION

IPEDS data are made available to consumers through the College Navigator tool, which details information on institutional enrollment, cost, financial aid, completion, academics, accreditation, and campus safety. Much of the information included in the College Navigator tool is required by law. IPEDS data also are used in several other consumer information tools, such as the College Scorecard, Financial Aid Shopping Sheet, College Affordability and Transparency Center, and numerous college search tools created by states and private entities.

DATA USERS

More detailed, customizable information is available from the IPEDS Data Center, which includes functions that allow users to compare institutions and develop descriptive statistics. For more in-depth analyses, users may download data files containing IPEDS survey components for a defined set of institutions. These downloadable files may be used for a variety of research purposes, including informing institutional improvement or conducting policy analysis. Users also may download institutional Data Feedback Reports (DFRs), which provide institutions with an annual benchmarking analysis.

[1] National Postsecondary Education Cooperative (October 2011). The History and Origins of Survey Items for the Integrated Postsecondary Education Data System. Retrieved from http://nces.ed.gov/pubs2012/2012833.pdf.
[2] NCES Taskforce for IPEDS Redesign (August 31, 1999). Integrated Postsecondary Education Data System (IPEDS): An improved system. Retrieved from http://nces.ed.gov/ipeds/pdf/redesign/redesign.pdf.

Selected Timeline[3]

1966
- The **Higher Education General Information Survey** (HEGIS), the precursor to IPEDS, is created.

1985
- **IPEDS is phased in**, incorporating and adding to the HEGIS data collection.

1992
- 1992 HEA amendments require all institutions that receive Title IV aid to **report to IPEDS**.

1997
- The **Graduation Rate Survey** is added to identify completion trends for student athletes and other students under the Student Right to Know and Campus Security Act of 1990.
- The **"Common Form"** for reporting finance information is updated based on new Financial Accounting Standards Board (FASB) recommendations for private nonprofit institutions.

1999
- The IPEDS Redesign Taskforce releases ***Integrated Postsecondary Education Data System (IPEDS): An Improved System***, which recommends several current services, including a web-based system with three waves of reporting (fall, winter, and spring), the creation of training workshops and a technical assistance Help Desk, the implementation of quality control checks, and the development of peer analysis and data access tools.[4]
- The **Student Financial Aid** (SFA) component is developed to comply with 1998 HEA amendments.[5]
- The **IPEDS For-Profit Finance** (F) survey form implemented to collect finance data from for-profit institutions.

2000
- The **Employees by Assigned Position** (EAP) component is added to IPEDS.

2002
- The **Governmental Accounting Standards Board** (GASB) form begins to be phased in to collect finance data from public institutions (phase-in complete in 2004-05). Public institutions use the Common Form until 2002.

2005
- The EAP, Salaries and Fall Staff survey components are merged to create the **Human Resources component**.

2007
- 12-month unduplicated headcount enrollment and instructional activity data are moved to the new **12-Month Enrollment** (E12) component.

2008
- **200% graduation rates** are added to IPEDS and the SFA component is expanded to include net price, Pell Grant, and student loan data as required by the Higher Education Opportunity Act (HEOA).
- Phase-in begins of the **revised race/ethnicity categories**, required by the 1997 OMB Race/Ethnicity Standards.
- New **post-baccalaureate award categories** are implemented. These categories become mandatory in 2010-11.

2011
- Revised **race/ethnicity categories** become mandatory.

2014
- **Data on veterans** is incorporated into the Institutional Characteristics (IC) and SFA components.
- Admissions data elements are shifted from the IC component to a new, **separate Admissions component**.
- A new **Academic Libraries component** is added to replace the Academic Libraries Survey.
- The **For-Profit Finance Form** (F) is updated to provide more detailed information.

2015
- The **Outcome Measures** component is implemented to collect completion, transfer, and subsequent enrollment data for four cohorts of students: full-time first-time, part-time first-time, full-time transfer, and part-time transfer.[6]

OVERVIEW	
Collection Frequency[7]	Annually: » **SEPTEMBER — OCTOBER** Institutional Characteristics, Completions, 12-Month Enrollment » **DECEMBER — FEBRARY** Student Financial Aid, Graduation Rates, 200% Graduation Rates, Admissions » **DECEMBER — APRIL** Fall Enrollment, Finance, Human Resources, Academic Libraries[8]
Years of Data Availability	1980-present[9]
Governance	» Statute/regulation » Title IV/FSA Compliance » Departmental/NCES policy
Uses	» Inform federal and state policy » Institutional benchmarking » Inform institutional practice » Consumer tools » Research reports
Participation	Mandatory for all Title IV institutions
Coverage	» 7,397 institutions and 79 administrative/system offices[10] » 28,305,025 undergraduate and graduate students[11]

[3] Unless otherwise noted, citations may be found in: Fuller, C. (2011). The History and Origins of Survey Items for the Integrated Postsecondary Education Data System. National Postsecondary Education Cooperative, U.S. Department of Education. Retrieved from http://nces.ed.gov/pubs2012/2012833.pdf.

[4] Peng, S. (1999). Integrated Postsecondary Education Data System (IPEDS): An improved system. Final Report of the NCES Taskforce for IPEDS Redesign. National Center for Education Statistics, U.S. Department of Education. Retrieved from http://nces.ed.gov/ipeds/pdf/redesign/redesign.pdf.

[5] Fuller, C. (2011). The History and Origins of Survey Items for the Integrated Postsecondary Education Data System. National Postsecondary Education Cooperative, U.S. Department of Education. Retrieved from http://nces.ed.gov/pubs2012/2012833.pdf.

[6] Information on changes in 2014-15 and 2015-16 may be found in: National Center for Education Statistics (NCES). Changes to the 2014-15 and 2015-16 Data Collections. Retrieved from https://surveys.nces.ed.gov/ipeds/VisChangesForNextYear.aspx.

[7] National Center for Education Statistics (NCES). 2014-15 Data Collection Schedule. Retrieved from https://surveys.nces.ed.gov/ipeds/ViewContent.aspx?contentId=21.

[8] Admissions and Academic Libraries components were added in 2014-15.

[9] This includes HEGIS and IPEDS data.

[10] Ginder, S.A., Kelly-Reid, J.E., and Mann, F.B. (2014). Enrollment in Postsecondary Institutions, Fall 2013; Financial Statistics, Fiscal Year 2013; and Employees in Postsecondary Institutions, Fall 2013. First Look (Provisional Data). U.S. Department of Education, National Center for Education Statistics. Retrieved from http://nces.ed.gov/pubs2015/2015012.pdf.

[11] Ginder, S.A., Kelly-Reid, J.E., and Mann, F.B (2014). Postsecondary Institutions and Cost of Attendance in 2013-14; Degrees and Other Awards Conferred, 2012-13; and 12-Month Enrollment, 2012-13: First Look (Provisional Data). U.S. Department of Education, National Center for Education Statistics. Retrieved from http://nces.ed.gov/pubs2014/2014066rev.pdf.

Data Measures in IPEDS

This is a summary of the measures included in the IPEDS data collection (indicated by a check mark). Text after a measure gives more specific information about the level of detail collected.

ACCESS

- ☑ Enrollment

PRICE

- ☑ Tuition/Price: Cost of attendance, tuition/fees, net price
- ☑ Grant aid: Student averages for annual total, Pell, state, institutional grants
- ○ Debt

PROGRESS

- ☑ Persistence: First-year only
- ○ Remedial course completion
- ○ Gateway course completion
- ○ Course completion
- ○ Credit accumulation
- ☑ Transfer-out: No information on receiving institution
- ☑ Still enrolled beyond graduation timeframe

COMPLETION

- ☑ Graduation rates: 100%, 150%, 200%
- ○ Time to degree
- ○ Credits to degree
- ☑ Credentials conferred

OUTCOMES

- ○ Employment rate
- ○ Earnings/wages
- ○ Repayment measures
- ○ Learning outcomes
- ○ Continuing education outcomes

OTHER

- ○ Contextual information about state and/or service area
- ☑ Institution and/or program details
- ○ Course information
- ☑ Academic and student support services
- ○ Student experience, engagement, satisfaction, and/or behavior
- ☑ Faculty demographics, courseloads, and/or student ratios

Student Characteristics

This list denotes which student characteristics this data collection uses to disaggregate data measures. Note that not all measures are disaggregated by all characteristics listed here.

- ☑ Enrollment status: First-time, transfer
- ☑ Attendance pattern: Full-time, part-time
- ☑ Degree/certificate-seeking status: Bachelor's-seeking, associate's/certificate-seeking, non-degree/certificate-seeking
- ☑ Income: Pell receipt*
- ☑ Race/ethnicity
- ☑ Gender
- ☑ Age
- ○ Program of study
- ☑ Military status*
- ○ Level of academic preparation

* This disaggregate is only available in the Student Financial Aid survey component.

SOURCE:
National Center for Education Statistics. Integrated Postsecondary Education Data System 2014-15 Survey Materials. Retrieved from https://surveys.nces.ed.gov/ipeds/VisIndex.aspx.

National Student Clearinghouse®

Website: www.studentclearinghouse.org • **Research Center:** www.nscresearchcenter.org
Student Module: www.mystudentcenter.org • **Loan Module:** www.meteornetwork.org

The National Student Clearinghouse is a 501(c)(6) nonprofit organization that stores and transmits data on behalf of education institutions to improve administrative efficiency and enhance service for their constituents.

Originally called the National Student Loan Clearinghouse, the organization was founded to simplify student loan reporting for institutions, students, guarantors, lenders, and servicers. At that time, the student loan industry was going through a process of standardization, and faced with competition from the Federal Direct Loan Program, industry representatives sought to create efficiencies and streamline their processes.[1] The Clearinghouse centralized and automated the reporting process, becoming a single point-of-contact for the collection and timely exchange of accurate enrollment records that it reported, on behalf of its participating colleges, to the National Student Loan Data System (NSLDS), loan guarantors, servicers, and lenders. The process developed and used by the Clearinghouse to report borrowers' enrollment status ensures appropriate loan servicing, including timely deferment or transition to repayment.

As time went on, the Clearinghouse began to offer additional services to institutions. To signal this shift in mission, the organization dropped "loan" from its name in 2000, becoming the National Student Clearinghouse. It now offers several services that seek to improve administrative efficiency at institutions, especially in financial aid reporting, transcript and enrollment services, and student loan portfolio management. For example, students can access their enrollment history and print enrollment certificates if their institution participates in Student Self-Service℠, and loan information can be viewed via Meteor®. The Clearinghouse also allows institutions to upload data to many optional fields and collects data from other entities on student completion of third-party credentials.

Privacy is a central tenant of the Clearinghouse. The organization takes several measures to protect students' educational data and facilitate compliance with the Family Educational Rights and Privacy Act (FERPA), The Higher Education Act, and other applicable laws. Students can opt out of Clearinghouse reporting if they express their preference to the institution(s) in which they enroll. Additionally, institutional data are protected by the Clearinghouse and are not released without the consent of the institution.

While Clearinghouse data are not publicly available at the institution level, entities such as colleges and universities, states, employers, and secondary schools can enter into contracts to query data related to their students via the Clearinghouse's StudentTracker℠ service. Also, the 501(c)(3) designated National Student Clearinghouse® Research Center™ publishes aggregate statistics based on analysis of Clearinghouse data on student enrollment and outcomes.

OVERVIEW	
Collection Frequency	Continuous
Years Included	1993-Present
Participation	Voluntary; most accredited public and private institutions
Coverage[3]	» 197+ million students » 98% of students currently enrolled in public and private Title IV degree-granting institutions » Over 3,600 institutions of higher education and 8,800 high schools » All guarantors, and most lenders and servicers » All 50 states
Uses	» Conduct institutional business operations » Inform institutional practice » Perform online education verifications » Federal data reporting » Research reports » Enhance State Longitudinal Data Systems (SLDS) » Benchmarking and program evaluation
Governance	» Clearinghouse Board of Directors » Clearinghouse Research Center Board of Directors » Clearinghouse Advisory Committee (CAC) » Data Access Advisory Committee (DAAC)

[1] Guide to Student Loan Issues, USA Funds. Retrieved from http://www.yumpu.com/en/document/view/7653209/guide-to-student-loan-issues-usa-funds.
[2] National Student Clearinghouse. "More than just data…" Retrieved from http://www.studentclearinghouse.org/about/files/NSCFactsheet-2014-Ext.pdf.
[3] National Student Clearinghouse (2014). "StudentTracker." Retrieved from http://www.studentclearinghouse.org/colleges/studenttracker/.

NATIONAL STUDENT CLEARINGHOUSE USES BY CONSTITUENCY

Colleges and universities can…	» Report and track student enrollment across U.S. institutions » Flag degree recipients » Inform data reporting to the federal government (e.g., NSLDS and Gainful Employment) » Assist with Federal Student Aid compliance audits » Perform secure electronic exchanges of transcripts with select partners » Analyze transfer, persistence, and completion trends of their students[2]
Students can…	» Verify their enrollment » Verify their receipt of a degree or certificate » Order and send copies of their transcripts » Track their student loans via the Meteor Network » Query the Clearinghouse to see their own data
Lenders, guarantors, and servicers can…	» Verify student enrollment for loan collection purposes » Identify students who are eligible for loan repayment, deferment through transfer or a return to school, and deferment extension » Check borrowers' enrollment histories
Employers can…	» Verify degree and/or professional certification completion » Confirm current enrollment
Secondary schools can…	» Track and analyze the postsecondary enrollment and completion of former students » Deliver transcripts electronically to postsecondary institutions
States can…	» Access data to inform policy on education pipelines and assess state grant program performance » Use Clearinghouse data to enhance state longitudinal data systems » Utilize the Clearinghouse's scalable infrastructure and processes to host and maintain SLDS
Researchers and third-party outreach organizations can…	» Obtain de-identified data to perform research and analysis » Get quick turnaround analyses on enrollment and completion data to inform advising, and to develop and evaluate programs

Timeline

1993
» The **National Student Clearinghouse** (originally called the National Student Loan Clearinghouse) is created to improve student loan reporting for all administrative entities

1998
» All **student loan guarantors** participate in the Clearinghouse

1999
» The Clearinghouse launches its **educational research service**, StudentTracker℠

2000
» The Clearinghouse drops "loan" from its name, officially becoming the National Student Clearinghouse and **expands its services** to include online education verification

2004
» **StudentTracker** for High Schools and Transcript Ordering℠ service is launched

2010
» The National Student Clearinghouse **Research Center** is created

Data Measures in the National Student Clearinghouse

This is a summary of the measures included in the Clearinghouse's data collection (indicated by a check mark). Text after a measure gives more specific information about the level of detail collected.

ACCESS

- ✓ Enrollment

PRICE

- ✓ Tuition/Price**
- ○ Grant aid
- ✓ Debt: Federal, private*

PROGRESS

- ✓ Persistence
- ✓ Remedial course completion**
- ✓ Gateway course completion**
- ✓ Course completion**
- ✓ Credit accumulation**
- ✓ Transfer-out
- ✓ Still enrolled beyond graduation timeframe

COMPLETION

- ✓ Graduation rates
- ✓ Time to degree
- ○ Credits to degree
- ✓ Credentials conferred

OUTCOMES

- ○ Employment rate
- ○ Earnings/wages
- ○ Repayment measures
- ○ Learning outcomes
- ✓ Continuing education outcomes: Licensure/certification completion

OTHER

- ○ Contextual information about state and/or service area
- ○ Institution and/or program details
- ✓ Course information**
- ○ Academic and student support services
- ○ Student experience, engagement, satisfaction, and/or behavior
- ○ Faculty demographics, courseloads, and/or student ratios

Student Characteristics

This list denotes which student characteristics this data collection uses to disaggregate data measures. Note that not all measures are disaggregated by all characteristics listed here.

- ✓ Enrollment status: First-time, transfer
- ✓ Attendance pattern: Full-time, three-quarter time, half-time, less than half-time, leave of absence, withdrawn, graduated, deceased
- ○ Degree/certificate-seeking status: Credential level**
- ○ Income: Pell receipt**
- ✓ Race/ethnicity*
- ✓ Gender*
- ✓ Age
- ✓ Program of study: 6-digit CIP code
- ✓ Military status**
- ✓ Level of academic preparation: High school GPA, remedial course enrollment*

* Denotes optional data elements that institutions can report to the Clearinghouse.

** Denotes new, optional data elements. The Clearinghouse has added this functionality, but institutions are only in the early phases of adoption.

NOTE: A first-time, full-time student indicator is an optional data element that can be included by institutions in their Clearinghouse reporting. Debt is presented via Meteor, an opt-in tool for tracking student debt.

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National Student Loan Data System (NSLDS)

Managed by: The Office of Federal Student Aid (FSA), U.S. Department of Education
FSA Homepage: https://studentaid.ed.gov/ • **FSA Data Center:** https://studentaid.ed.gov/data-center
Student Access Page: https://www.nslds.ed.gov/nslds_SA • **Aid Administrator Access Page:** https://nsldsfap.ed.gov

The National Student Loan Data System (NSLDS) is administered by the Office of Federal Student Aid (FSA) within the Department of Education (ED). The system was authorized as part of the 1986 Higher Education Act (HEA) Amendments and was developed to accomplish three primary goals:

1) Improve the quality and accessibility of student aid data,

2) Reduce the administrative burden of Title IV Aid, and

3) Minimize fraud and abuse of student aid programs.[1]

NSLDS is one of several student-focused data systems maintained by FSA, all of which exchange data to manage the student aid system, from application to origination, disbursement, and repayment. These systems are described in more detail in Table 1.

When NSLDS was first created, the system focused primarily on loan program compliance and therefore contained limited information on other aid received and borrower enrollment. Over time, the system has grown to include more detailed information in an effort to meet changing statutory and regulatory requirements. For example, the 1992 Higher Education Amendments required NSLDS to be integrated with the Pell Grant applicant and recipient databases, which provided more detail on aid received by student borrowers, and in 2010, NSLDS was configured to accept and post files uploaded by institutions in compliance with Gainful Employment regulations.[2,3]

In its current form, HEA requires NSLDS to allow for the electronic exchange of data between program participants and the system, including the following elements:

- Borrower name and social security number,
- Originated, disbursed, and current balance, type, status (e.g. in repayment, deferred, canceled, defaulted) of each loan,[4]
- The lender, holder, servicer, and guarantor of each loan,
- The institution that originated the loan, as well as subsequent institutions in which the student enrolled,
- The date of cancellation, repayment, or default on each loan.[5]

NSLDS enrollment reporting has undergone significant change in recent years. When the system was launched, student enrollment was only reported at the campus level and completion statuses were only used for loan deferment and repayment date calculations. Although various loan status-

TABLE 1: PRIMARY FSA STUDENT DATA SYSTEMS

System	Acronym	Purpose	Students Included
National Student Loan Data System	NSLDS	Manage repayment of student loans and serve as a record for aid received.	Includes all Perkins, Direct, and FFELP loan borrowers, and Pell, SMART, TEACH, and Academic Competitiveness Grant recipients.
Central Processing System	CPS	Stores and sends FAFSA information to schools and the student, calculates estimated family contribution (EFC), confirms student identity and eligibility with other federal agencies, selects applications for verification.	All FAFSA filers.
Common Origination and Disbursement	COD	Stores origination and disbursement records for Pell Grants, Federal Direct Loans, Iraq and Afghanistan Service Grants, and TEACH Grants.	Students for whom any Title IV award is originated.

[1] NSLDS Guide (March 1996). Retrieved from http://ifap.ed.gov/nsldsmaterials/attachments/ug_ch01.pdf.
[2] 20 U.S. Code § 1092b (h). Retrieved from http://www.law.cornell.edu/uscode/text/20/1092b.
[3] Department of Education (October 29, 2010). Federal Register: 34 CFR Parts 600, 603, et al. Program Integrity Issues; Final Rule. Retrieved from http://www.gpo.gov/fdsys/pkg/FR-2010-10-29/pdf/2010-26531.pdf.
[4] For a full list of loan types and statuses, see https://www.nslds.ed.gov/nslds_SA/public/SaGlossary.do.
[5] 20 U.S. Code § 1092b (a)(1-11).Retrieved from http://www.law.cornell.edu/uscode/text/20/1092b.

Timeline

1986
- NSLDS established as part of the 1986 HEA reauthorization.

1992
- HEA Amendments mandate Pell Grant applicant and recipient databases to be merged with NSLDS by July 1, 1994.
- HEA Amendments also mandate enrollment reporting to NSLDS.

2001
- Transfer student monitoring function added to help aid administrators track mid-year transfers.[6]

2002
- NSLDS adds several ad hoc reports related to cohort default rates, repayment information, exit counseling, loan cancelation, and transfer monitoring.[7]

2006
- NSLDS adds Graduate PLUS loans, Academic Competitiveness Grants (ACG), and SMART Grants, which were created by the Higher Education Reconciliation Act of 2005.[8]

2010
- The Gainful Employment reporting module is created, which was the first module in NSLDS to require program-level reporting.

2012
- Institutions are required to report enrollment for students who only receive a Pell Grant. Previously, enrollment was only reported for student loan borrowers.

2013
- Repayment plan information is added to NSLDS.[9]

2014
- Enrollment reporting is updated to include program-level CIP codes.
- Congress directs the Department of Education to submit a report on the enrollment and graduation rates of Pell Grant recipients using data from NSLDS.[10]

es, such as "Graduated" and "Withdrawn" had existed in the system for some time,[11] the Department issued additional guidance to institutions in 2012, reiterating the importance of reporting accurate enrollment and completion statuses and requiring institutions to report enrollment status for Pell-only recipients and to report credential level for all students in the system.[12] Additional detail was added in 2014, when a new regulation limiting student subsidized loan eligibility required institutions to report NSLDS student enrollment by a Classification of Instructional Programs (CIP) code and program length.[13] These changes have prompted the Department to further increase the accuracy and level of detail on student enrollment, with updates provided by institutions every 60 days.[14]

Per HEA, access to NSLDS is restricted to guarantors, lenders, and aid administrators, who may only use data for "legitimate program operations".[15] Financial aid administrators use the system to determine federal student aid eligibility, to monitor student enrollment, to provide accurate counseling to students, and to conduct default management activities, while guarantors and servicers use the system to monitor enrollment and appropriately administer their portfolios. Students can access only their own information on the NSLDS student access site, which includes information about their Title IV loans and grants, as well as servicer information.

Because NSLDS is used to manage and report on financial aid programs, most of its data are not widely available to policymakers, researchers, or the public, although additional uses are not prohibited. For example, FSA uses data from NSLDS to generate reports on aid volume, repayment behavior, and cohort default rates, which it publishes on the FSA Data Center website. While the statutory language bans non-governmental researchers from accessing personally identifiable information from NSLDS, it does not prohibit sharing of aggregate or de-identified data for research and policy analysis. For example, NSLDS is used for budget and audit analyses, and recent Department of Education efforts have suggested using NSLDS data in a college ratings system to inform institutional improvement, consumer choice, accountability, and policymaking.[16]

OVERVIEW	
Collection Frequency	Continuous
Years Included	» Loans active from 1989 to present » Pell Grant recipients as of 1994
Governance	» Statute » Regulation » Agency policy
Uses	» Conduct financial aid business operations » Borrower tools » Inform institutional practice » Monitor Federal Student Aid programs » Research and policy analysis
Participation	Mandatory for all institutions, guarantors, and lenders participating in Title IV aid programs
Coverage[17]	» All Direct Loan (DL), Federal Family Education Loan (FFEL), Federal Insured Student Loan (FISL), and the Perkins Loan borrowers » All Pell Grant, Academic Competitiveness Grant (ACG), National Science and Mathematics Access to Retain Talent (National SMART) Grant, Teacher Education Assistance for College and Higher Education (TEACH) Grant, and Iraq and Afghanistan Service Grant recipients

[6] NSLDS Newsletter Number 1 (January 2002). Retrieved from http://www.ifap.ed.gov/nsldsmaterials/attachments/Newsletter1.pdf.
[7] NSLDS Newsletter Number 4 (June 2002). Retrieved from http://www.ifap.ed.gov/nsldsmaterials/02NewsLtr4Feb.html.
[8] NSLDS Newsletter Number 14 (January 2007). Retrieved from http://www.ifap.ed.gov/nsldsmaterials/attachments/Newsletter14.pdf.
[9] NSLDS Newsletter Number 42 (February 2013). Retrieved from http://ifap.ed.gov/nsldsmaterials/attachments/NSLDSNewsletter42.pdf
[10] Explanatory statement submitted by Mr. Rogers of Kentucky, Chairman of the House Committee on Appropriations regarding the House Amendment to Senate Amendment on H.R. 3547, Consolidated Appropriations Act, 2014. Retrieved from http://docs.house.gov/billsthisweek/20140113/113-HR3547-JSOM-FM-B.pdf.
[11] Enrollment information, including statuses, were added in the 1992 HEA Amendments (Pub. L. 102–325, § 487(a)).
[12] NSLDS Enrollment Reporting Process (March 30, 2012). Retrieved from http://www.ifap.ed.gov/dpcletters/GEN1206.html.
[13] Changes to NSLDS Enrollment Reporting: Program-Level Reporting and More Frequent Reporting (April 14, 2014). Retrieved from http://ifap.ed.gov/dpcletters/GEN1407.html.
[14] NSLDS Enrollment Reporting Guide (July 2014). Retrieved from http://ifap.ed.gov/nsldsmaterials/attachments/NewNSLDSEnrollmentReportingGuide.pdf.
[15] 20 U.S. Code § 1092b (d)(1).Retrieved from http://www.law.cornell.edu/uscode/text/20/1092b.
[16] For Public Feedback: A College Ratings Framework. U.S. Department of Education. December 19, 2014. Retrieved from: https://www.insidehighered.com/sites/default/server_files/files/ratings%20framework%20draft.pdf
[17] This information is primarily drawn from the System of Records Notice for the National Student Loan Data System. Retrieved from http://www.gpo.gov/fdsys/pkg/FR-2014-04-02/pdf/2014-07294.pdf.

Data Measures in NSLDS

This is a summary of the measures included in the NSLDS data collection (indicated by a check mark). Text after a measure gives more specific information about the level of detail collected.

ACCESS

- ☑ Enrollment

PRICE

- ☐ Tuition/Price
- ☑ Grant aid: Pell, TEACH, SMART, ACG
- ☑ Debt: Federal

PROGRESS

- ☑ Persistence*
- ☐ Remedial course completion
- ☐ Gateway course completion
- ☐ Course completion
- ☐ Credit accumulation
- ☑ Transfer-out*
- ☑ Still enrolled beyond graduation timeframe*

COMPLETION

- ☑ Graduation rates*
- ☑ Time to degree*
- ☐ Credits to degree
- ☑ Credentials conferred*

OUTCOMES

- ☐ Employment rate
- ☐ Earnings/wages
- ☑ Repayment measures*
- ☐ Learning outcomes
- ☑ Continuing education outcomes: Graduate school enrollment*

OTHER

- ☐ Contextual information about state and/or service area
- ☐ Institution and/or program details
- ☐ Course information
- ☐ Academic and student support services
- ☐ Student experience, engagement, satisfaction, and/or behavior
- ☐ Faculty demographics, courseloads, and/or student ratios

Student Characteristics

This list denotes which student characteristics this data collection uses to disaggregate data measures. Note that not all measures are disaggregated by all characteristics listed here.

- ☑ Enrollment status: Transfer status*
- ☑ Attendance pattern: Full-time, three-quarter time, half-time, less than half-time, leave of absence, graduated, withdrawn, deceased
- ☑ Degree/certificate-seeking status: Credential level
- ☑ Income: Pell receipt, income*, EFC*
- ☐ Race/ethnicity
- ☑ Gender*
- ☑ Age*
- ☑ Program of study
- ☐ Military status
- ☐ Level of academic preparation

* While NSLDS does not collect these measures directly, they could be constructed (with limitations in some cases) for federal loan and Pell Grant recipients using NSLDS and/or CPS data.

Access to Success

http://www.edtrust.org/issues/higher-education/access-to-success

Established in 2007, Access to Success (A2S) is an initiative that works with public higher education systems to cut the college-going and graduation gaps for low-income and minority students in half by 2015.

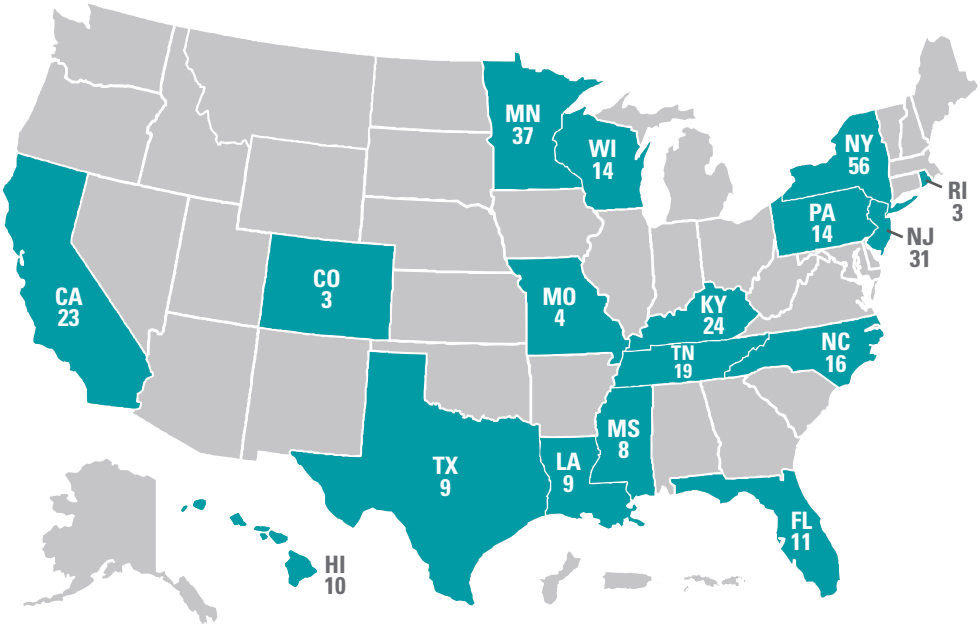
LEADERSHIP: President, The Education Trust: Kati Haycock | Director of Higher Education Research and Data Analytics: Andrew Nichols

Executive Director, National Association of Systems Heads: Rebecca Martin

LEVEL OF INFORMATION

Level of commitment to initiative:	System
Level of data submitted to initiative:	System & Institution
Level of data reported publicly:	System

NUMBER OF INSTITUTIONS BY STATE



PARTICIPATION

MAJOR ACTIVITIES

- ✓ Data collection
- ✓ Data tools
- ✓ Convenings
- ✓ Best practices
- ✓ Technical assistance
- ○ Federal policy recommendations
- ✓ State policy recommendations
- ✓ Institutional policy recommendations

KEY RESOURCES

Individual System and Institutional Report Cards
http://www.edtrust.org/issues/higher-education/access-to-success

Publications
http://www.edtrust.org/dc/resources/publications/access-to-success

Data Measures in Access to Success

This is a summary of the measures included in the Access to Success data collection (indicated by a check mark). Text after a measure gives more specific information about the level of detail collected.

ACCESS

- [x] Enrollment

PRICE

- [ ] Student prices
- [ ] Grant aid
- [ ] Debt

PROGRESS

- [x] Persistence: First-year, term-to-term, year-to-year
- [ ] Remedial course completion
- [ ] Gateway course completion
- [ ] Other course completion
- [ ] Credit accumulation
- [x] Transfer-out: Two-year to four-year
- [ ] Still enrolled beyond graduation timeframe

COMPLETION

- [x] Graduation rate
- [ ] Time to degree
- [ ] Credits to degree
- [x] Credentials conferred

OUTCOMES

- [ ] Employment rate
- [ ] Earnings
- [ ] Repayment measures
- [ ] Learning outcomes
- [ ] Continuing education outcomes

OTHER

- [x] Contextual information about state and/or service area
- [ ] Institution and/or program details
- [ ] Course information
- [ ] Academic and student support services
- [ ] Student experience, engagement, satisfaction, and/or behavior
- [ ] Faculty demographics, courseloads, and/or student ratios

Student Characteristics

This list denotes which student characteristics this initiative uses to disaggregate the data measures listed above, although not all measures are necessarily disaggregated by all characteristics noted here.

- [x] Enrollment status: First-time, transfer
- [x] Attendance pattern: Full-time, part-time
- [x] Degree/certificate-seeking status: Bachelor's-seeking, associate-seeking
- [x] Income: Pell receipt
- [x] Race/Ethnicity
- [ ] Gender
- [ ] Age
- [ ] Program of study
- [ ] Military status
- [ ] Level of academic preparation

Complete College America

www.completecollege.org

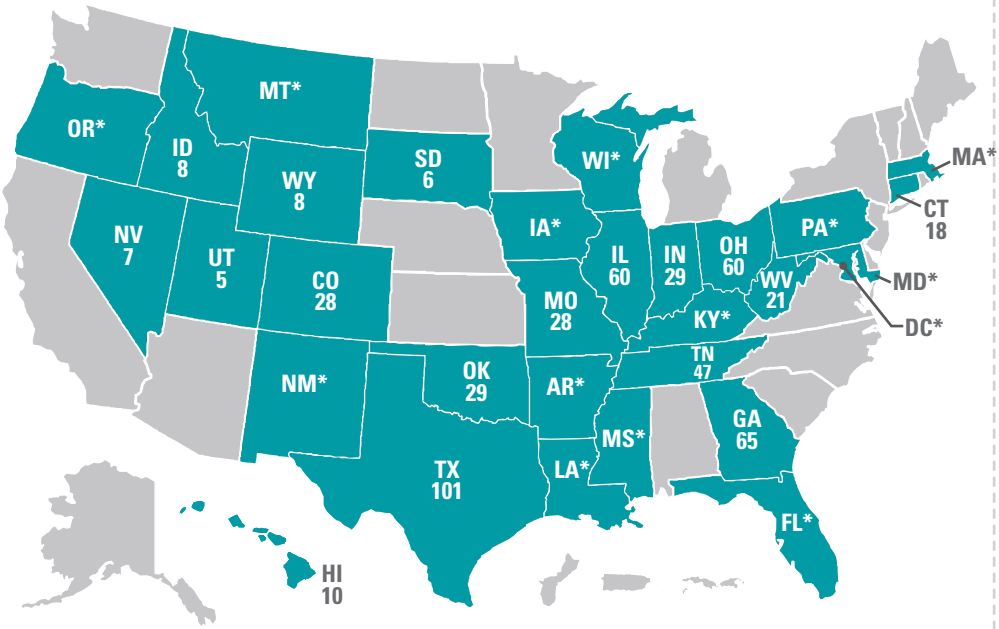
Established in 2009, Complete College America (CCA) is a national nonprofit working to increase the number of Americans with a college degree or credential of value and to close attainment gaps for traditionally underrepresented populations. To participate, a state's governor must commit to making college completion a top priority.

LEADERSHIP: President: Stan Jones | Vice President: Bruce Vandal

LEVEL OF INFORMATION

Level of commitment to initiative:	State
Level of data submitted to initiative:	State or Institution
Level of data reported publicly:	State

NUMBER OF INSTITUTIONS BY STATE



*These states report data

PARTICIPATION

MAJOR ACTIVITIES

- Data collection
- Data tools
- Convenings
- Best practices
- Technical assistance
- Federal policy recommendations
- State policy recommendations
- Institutional policy recommendations

KEY RESOURCES

Technical Guide of Complete College America Metrics, Updated April 2014
https://ccacollection.sheeo.org/cca/homeattach/2014%20Metrics%20Technical%20Guide%20Final%2004022014.pdf

State-level data reports for all participating states
http://completecollege.org/college-completion-data/

Reports, briefs and event materials
http://www.completecollege.org/resources.html

Data Measures in Complete College America

This is a summary of the measures included in Complete College America's data collection (indicated by a check mark). Text after a measure gives more specific information about the level of detail collected.

ACCESS

- ☑ Enrollment

PRICE

- ○ Student prices
- ○ Grant aid
- ○ Debt

PROGRESS

- ☑ Persistence: Year-to-year
- ☑ Remedial course completion
- ☑ Gateway course completion
- ☑ Other course completion
- ☑ Credit accumulation
- ☑ Transfer-out: Two-year to four-year, credits/credentials accumulated prior to transfer
- ○ Still enrolled beyond graduation timeframe

COMPLETION

- ☑ Graduation rates: 100%, 150%, 200%
- ☑ Time to degree
- ☑ Credits to degree
- ☑ Credentials conferred

OUTCOMES

- ○ Employment rate
- ○ Earnings
- ○ Repayment measures
- ○ Learning outcomes
- ○ Continuing education outcomes

OTHER

- ○ Contextual information about state and/or service area
- ☑ Institution and/or program details
- ○ Course information
- ○ Academic and student support services
- ○ Student experience, engagement, satisfaction, and/or behavior
- ○ Faculty demographics, courseloads, and/or student ratios

Student Characteristics

This list denotes which student characteristics this initiative uses to disaggregate the data measures listed above, although not all measures are necessarily disaggregated by all characteristics noted here.

- ☑ Enrollment status: First-time, continuing, transfer
- ☑ Attendance pattern: Full-time, part-time
- ☑ Degree/certificate-seeking status
- ☑ Income: Pell receipt
- ☑ Race/Ethnicity
- ☑ Gender
- ☑ Age
- ☑ Program of study
- ○ Military status
- ☑ Level of academic preparation: Remedial placement/enrollment

Notes

CCA's persistence metric follows students at 2-year institutions for four years and students at 4-year institutions for six years.

Additional Resources

Using and Sharing Data to Improve Postsecondary Success (2012: National League of Cities)

This municipal action guide serves as a roadmap for gathering, using, and sharing data on students' postsecondary outcomes in a community context. It provides an overview of useful data resources and details key steps, such as conducting inventories of local data capacity, sharing data, conducting "loss point" analyses along the education pipeline, determining baseline measures, setting goals, and reporting progress.

Conducting a Scan of Local Efforts to Promote Postsecondary Success (2012: National League of Cities)

This guide provides an in-depth look at the important information-gathering work that must precede a comprehensive postsecondary success initiative. City leaders can conduct a scan of local postsecondary success efforts to understand what supports are available to students across the education pipeline.

Data for Action 2014 (2014: Data Quality Campaign)

The Data Quality Campaign shares the results of their most recent annual survey of states on their 10 State Actions to Ensure Effective Data Use. This report also describes other key emerging K-12 data issues and provides numerous examples of promising practices of data use in the field. It features a table of states that have completed important steps such as linking K-12 data systems with other systems, building state data repositories, and creating progress reports with student-level data.

Postsecondary Data Resource List (2015: Institute for Higher Education Policy)

IHEP's Postsecondary Data Collaborative, or PostsecData, has compiled an extensive list of resources that will be of use to anyone interested in accessing or better understanding postsecondary data. Users can search within the resource list for consumer information tools and databases and find many examples from around the country.

College Results Online (The Education Trust)

This interactive web tool was designed to provide policymakers, school counselors, parents, students, and others with information about college graduation rates, including rates for underserved students, at nearly any four-year college or university in the country. Data can be disaggregated easily for underserved students, revealing gaps in graduation rates while also showing that these gaps are neither present at every institution nor inevitable. Users can compare colleges as well as see changes for a particular college over time.

American Community Survey (ACS) (U.S. Census Bureau)

Sponsored by the U.S. Census Bureau, this annual survey of approximately 3.5 million households provides a wide range of information on the U.S. population, including data on demographics, educational attainment, occupation, earnings, and industries of employment. These data can be used by local governments and other parties to view population, education, and workforce information in their area of interest and can be disaggregated at the regional, state, county, city, and census-tract level.

Chapter Two:

How to Build Successful Community Data Collaborations

As communities strengthen their collaborative work around serving and supporting students through the attainment pipeline, they must be sure to collaborate around data as well. This can prove challenging as institutions and organizations that are accustomed to handling their data internally must learn how to adopt a culture of more open and transparent data sharing. This is an ongoing process that may not only help communities to learn how to serve students more effectively, but can also enable community partners to build more trust in each other and collaborate in other areas.

The Data Quality Campaign (DQC) and StriveTogether have identified several promising practices within communities that have been successful in sharing actionable data. This guidebook includes a joint animation produced by DQC, StriveTogether, and IHEP that outlines these practices. It emphasizes leadership buy-in, user training, and a thorough understanding of the data systems that already exist in order to better integrate and house them. In addition, the importance of protecting student data cannot be overstated. Our animation and other resources in this guidebook help communities understand how the Family Educational Rights and Privacy Act (FERPA) is a roadmap to safely sharing data that will be used to benefit students.

A vital tool in data governance and data sharing is a **community data-sharing agreement**. This formal agreement clearly outlines what information each partner will exchange and be able to access; its development takes a significant amount of time, coordination, communication, and commitment. As students of all ages navigate through schools, after-school programs, and other community-based services, the ability to track individuals across service providers enables communities to identify important information: leaks in the pipeline, successful interventions that herald more positive outcomes, interventions that need to change to produce better results, and inefficient processes that lead to unmet needs or duplicative efforts.

Data about the trends and experiences among underserved students in the community—whether they are still moving through high school or are adults returning to college—allow community partners to engage more deeply to seek out more information and develop new ideas. When communities are able to access and organize these data, they often discover opportunities to realign resources, increase efficiency, and spend time and money more wisely in supporting students.

In addition to the **data-sharing animation** that outlines tips for successful community data collaborations, this section of our guidebook also features an **interview with leaders in Providence, R.I. on a service and data-sharing agreement** that has recently been put in place between Providence Public Schools and a collaborative of youth-serving organizations. These relationships enable stakeholders to share a new online case management system to better match students with the supports they need.

Finally, this chapter ends with a list of **additional resources** where you can find more information on successful data-sharing agreements and data governance.

Providence, R.I.: How to Develop a Community Data-Sharing Agreement

- *Angela Romans, Ed.M., Co-Director of District and Systems Transformation,* ***Annenberg Institute for School Reform****, and Co-Chair of High School to College and Career Work Group,* ***Providence Children and Youth Cabinet***
- *Matt Billings, Project Manager,* ***Providence Children and Youth Cabinet***
- *Stephanie Geller, Ed.M., Co-Chair of High School to College and Career Work Group,* ***Providence Children and Youth Cabinet*** *and Policy Analyst,* ***Rhode Island KIDS COUNT***

IHEP spoke to leaders from the Providence Children and Youth Cabinet (CYC); an education reform support partner, the Annenberg Institute; and a policy and advocacy partner, Rhode Island KIDS COUNT, to learn how they developed a new service and data-sharing agreement in Providence. Through shared use of a data platform, a collaborative of local youth-serving organizations and teachers, counselors, and leaders at Providence Public Schools will be able to access data about their students to promote college and career readiness. The platform, *Richer Picture*, allows users to share notes with each other for an enhanced case management system. Read this interview for advice on how to successfully negotiate such agreements with partners to share data across sectors and promote student success.

Goals

IHEP: What information will be shared through these agreements?

These agreements would allow the collaborative consisting of various members of the Providence Children and Youth Cabinet's High School to College and Career (HSCC) Work Group—who work directly with Providence youth—to share data with Providence Public Schools through the *Richer Picture* platform. One is a service agreement that clarifies the responsibilities of both parties in terms of the services that youth-serving organizations will provide to Providence students and to the public schools through their use of data. The other is the data-sharing agreement that's more focused on the actual protection of student data, what data can be seen, how data are kept confidential, and so on.

They would allow those youth-serving organizations to see information on youth with whom they work, and information on their progress toward high school graduation and potential barriers to graduation, including issues around chronic absence, course performance, test scores, and so on. They also share information about college readiness and supports to apply for college, including FAFSA completion and other indicators.

This agreement will also allow Providence Public School personnel to see notes written by youth-serving organizations about the support they are providing to improve student outcomes related to high school graduation and college readiness.

IHEP: Looking at the big picture, what goals are you pursuing through these agreements, for both students and partner organizations?

We're not always sure how reliable the information is that the schools have, or which youth-serving organizations are reaching youth. The superintendent in Providence, Dr. Susan Lusi, had envisioned building a sort of case management system, enabling guidance counselors (for example) to identify a need that is out there, like a student who is not attending school regularly or who needs some support with the college application process. He or she will be able to know that there may be some organization out there already working with the student, who might be a natural partner in addressing those issues, and work more collaboratively with that organization. We are working towards a vision where all of us in the community are taking responsibility for our youth,

> "We are working towards a vision where all of us in the community are taking responsibility for our youth, and we can most effectively meet their needs by working with the community and schools, collaborating both in a big picture way and in serving individual students."

and we can most effectively meet their needs by working with the community and schools, collaborating both in a big picture way and in serving individual students.

We also want organizations to potentially realign some resources for students who have the greatest needs, or needs that those organizations could meet. Service agreements are asking organizations currently working in the high schools if they are willing to work in other high schools or with other students whom they are not currently serving, if those students are identified as having needs that the organizations can meet. We hope that the case management system will enable us to link students who are most at need with those youth-serving organizations that could meet their needs, providing a multi-tiered support system for students.

Partnership

IHEP: Which organizations or institutions are involved in this data-sharing agreement?

There was a lot of conversation about the wording of both of those agreements and which parties were willing and able to be a part of it. We now have 10 organizations, all serving K-12 students, who are part of the HSCC Work Group and have sign ed service agreements and data-sharing agreements. Some of the youth-serving organizations who are members of the CYC already have their own individual data-sharing agreements with the public schools and are still using those rather than participating in our blanket group data-sharing agreement. A couple of others are expected to sign onto the agreement but are still waiting on some final signatures or getting legal language clarified.

IHEP: Which partners initially drove the development of these new agreements?

It was originally the vision of the superintendent, Dr. Lusi, who wanted to address college and career readiness for the district. She looked at a case management system that existed at the elementary school level in full-service community schools, and she wanted to see something similar brought to the high school level. Community members really pushed for this agreement as well to strategically move toward her vision of the case management approach. Ideas for this level of data-sharing have been kicked around the district for three or four years. Providence Children and Youth Cabinet is working around collective impact, and the backbone of that work is the realignment of resources to meet the needs of students, so it's fundamental to our vision as well.

Dr. Marco Andrade, the director of the Office of Research, Planning, and Accountability at Providence Public Schools, has played a significant role as well. He has a vision of open data and an understanding of what a strong Response to Intervention (RTI) model looks like when articulated. Angela Romans and Stephanie Geller have facilitated the development and implementation of agreements between the district and youth-serving organizations; a lot of work has been invested in the high-level communication and transparency that goes into talking about what's working and what's not working, facilitating dialogue, getting everyone's sign-off, and building trust across partners.

Implementation

IHEP: With the agreements now in place, how will *Richer Picture* support the idea for this case management system?

Richer Picture shifts the conversation from a traditional one-way model—one organization sharing information with another—to a two-way model. The youth-serving organizations will actually input qualitative data on students; there's a function in *Richer Picture* that allows partners to input narratives or stories on the students they are serving. Teachers, counselors, and others at schools would be able to access them, and write their own notes as well. It's like sharing notes back and forth. It's an opportunity for community-based and school-based partners to write about what's happening with a student and share information.

Dr. Andrade and his team at the district selected the platform. In addition to the case management features, one reason it was chosen was because it has multiple levels of access. District officials have wide access, parents have specific access points, students have access, and teachers, counselors, and community organizations have different levels of access. Another reason was its visual interface, which was more intuitive for users than other platforms.

IHEP: Can you describe the different phases of work that went into developing these agreements?

First we talked about the general idea, how people could benefit from it. Then there was a phase that clarified what this would look like. We had organizations come to trainings so people could actually view the *Richer Picture* product and get excited about what it would allow them to do. There were mock students and they could play around with their data. After that, we had to write, edit, and finalize the language in the service agreement, get it to everyone, and collect all the signatures we needed. Then we went through the same process with the data-sharing agreement, making sure everyone approved the language and getting all of the organizations and partners to sign it. We also needed to obtain a list of all the staff members at each organization who would have access to the data and collect confidentiality agreements from these individuals.

You don't always think early on about all the steps that need to happen. There were more than we realized when we first started the project a year and a half ago. I don't think we were aware at the beginning that these would be two agreements, a service agreement and data-sharing agreement. We were also not aware that we would end up needing to have parent releases. That involved another process of reviewing the language there,

making sure everyone was comfortable with it, and translating the release into Spanish.

IHEP: Which components of these agreements took the longest time to complete?

One piece that took a long time was coming to a consensus on what the data-sharing agreements would allow in terms of level of access. For example, we initially thought organizations that were part of the agreement would be able to have access to information on all the youth they serve. Then more recently we talked about how the district felt uncomfortable providing information on all of those students unless they had individual parent releases for each youth. That took a while to work out and get everyone on board with the new language in the agreement, and making sure it was all understood by both parties.

Certainly issues of trust and commitment have come up. We had the superintendent attend a meeting of the Work Group and she was able to demonstrate that she remained committed to the agreement and to seeing it through to the end, and that her call for the parent releases did not take away from that commitment. I think that was an important show of leadership on her part and busted some barriers around trust. As an organization, we have talked a lot about trust and not just how to build it, but also the processes required to go through to rebuild it if it is breaking.

It's been a new experience for the school district, which traditionally had data-sharing agreements with individual organizations rather than with a collaborative. Dr. Andrade was clear that he was not going to enter into any such new data-sharing agreements and the district would align all of its efforts into this consortium agreement. I think that level of commitment to alignment helped keep folks at the table and helped the district demonstrate support for collective impact.

IHEP: What steps are you working on now?

Now we're in the process of rolling it all out, running Family Educational Rights and Privacy Act (FERPA) trainings, and actually using the *Richer Picture* product. We've had one training about FERPA—the legal requirements in terms of protecting data—and we're setting up another one.

We also need to make sure we have a process in place for troubleshooting, when people have any difficulty with the platform. We're talking about having regular meetings with the groups that are party to the agreement to talk about how to improve *Richer Picture*, how it works, and how we could expand it to other kinds of data and to other organizations in the upcoming academic year. We consider the remainder of this school year to be a pilot. During the trainings, there are a couple of key objectives: 1) get people excited about the capabilities of this product, 2) make sure everyone understands the legal requirements in protecting student data, 3) show people how to actually use the nuts and bolts of this platform, and 4) talk about how to improve our use of the platform over time.

“Certainly issues of trust and commitment have come up… It's been a new experience for the school district, which traditionally had data-sharing agreements with individual organizations rather than with a collaborative.”

Impact

IHEP: What kind of impact has the process of creating these agreements had on the partnership in Providence?

Despite the fact that this is a longer process than we had envisioned, I think some of the growing pains in putting it together actually make the collaborative stronger. You have to be more direct about clearly identifying everyone's responsibility. As a tool it brings conversations to a new place, about what everyone is giving and what they hope to get through the work.

Additional Resources

Data Drives School-Community Collaboration: Seven Principles for Effective Data Sharing *(2015: StriveTogether and Data Quality Campaign)*

This playbook helps communities develop strong data partnerships to improve student supports and educational outcomes. Its seven principles help equip educational and community stakeholders with the information they need to establish data partnerships in their respective communities. These principles are informed by the experiences of communities who have already developed cradle-to-career networks, as well as by national experts at StriveTogether and the Data Quality Campaign. The playbook also identifies four common hurdles to data-sharing initiatives—trust, turf, time, and technology—and offers advice for overcoming them.

Developing a Master Data Sharing Agreement: Seeking Student-Level Evidence to Support a Collaborative Community Effort in Education *(2012: Neil E. Carlson et al.)*

This resource describes how school systems, out-of-school programs, and other organizations can partner together to create a Master Data Sharing Agreement (MDSA), in which longitudinal student data is shared in order to propel and evaluate efforts to improve education quality and outcomes. The report examines the formation of a partnership between out-of-school programs and a public school system in Grand Rapids, Michigan to explain the process of creating MDSAs. It describes the data flow process for partnerships, the groundwork needed for building MDSAs, and key obstacles and breakthroughs in the negotiation process. It also details recommendations for organizations that want to create an MDSA using this community's experience.

Credential Data Pioneers *(2014: Workforce Data Quality Campaign)*

This report outlines how states and institutions can use data to track outcomes for students who earn certificates, certifications, and licenses in order to better measure their value in the workforce. These data systems can be used to show policymakers the worth of credentials, help educators know how well their programs align with the labor market, guide decision-making among students and employees, and assist businesses in recruiting students with these credentials. This resource also describes how several states and institutions have made data-sharing agreements with certification bodies and licensing agencies to access data on workforce outcomes.

Data Use in Promise Partnerships of Salt Lake – A Resource for Parents, Students, and Community Members *(2014: United Way of Salt Lake)*

This resource for parents, students, and community members describes how out-of-school education, healthcare, and other student and parent support programs called Promise Partners can share data in order to make a better collective impact on student outcomes. This guide provides principles on data sharing and use and covers the security mechanisms for protecting data stored in a cloud-based data management system. Lastly, it explains how data collection must comply with privacy regulations and practices like FERPA and includes an overview of the FERPA waiver process.

Making Workforce Data Work *(2014: Workforce Data Quality Campaign)*

This report provides an overview of the various stakeholders—students, employers, policymakers, and educators—who need access to quality workforce data and the data that should be collected. It also discusses state longitudinal data systems and their role in bringing together workforce data with relevant information on education and workforce training programs, social services, and earnings. It includes examples of how states are implementing various reforms in workforce data-sharing and use.

Chapter Three:

How to Use Student-Level Data to Improve College and Career Readiness

K-12 schools generally have a wealth of data available on their students that can be leveraged toward increasing college and career readiness, with the right tools. Careful data collection and analysis enables researchers, administrators, teachers, and counselors to identify how certain variables may be more likely to trigger particular student outcomes. These analyses are only useful, however, if they inform interventions for students, either enabling them to get back on track when they start to slip or—even better—to prevent them from falling off track in the first place.

Schools are not the only keepers of valuable information to support students. Community-based organizations, from after-school program providers to college access organizations, also work to support youth academically, socially, emotionally, and financially on the path to postsecondary education. The data on a single student, gathered from multiple organizations and providers and tracked over the years, will provide a more complete picture of that student's needs and effective responses than any single piece of information could alone. By reviewing a larger dataset of students, researchers can identify patterns and implement a variety of interventions to help students complete their coursework on time, score well on tests like the ACT, and graduate college-ready. Below are a few examples of tools that can be used to share K-12 student-level data:

FAFSA Completion Tool. A strong correlation exists between FAFSA completion and college enrollment. *Does your community want to know if students are filing for student financial aid, especially Pell Grants?* Having reliable data on FAFSA submissions can uncover those answers. In 2012, the U.S. Department of Education developed a FAFSA Completion Tool that provides high schools with real-time data to track their students' FAFSA completion rates, helping communities to identify low rates and form a strategy to raise them.

Summer Melt Handbook. A high percentage of students who have every intention of attending college do not actually enroll the fall after graduation. *Does your community want to know how to identify these students and support them in following through with their plans?* The Strategic Data Project at Harvard University's Center for Education and Policy Research offers a guide for stakeholders who want to measure the extent of summer melt and design and implement a summer counseling initiative to mitigate the problem in their communities.

Student Achievement Predictive Data Model. *Does your community want to identify at-risk students early and effectively?* This data tool enables schools to harness the tremendous amount of data they possess to identify the relation of one variable to another, allowing schools and other student-serving organizations to identify the most important benchmarks students must meet in terms of college readiness. Once at-risk students are identified, school and community leaders can direct resources towards meeting those students' needs.

This section of the guidebook explores this last tool in more depth and includes an **interview with a lead researcher at Summit Education Initiative (SEI) in Akron, Ohio** to shed light on how they have used predictive data modeling to support students across Summit County. We also include a **data-sharing agreement template** to demonstrate language you can use to share student-level data between a school district and community partners. Finally, this chapter ends with a list of **additional resources** where you can find more information on K-12 student-level data tools.

Akron, Ohio: How to Use a Student Achievement Predictive Model to Help At-Risk Students Graduate High School College- and Career-Ready

- *Matt Deevers, Ph.D., Senior Research Associate,* ***Summit Education Initiative***

IHEP spoke with Matt Deevers, Senior Research Associate at Summit Education Initiative (SEI) in Akron, Ohio, to learn about the student achievement predictive model that SEI has built to identify K-12 students who are at risk of not graduating college- and career-ready. Deevers describes how SEI developed a data-sharing agreement that allowed them access to student-level data without compromising student privacy. Read this interview to learn which data go into building such a model and how you can use its results to inform early and effective interventions for students.

Goals

IHEP: How did you decide that building a student achievement predictive model was the right data tool for your purpose?

Having worked in the K-12 space for 18 years, one thing I knew was that there is no shortage of data in schools. Instead, they are usually overrun with data, and they don't have the staff available to conduct some more complex analytical research projects. I also knew that though there is an overwhelming amount of data in schools, there is sometimes a startling lack of information, and we define "information" as data that can direct action in positive ways to support student success.

What we were seeing was that there were a lot of distinct data initiatives, so we thought it was time to step in and say, "How do we connect all of these seemingly disconnected pieces of data in a way that can focus and organize school efforts?"

IHEP: How did you determine what student achievement meant in order to measure it?

Research shows us that an ACT composite score of 21 or better increases the chance that a student will earn an A or a B in their first freshman course by 50 percent, and there is a 75 percent probability that the student will get a C or better, so that is the outcome variable we use.

The Board of Regents in the state of Ohio also adopted remediation-free standards, which basically say that if you have this 22 math score, this 21 reading score, and you are accepted by a state school, then that state school cannot require you to take a remedial course—even if a test like Compass or Accuplacer recommends your placement into those courses. So the ACT composite score becomes an important common standard to judge college readiness.

Partnership

IHEP: How were you able to gain access to the data you needed to build this tool?

We have a data access agreement. There are 17 public school districts in Summit County, Ohio, and there's an annual agreement with two levels to it signed between the superintendent of the school district and Summit Education Initiative. The first level says that we have access to the district's data for 12 months or until somebody opts out.

The second part of that agreement is a project-authorization form, approved on a project-by-project basis, where SEI promises not to actually access or pull any data unless we are specifically conducting a project on the district's behalf.

This agreement can now be signed digitally, so that really speeds up the process.

IHEP: How did you develop this data-sharing agreement?

We actually borrowed a data agreement from another member of the StriveTogether network, Seattle. So we took that and tailored it to the nature of the work that we'd be doing.

Before we asked for all the districts to consider signing it, we met with one partner district that was familiar with the work that we were doing and was supportive of the work. The school superintendent also happened to be on our board of directors and we knew we needed buy-in at that level. Their most immediate concern was raising student achievement on a 10th grade graduation test. In Ohio, students start taking their graduation test in 10th grade, and if they pass it the first time, they don't have to take it again. If they pass it very, very well, then it reflects positively on the school, performing at a higher level. So this early adopter partner district had targeted that as an area of need. They signed our agreement, so we did the work for them.

IHEP: How did you help this district address its concern of raising achievement on the 10th grade graduation test?

We built predictive models for them that specifically connected grade point average and some early college readiness test scores to the state test scores, so that they could pinpoint with much greater accuracy the students who were unlikely to meet with success at the highest performance levels, without additional intervention.

Once we had that successful relationship with one district, we were able to go to the other school districts. It helps that our early adopter partner district is willing to share its experiences with new districts.

IHEP: Did you encounter concerns about safeguarding students' private information when sharing data?

The first thing that I'll say is when you are in the course of conducting research in order to identify critical values which districts can act on, you only need personally identifiable information (PII) for a very brief moment in time, and that is only to connect disconnected datasets—like connecting attendance totals to grade point averages to state test scores to ACT scores to graduation lists. The PII is only used to aggregate the data together, and then it's eliminated. So by the time I start doing the work at the Summit Education Initiative, the data are completely anonymous, and I think that's an important thing to keep in mind.

When you are in the research phase, stripping data of PII as early and quickly as possible is definitely a best practice.

In the example I mentioned above, where I was linking the 10th grade fall assessment with the 11th grade first grading period GPA, I stripped the information from the students who had been through the pipeline. I study the trends in the data from de-identified data, so that I can understand what critical values can then be mapped onto current live data.

When we get into the phase where we are turning the data back to the schools in real time in a way that we want them to drive action, then we use a cloud-based database solution that allows us to have record-level security. When the current live data are extracted, because they have PII on them, they are immediately uploaded to this secure cloud-based database system that allows the principals then to log onto a web portal and see the results.

Implementation

IHEP: Can you describe how the tool works?

The tool allows me to take two pieces of data and put them together. One project, for example, required connecting a 10th-grade fall readiness assessment with the grade point average from the first grading period of 11th grade. These are two disparate data points, but both of which are highly correlated with the ACT score that students get in the spring of 11th grade.

I took those two datasets together so that I could identify the critical values that would lead to a student succeeding on the ACT or struggling on the ACT. This is how we get blood pressure, how we know 120 over 80 matters, because we measured it in thousands and thousands of people over time, so the same thing applies here. I study the trends in the data so that I can understand what variables impact student success.

IHEP: How do you decide which data points will enable you to determine which students are most in danger of not meeting an ACT composite score of 21 or better?

Again, we began with the assumption that there are plenty of data out there and we don't need to create something new, so we set up three criteria that just guided our own work. Data needed to be: 1) commonly collected, 2) easily understood, and 3) actionable.

After the No Child Left Behind Act of 2001, we had reading and math scores from students in grades 3 through 8 and at least once in high school. We could establish a correlation between those early indicators—8th grade mathematics and high school state test scores—and the ACT. We also know that the way most schools work, students get a grade point average every quarter, and so why not harness the use of this incredible amount of data that is already being collected to channel attention and energy towards something like graduating college-ready?

So the data points where we first focused our energy were state test scores, quarterly grade point averages and cumulative grade point averages, and also attendance data because our urban school partners feel students often have a hard time staying on track because they just can't get to school.

> "Why not harness the use of this incredible amount of data that is already being collected to channel attention and energy towards something like graduating college-ready?"

IHEP: How long would you say it took SEI to develop this tool, including all planning, designing, and testing phases, as well as engaging the early adopter district?

We spent about 18-24 months getting to a place where if a school calls us, concerned about which ninth graders most need attention, we can turn around within a couple of days and give them web-based secure access into their own data that enables them to see the students who are in need of the greatest attention.

However, our work is still in its infancy because some of our partners use different sites to house their students' data. There is nothing quite automated about the work just yet. We just continue to refine and enhance it until the value proposition is so clear that the districts themselves are willing to invest a little bit of their own human resources into helping us aggregate and report their own data into our cloud system.

We hope to get to a place where the schools would task someone with automating the creation of datasets, because then it could be pushed automatically to a cloud-based database straight from the school district. Then we'd just be managers of the database without actually ever pulling down the data. Ultimately our goal is to write ourselves out of the mechanical processes, which will free up more of our time to facilitate dialogue about what to do with the data once you have them.

Impact

IHEP: How do you believe school districts can use these data to inform interventions that would increase student success?

We don't necessarily think that all the data we collect would identify a student at risk, or that they have all the answers that could direct us to the appropriate interventions. So we developed another data tool over the past two years that is a survey of social/emotional factors that can be used in schools.

By using this survey, we begin to create a more comprehensive understanding of each student. We believe if the data are robust enough, then paths to support that child will be made clear. We are very careful in our mission of "working with schools," not "working on schools," and so we try to put enough data into the school leaders' hands in a way that we get them right to the edge of, "Okay, now we know what we need to do," and then they can take it from there.

> "We believe if the data are robust enough, then paths to support that child will be made clear."

IHEP: Could you please provide an example of how these tools were used to identify at-risk students and the specific interventions the data informed?

In the spring of 2013, the early adopter partner district I mentioned earlier wanted to identify students who were at risk for not exceeding minimum standards on the state test. We combined some predictive modeling work with some of the other work that we do on the social/emotional development and positive psychology and gave these data to the district. The building principal then met with each of the department chairs and gave them the list of at-risk students who were not going to exceed minimum standards on the state tests, unless they took action.

Then the department chairs sat down with each student and said, "The good news is we have every reason to believe you are going to be successful on the state test in a few months, but we have studied these data, and we believe that with a little extra effort, you could blow the doors off this and be very, very successful and score the higher performance levels. We have structured some time that we would like to invite you to. We will take care of your lunch. We are going to do group study sessions and do some review activities and really prepare you for success, so that when the day the test comes, you won't need to worry about how prepared you are."

So they took our predictive model, and combined it with their own approach to working with kids that said, "We are confident in your abilities, and we want to help enhance them."

IHEP: Does SEI involve itself in training district teachers and administrators on what to do with the data you collect?

Our Ready High School Network is made up of teams that represent each one of the high schools in the urban school district and about 50 percent of the suburban high schools. This network meets quarterly and begins each meeting with what we call a "data dip," where we focus on one particular data point.

So, for example, each high school will be given the FAFSA data from the government that says the number of students who have started the FAFSA and the number of students who have completed the FAFSA. We will combine that with the total number of students in their 12th-grade class to say, "Here is your gap analysis."

When one member of the network finds something that seems to be working, that member is invited to come back to the next meeting and actually showcase their work. For instance, one school felt they had a really great college visit model that included lessons for students before they go on the visit, tasks to complete while they are on the visit (e.g., a scavenger hunt), and reflective activities that followed the college visit. By sharing their model with other schools that felt their college visits were lacking, this networking experience starts to produce a more standard protocol for how to do college visits.

So it is really these network teams that we think drive the change. We don't have the personnel to go out to every school and tell them what to do, nor do we want to, and we certainly don't know what all the answers are. I believe that the schools know how to best meet the needs of the students in their schools. They just need a little help organizing the information and finding clarity of focus.

IHEP: Have you seen an increase in graduation rates over the past few years? Perhaps specifically graduation rates of college-ready students?

Yes, we have. I don't claim responsibility for that, but I do claim in its celebration. We have been collecting and aggregating the college-ready rates of our students at the county level for the past three years, and what we found was that college readiness (again, which we define as students earning a 21 or higher on the ACT) has improved by five percent from 2012 to 2014. That means, in our county, there are 240 more students every year who are leaving high school prepared for success in a postsecondary program.

Looking Forward

IHEP: Would you like to offer any last words of wisdom to CPA communities who are looking to use predictive data modeling to identify students most in need of intervention?

First, we understand that schools are facing very immediate needs in isolation from the big picture. Graduating ready for college is great, for example, but schools are worried about graduation rates, period. Schools can't think about who will do well on the ACT, because it happens at the end of 11th grade, while they're concerned about kids not passing their exams at the end of 9th grade. Now, often, the same kid who was at risk for not passing their 9th-grade test is the kid who is at risk for not graduating with a 21 on the ACT, and we really need to help people understand this so that our data can have more impact.

Secondly, there are such wild variations in some of the data collection habits of school districts that we're struggling to find something that can be universally referenced, yet also still actionable.

I will give you a down-in-the-weeds example, but for people who are starting to work with school districts, this is valuable. At the end of the first nine weeks of school, kids get a grade point average. It is not their cumulative grade point average, but it is their grade point average for how they did in the last 45 days. We believe that is the most valuable of grade point averages because you get a fresh one every 45 days.

The limitation, however, is that School A might call that "quarter 1" in their data system. School B might call that "QPR1." School C might call it "first quarter." There are so many variations on the naming conventions for how the data get into the system, so coming up with a universal way to pull it out is quite a challenge.

So we start looking toward cumulative GPA because there's much greater consistency around the way that that data are encoded when they're put into the student information system. However, one of the limitations of cumulative GPA is it is considerably more stable, meaning it doesn't move quite as much. So you could have a kid from one grading period to the next go from a 2.0 to a 3.1, and this is a huge victory that we should all celebrate. But rarely does the cumulative GPA move that much. As we try to balance the expediency of data collection with the value that that data brings to the conversation, we should select the data we use carefully.

> "As we try to balance the expediency of data collection with the value that that data brings to the conversation, we should select the data we use carefully."

AGREEMENT

BETWEEN

SUMMIT EDUCATION INITIATIVE AND

TWINSBURG CITY SCHOOL DISTRICT BOARD OF EDUCATION

REGARDING

DATA SHARING FOR RESEARCH PURPOSES

This annual agreement ("Agreement") regarding data sharing for research studies is entered into by and between Twinsburg City School District Board of Education ("District" or "Board") and Summit Education Initiative ("SEI"), collectively, the "Parties."

PURPOSES

- **Establish a working relationship between the District and SEI;**
- **Identify research studies that SEI will perform for and on behalf of the District to improve instruction;**
- **Authorize the use of specified student information to SEI for use in research studies; and**
- **Protect against unauthorized access to and disclosure of personally identifiable student information.**

AGREEMENT

1. PROJECT AUTHORIZATIONS

1.1 The Parties shall enter into a separate agreement, called a Project Authorization, for each research study conducted by SEI using data provided by the Board that includes personally identifiable student information.

1.2 The terms and conditions contained in each Project Authorization shall be incorporated into this Agreement and become binding on the Parties.

2. STUDENT INFORMATION

2.1 Student Information-SEI will only access and utilize District student information as detailed in Project Authorizations. Data will be accessed using District assigned student identification numbers. All Cradle to Career Alliance Projects as well as other District initiated data research projects will be approved by the District Superintendent or designee through a Project Authorization. All data fields and files to be accessed,

including but not limited to Personally Identifiable Information, will be delineated in each Project Authorization.

2.2 Personally Identifiable Information. As used in this Agreement, "Personally Identifiable Information" or "PII" means that student information identified as such in the Family Educational Rights and Privacy Act (FERPA), 20 U.S.C. Sec 1232g, and specifically in the definition of "Personally Identifiable Information" in 34 C.F.R. 99.3.

2.3 SEI understands that PII from educational records is confidential and cannot be re-disclosed by publishing such information in any way that allows individuals to be directly or indirectly identified. SEI shall not re-disclose PII in any way that causes a breach in confidentiality.

3. RESEARCH STUDIES TO IMPROVE INSTRUCTION

3.1 SEI will perform research for and on behalf of the District in conjunction with SEI's Summit County Cradle to Career Alliance effort.

3.2 Subject to section 5.6 hereof, SEI will provide its District research analysis to, and only to, the District so that it can assess how it may better serve its students through improved instruction and other educational strategies.

3.3 The research analysis SEI will provide to the District will primarily focus on longitudinal measures of progress related to student educational outcomes. SEI will use District data to understand educational trends across not only the District, but the County as a whole. SEI will provide that analysis to the District to inform instruction strategies for improving educational outcomes in the District. SEI will use county-wide, aggregated data for policy initiatives focused on supporting the efforts of schools and advocating for best practices to support effective instructional practices. SEI will also provide analyses that are useful to the District in informing education policies and practices, such as comparative analysis of the District with the county-wide aggregate. SEI will NOT share, present, or publish District-specific data and results with any entity except the District.

3.4 SEI shall be solely responsible for obtaining any necessary review and approval by an institutional review board for research studies involving human subjects.

4. DATA SHARING

4.1 To assess progress in the District, the District will share specified raw data files and fields with SEI, some of which will contain PII. The particular data files and fields to be shared will be specified on a Project basis as outlined in each Project Authorization and will depend upon the nature of the questions to be addressed by SEI.

4.2 Each Project Authorization shall identify all SEI officers and employees who will have access to Personally Identifiable Information during the research project described in the Project Authorization, and shall specifically identify the SEI officer or employee whom SEI has designated to be the custodian of the PII obtained from the Board for the project. The custodian and other SEI personnel who have access to PII shall each provide to the Board an affidavit stating that he or she understands the confidential nature of PII; understands his or her legal obligations regarding PII under FERPA, Ohio law, this Agreement, and the Project

Authorization; has received training from SEI regarding those obligations; and that he or she promises to comply with the aforementioned obligations.

4.3 Only SEI officers and employees with a legitimate interest in PII, as demonstrated by the parameters of the Project Authorization, shall view the PII related to a research project.

4.4 Execution of the Project Authorization by the Board's Superintendent or designee and SEI (email acceptable) will be the only acceptable authorization for the release of PII to SEI. Contained within the Project Authorization will be: the project title, the purpose and scope of the project, the duration of the project, each data field to be accessed and the time period of the data to be accessed (School Years).4.5 Project Authorizations are only valid if:

- **this Annual Agreement is signed and on file at SEI and**
- **for NEONET partners, the DASLr Security Authorization Form, indicating which DASLr "Views" are authorized as being necessary to complete the research project, is on file at NEONET.**

5. DATA SECURITY AND PROTECTION OF PRIVACY

To effect the transfer of data and information that is subject to federal and state confidentiality laws and to ensure that the required confidentiality of Personally Identifiable Information shall always be maintained, SEI agrees to the following in compliance with FERPA in general and 34 C.F.R. 99.31 (a) (6) specifically:

5.1 SEI will comply with provisions of FERPA and Ohio law as they apply to PII. Nothing in this Agreement may be construed to allow either party to maintain, use, disclose, or share student record information in a manner not allowed under federal or state law or regulation.

5.2 Method of transfer. To ensure security of data provided by the District, SEI will access data through a VPN provided by NEONET. No personally identifiable data will be collected or stored by SEI nor will these data be accepted by SEI through email from the District. SEI will not transfer any Personally Identifiable Data through email. All District data reports that contain Personally Identifiable Information will be conveyed by SEI via physical media (hard drive, USB drive, CD, DVD).

5.3 SEI will use Personally Identifiable Information shared under this Agreement for no purpose other than to meet the objectives of the research study specified in the Project Authorization. Non-Personally Identifiable Information will be used by SEI for purposes defined in the Project Authorization and may also be used by SEI, in aggregate form, for county-wide Cradle to Career Alliance projects.

5.4 SEI will conduct research studies having Project Authorization in a manner that does not permit personal identification of students or parents by anyone other than representatives of SEI with a legitimate interest in the information and the District.

5.5 SEI will not disclose Personally Identifiable Information in any manner that could identify, directly or indirectly, any individual student or parent except as authorized by FERPA and provided for in a Project Authorization. In such cases, the Project Authorization will clearly specify the information to be disclosed, the entity receiving the information, if other than the District, and the purpose of the disclosure.

5.6 SEI has the right to present, publish, or use the data it has gained in the course of the research for and on behalf of the District under this Agreement, but SEI may only present, publish and use the data in an

aggregated form, with no Personally Identifiable Information, with all other participating county districts and schools. SEI may not present or publish data comparing or listing specific districts and/or schools.

5.7 SEI will not provide any data obtained under this Agreement to any entity or person that SEI knows is ineligible to receive data protected by FERPA.

5.8 SEI will destroy or return all data files and hard copy records to the District that contain Personally Identifiable Information and purge any copies of such data from its computer system:

5.8.1 Immediately upon termination of this Agreement, either by expiration or as provided herein or

5.8.2 Within 5 business days after Personally Identifiable Information is no longer needed for the purposes stated in the Project Authorization.

5.8.3 SEI shall provide to the Board an affidavit confirming the destruction and/or return of PII within 5 business days of being required to destroy or return such information.

5.9 SEI understands that the Agreement does not convey ownership of the District's data to SEI.

6. PERMISSION TO ACCESS DATA

6.1 SEI will access data through a third party, NEONET, upon the annual authorization of this Agreement.

6.2 SEI shall not access data through NEONET other than as authorized by this Agreement and the applicable Project Authorization.

6.3 SEI may, upon the request and explicit approval of the District through a Project Authorization and the specific authorization described in this subsection, share data with a third party, such as the National Student Clearinghouse. SEI shall not, however, disclose PII to any third party. Prior to disclosing non-Personally Identifiable Information to a third party, SEI shall provide the Board with a copy of the information that SEI intends to disclose, and SEI shall not disclose the information until the Board or its designee has reviewed the intended disclosure and provided SEI with written authorization to make the disclosure.

7. TERM OF AGREEMENT

This Agreement shall commence upon the date of signature by the Board's Superintendent and the SEI Executive Director. It shall have duration of no more than one calendar year. For the year beginning January 1, 2013, the Agreement will be in force for no more than 13 months and will terminate on February 1, 2014. Thereafter the Agreement shall annually be reviewed and executed no later than January for the succeeding calendar year. All subsequent Agreements shall be for 12 months.

8. TERMINATION

Either Party may immediately terminate this Agreement, a Project Authorization, or both, at any time for any reason, by written notice to the other Party. Termination of the Agreement, a Project Authorization, or both shall not abrogate any remedy provided for in the Agreement.

9. PAYMENT

SEI will not charge the District for the work being performed for and on behalf of the District as it relates to the Cradle to Career Alliance. SEI will operate as a flow through organization for districts which choose to participate in Cradle to Career Alliance Projects that offer group discount pricing. (Examples of such programs are: National Student Clearinghouse, ACT/PLAN/Explore.) Customized research services can be contracted through SEI through a separate agreement. (e.g. climate survey, community feedback, etc.)

10. NONDISCRIMINATION

The Parties agree that no individual shall be excluded from participation in, denied the benefits of, subjected to discrimination under, or denied employment in the administration of or in connection with any aspects of this Agreement because of sex, race, creed, religion, color, national origin, age, honorably discharged veteran or military status, sexual orientation, including gender expression or identity, the presence of any sensory, mental, or physical disability, or the use of a trained dog guide or service animal by a person with a disability. The Parties agree to abide by the standards of responsibility toward the disabled as specified by the Americans with Disabilities Act. In the event that either Party refuses to comply with this provision, this Agreement may be canceled, terminated, or suspended in whole or in part by the other Party.

11. ASSURANCES AND NOTIFICATIONS

11.1 The Parties agree that all activity pursuant to this Agreement shall be in accordance with this Agreement and all applicable current or future federal, state, and local laws, and all applicable rules and regulations.

11.2 By signing this Agreement, SEI represents to the Board that it has not been previously determined by a court of law, administrative agency, hearing officer, or similar decision-maker, to be in violation of FERPA, Ohio law, or federal or state regulations governing the handling and disclosure of PII, and that no court of law, administrative agency, hearing officer, or similar decision-maker has determined that the conduct of SEI or its officers or employees have caused any board of education to be in violation of the laws and regulations governing PII. If any such determination is made during the term of this Agreement, SEI shall immediately notify the Board.

11.3 SEI shall notify the Board immediately if SEI determines that PII has been improperly disclosed to SEI personnel who do not have a legitimate interest in the PII or to any third party. This requirement applies to PII provided by any source, not just the Board.

11.4 SEI shall notify the Board immediately if SEI determines, or if a court of law, administrative agency, hearing officer, or similar decision-maker determines, that SEI has improperly disclosed PII that SEI obtained from the Board. The Parties agree that this notification requirement survives the expiration of the term of this Agreement.

12. RESPONSIBILITY FOR IMPROPER DISCLOSURE OF PERSONALLY IDENTIFIABLE INFORMATION

SEI shall be solely responsible for damages caused by the improper disclosure of PII that is caused by the conduct of SEI, its board members, officers, employees, or agents. SEI agrees to indemnify the Board and hold the Board harmless for any damages caused by the improper disclosure of PII that is caused by the conduct of SEI, its board members, officers, employees, or agents, and to defend the Board against such claims for damages. The parties agree that the terms and requirements in this Section 12 survive the expiration of the term of this Agreement.

13. RIGHT TO AUDIT

The Board, through its employees or agents, shall have the right to audit SEI's compliance with this Agreement. The Board shall give SEI 5 business days' notice of its intent to audit SEI's compliance. SEI shall cooperate fully with such audit.

14. DISCLOSURE OF THIS AGREEMENT

The Parties understand that this Agreement, once executed, as well as all Project Authorizations, are public records. The Board will disclose this Agreement and Project Authorizations when a public records request is made for such documents. The Board may, even in the absence of such a request, disclose this Agreement and Project Authorizations, including, without limitation, by posting them on its website.

15. SURVIVAL

Notwithstanding anything to the contrary is this Agreement or Project Authorization, the rights and obligations contained in the following sections and subsections of this Agreement shall remain in effect after this Agreement or Project Authorization is terminated, and after a project has been completed: Subsection 1.2, Section 2, Subsection 3.2, Subsection 4.3, Section 5, Subsection 6.2, Subsection 6.3, Section 9, Section 11, and Section 12.

16. ENTIRE AGREEMENT

This Agreement, along with incorporated Project Authorizations, constitute the entire agreement among the Parties with respect to the subject matter hereof and supersedes any prior agreement or understanding among the Parties with respect to such subject matter.

17. AMENDMENT

This Agreement shall not be modified or amended except by written agreement executed by both Parties.

IN WITNESS WHEREOF, in consideration of the terms, conditions, and covenants contained herein, or attached and incorporated and made a part hereof, the parties have executed the Agreement by having their representatives affix their signatures below.

DATED this _____day of _____, 2013.

TWINSBURG CITY SCHOOL DISTRICT BOARD OF EDUCATION	**Summit Education Initiative**
By:_____	**By:_____**
Title:_____	**Executive Director**

Additional Resources

Strategic Data Project Summer Melt Handbook: A Guide to Investigating and Responding to Summer Melt *(2013: Center for Education Policy Research at Harvard University)*

This handbook explains how school administrators, high school counselors, and community-based organizations can reduce "summer melt," the phenomenon in which students who enroll in a postsecondary institution in the spring fail to attend the following fall. It offers strategies for helping districts collect data on summer melt among their students and provides various examples of how a district can decrease its rate of summer melt depending on its resources, information, and connections with local colleges or college access organizations. The handbook includes five case studies of initiatives from community organizations and schools to implement summer melt interventions, detailing costs, timelines, and results.

Data Usage and Platforms for College Access and Success *(2014: National College Access Network)*

This brief details different platforms available for tracking student data that can be used by programs and practitioners seeking to advance college access and success through program improvement and scaling. This resource uses survey results to compare different platforms—including SalesForce, Naviance, College Greenlight, and others—by looking at what data they are collecting, how the data are stored, platform strengths and weaknesses, and how they can best be utilized for different purposes. NCAN also describes the experiences of its members in utilizing each of the platforms.

Privacy Technical Assistance Center *(U.S. Department of Education)*

The Privacy Technical Assistance Center is a "one-stop" resource for education stakeholders who use student-level data. These resources are especially important in light of the increasing use of K-12 and P-20W longitudinal data. The Center provides tools and assistance—both online and offline—to help organizations and institutions maximize the quality and usefulness of student-level data without compromising students' privacy. Its Privacy Toolkit offers a collection of up-to-date information and resources about FERPA and other legal, statistical, and policy issues. The Center also offers site visits to state and local educational agencies, informational forums, and a support center with an interactive help desk.

Student Privacy Resource Center *(FERPA|SHERPA)*

This website provides materials for parents, school officials, policymakers, tech companies and education service providers on how to use student data responsibly under FERPA and other student privacy regulations. This resource also includes information on the privacy laws and data security, along with policy papers and other resources concerning student privacy.

A Stoplight for Student Data Use *(2014: Data Quality Campaign)*

This guide provides an overview of the Family Educational Rights and Privacy Act (FERPA) and describes the scenarios in which educators and policymakers can and cannot share students' personally identifiable information under the law. This resource should be used to understand key provisions of the law and determine when it is necessary to consult the law or an expert.

Chapter Four:

How to Use Student-Level Data to Improve Postsecondary Student Outcomes

While it is very important for colleges to track and report how student cohort groups are doing—such as the graduation rate of the Class of 2015, the retention rate of African-American students, or remediation outcomes among first-generation students—it is just as important to have robust student-level data. When colleges know when an individual student is starting to struggle, this information can trigger interventions to help students navigate academic, financial, or personal barriers and make continuous progress through their program.

Data on individual students can help at various points, including: course selection or enrollment in supportive programming at the start of a semester; progression through individual courses and sequences of coursework to meet requirements for transfer or a program of study; and counting credits and awarding degrees appropriately when students leave an institution.

A variety of tools make it easier to collect these data. Institutions increasingly use online systems to share information more quickly and widely, freeing up person-to-person communication between students and faculty or advisors for more personalized, in-depth conversations. Through the Gates-funded initiative to support Integrated Planning and Advising Services (IPAS), more institutions are using online tools holistically, enabling greater collaboration across offices and programs to support student success. Below are a few examples of postsecondary student-level data tools:

Educational Planning Tools. *Do your institutions want to provide students with customized education plans, based on their educational objectives as well as a recommended time frame for completing their goals?* Educational planning tools suggest degree-appropriate courses and ensure students are taking their classes in the correct sequence. This helps students accumulate credits more efficiently, saving them both time and money. Transfer students, who often struggle to integrate their past credits into their current education plan, may find these tools particularly useful.

Early Alert Systems. *Do your institutions want to help students who are at risk of not completing by intervening early and often?* Early alert systems include **online warning tools** that identify students who are at risk of veering off track due to potential road blocks like falling grades, missing gateway classes, insufficient course loads, or erratic attendance. Once identified, these students receive an alert with a suggested course of action. These systems can also employ **risk-based statistical models** that identify at-risk students based on continuously updated information about their financial, personal, and academic variables. Often, academic advisors, faculty, and support staff are notified if their students are at risk of failing or falling behind, enabling them to intervene in a timely manner. Research has shown that this kind of "intrusive advising" increases students' likelihood of persisting in college and graduating on time.

Degree Audit Systems. *Do your institutions want to make sure students receive their degrees in a timely manner?* These systems provide students and their advisors with information about degree requirements. They also help monitor students' progress toward earning their degrees, ensure that students receive credits and degrees they are eligible for, and locate potential degree earners—individuals who left school before completing and may be targeted by outreach campaigns to come back and finish.

This section of the guidebook features **interviews with leaders at a west-coast community college and east-coast four-year university** who share details about their student-level early alert and educational planning tools and their effect on school staff and students. In addition, we provide a brief **degree audit manual** to help community leaders understand whether their local postsecondary institutions might be ready to adopt IHEP's Project Win-Win degree audit model to identify near-completers and students who left without receiving the appropriate degree, improving both individual and institutional outcomes. Finally, this chapter ends with a list of **additional resources** where you can find more information on postsecondary student-level data tools.

Shasta County, Calif.: How to Support Postsecondary Student Success through an Early Alert Advising System and an Educational Planning Tool

- *Kevin O'Rorke, Ph.D., Vice President of Student Services and Dean of Students,* ***Shasta College***
- *Kate Mahar, Ed.D., Project Director for* ***Shasta College Community Partnership for Attainment initiative*** *and Associate Dean of Foundational Skills and Adult Education,* ***Shasta College***

IHEP spoke with Kevin O'Rorke and Kate Mahar from Shasta College, a community college serving the rural region of Redding in northern California. Their institution has used an early alert advising system since 2008, which impacts not only the information and support services to which students have access, but also the perspectives of faculty on the value of tracking students' progress. They are currently developing an automated educational planning tool to help students with degree planning, freeing up time for counselors to focus on other important areas of success in meetings with students. Read this interview to learn how to shop for software systems, how faculty and counselors come on board with these new tools, and the importance of establishing strong connections with IT departments.

Goals

IHEP: What kind of early alert system do you have in place at Shasta College?

During the fifth and tenth week of each semester, we send out an early alert notice to faculty. They go into their electronic grading book and put an X next to any student who may be struggling in a course. We get that list of students, and those students get a letter from the counseling department; some receive personal phone calls from our counseling system telling them their instructor identified them as struggling. Then they work with the students to get them into the tutoring lab and figure out the barriers to succeeding in class. We've had this system in place since 2008.

IHEP: What were the college's primary goals when you decided to start developing and using this early alert system?

We certainly wanted to increase our retention. We also wanted a more proactive counseling department where we would reach out to students. We wanted to move away from the "prescriptive" model of counseling, like the old joke says, "Take these two classes and see me next year." We wanted to collaborate more with the faculty and let them know how we could support them and to identify what struggles our students were experiencing. Were they related to finances, time, academics, or life circumstances? We wanted to collect more information.

IHEP: You're also working on developing an automated educational planning tool at the college. Tell us about that tool and the goals you have in mind.

We recently implemented a degree audit system. Now we're moving toward automating an educational planning tool so students will be able to do degree shopping online. We're planning on releasing it next year. Students have an audit tool to run a grade check, but we can move toward identifying the student's end plan, where they want to transfer, and telling students what classes to take. In California, there isn't a single state system; colleges have to send transcripts back and forth. Course numbering and course titles are different across institutions as well.

The idea is that students will be able to update their educational plan automatically, and our counselors will be able to spend a lot more time with students doing something other than developing education plans by hand. They would be able to work with them on career counseling, personalized assessment, time management skills, and other aspects of student success. Counselors are excited to have more time to talk about these things; it's more professionally rewarding for counselors to use their master's degree-level skills for something other than just going through the course schedule with student after student. The students, meanwhile, will hopefully develop a good relationship with their counselors. They also won't have to schedule an appointment and drive in to see a counselor for degree planning if they can just open up this tool online.

Partnership

IHEP: Who was involved in setting up the early alert system?

The counselor coordinator at the time and I [Dr. O'Rorke] brought the idea of an early alert system to the Matriculation Committee, now called the Student Success Committee. It included faculty members, administrators, and staff. We had instructional coordinators from the English and Math departments on the committee, and during department meetings and meetings with the Academic Senate, they explained what the system was and promoted it. IT people worked on configuring the screen in our student information system. There was also someone from the Institutional Research Office on the committee.

The counseling department worked on the letter going to struggling students and how to follow-up with students who received letters. When faculty mark a student as struggling in our system, this triggers a letter from our office to the student notifying them that a faculty member is concerned about his or her performance and encourages the student to contact the instructor or a counselor. In addition, the counseling office personally contacts each student to respond to individual circumstances and needs.

After a semester we had the system up and running, but it took a long time to grow.

IHEP: Let's talk more about that process of growth. What was it like bringing faculty on board to use the early alert system?

The faculty weren't jumping on board and using the system right away, but eventually it caught on. Our goals were to increase the number of faculty using it, and we hit that goal. We talked for a while about whether the system should just be for our basic skills classes, and we decided to open it up for everybody to use. We did have to make it clear to the students that this system was voluntary among faculty, otherwise some students thought that if they were failing they would automatically get a notice about it from any class. The Academic Senate was key in making sure faculty were on board with participating.

“This can't be a top-down issue. The faculty are the ones who are going to have to be the drive behind using an early alert system. You can create an awesome system, but if they are not on board, they are not going to use it.”

This can't be a top-down issue. The faculty are the ones who are going to have to be the drive behind using an early alert system. You can create an awesome system, but if they are not on board, they are not going to use it. It's important to get some of the key faculty members with a lot of influence at the college to help develop and share it, and this will vary by institution. If departmental coordinators are assigned through an administrator or there's no faculty vote, you may have to step back and see who the leaders are in the Academic Senate. If you can get the basic skills faculty on board, you're going to hit a large percentage of students. Finally, if you're getting some resistance from current faculty, then I would go right to recent faculty hires and ask them to make it part of their orientation in the sections they will teach.

IHEP: Who has been involved in working on the automated educational planning tool?

The primary driver behind this tool has been the counseling department. Before we could use the education planning tool, we had to build the degree audit system over the last couple of years, which has been a collaboration between Admissions and Records, Counseling, and instructors. The Instruction Council has been charged with working with faculty to identify key courses and course sequences so they can work with counselors to make sure everything is clear for students in the system. They are trying to look at it as a four-semester sequence for everything and that has led to a fantastic conversation about when we offer different courses and why we have some prerequisites in the spring and fall.

We have paid for some programming and IT support. The counselors went through demos of different software programs. We finally selected the one we wanted and purchased it, and now we're in the process of building it. Our IT Department and Students Services are merging every day. It's almost becoming one department, no longer separated in our daily operations. We paid for an IT position to be housed within Student Services to help us work on this, because we learned that it is easier to hire someone with expertise in IT and then teach them about Admissions and Records for the position, rather than to hire someone with expertise in transcripts and then teach them about IT. In order for the content and user interface to make sense to students and instructors, it was imperative that our IT person was part of Student Services at the time.

IHEP: How do you gain buy-in for the education planning tool?

The counselors are the people who are going to be using it on a day-to-day basis; they need to have the most input on what tools they'll use and what they'll look like. We offered them options. That probably helped develop into a feeling of ownership for them, and the idea that the tool would sink or swim based on their input and buy-in.

Implementation

IHEP: What technological resources were needed to put the early alert system into place?

We made the change in the existing electronic grading book, the My Shasta system. We just added the 5th and 10th weeks to enable instructors to mark if students were struggling at those points. It was low to no cost, aside from some IT programming time.

IHEP: What were some of the leading qualities you looked for when choosing a software system for your education planning system?

We use *Colleague*, commonly called *Datatel*, by Ellucian. We wanted a web interface that anybody could use. It needed to be mobile-friendly, since a lot of students have mobile phones and may access the tool through their phone rather than a desktop computer. We wanted something portable and easy to read and understand. It was also important for it to be able to incorporate transfer units, so if students transferred from another institution or had college credit to bring in, that would also be posted on their plan.

Institutions shopping for a system may also consider customization issues. The *Datatel* system gets updated annually, and if we as an institution customize anything, those get erased and you have to re-do them with the new version. But they have representatives who they send out to all their colleges to work with the institution's IT department. A lot of colleges just use the overall framework rather than doing too many customizations. Colleges might also choose to use a home-grown system that they can customize however they want, but the downside is that it will eventually grow beyond capacity and will need to be replaced by a larger system. We've seen that happen at many institutions, and it's a lot of work for schools to switch their student information systems.

IHEP: What kind of investment does the education planning tool require?

It is costly. The philosophy here has been that we are going to take some money that would typically have been used to provide staffing and counselors to invest in technology that supports our counselors' efforts. We can't underestimate how challenging those conversations may be, because not everyone agrees with that decision. A counseling group may have an idea about what's best for counselors, and administrators will think of what's best for administration. But it all boils down to what is best for students, and that will usually break the tie.

> “[The tool] needed to be mobile-friendly, since a lot of students have mobile phones and may access the tool through their phone rather than a desktop computer. We wanted something portable and easy to read and understand. It was also important for it to be able to incorporate transfer units.”

Impact

IHEP: What has the response been to the early alert system at Shasta College?

One of the biggest benefits of the early alert system was that it opened up the conversation with our faculty about their responsibility in gauging how their students are doing early on in the semester and paying attention to that moving forward. We had some faculty who were assessing their students once with a mid-term and once at the end of the class, who would say they couldn't use the early alert system because they weren't getting information on student grades until mid-semester. That opened up a conversation about pedagogy and whether we actually should only be assessing students twice per course, or whether we needed to have assessments earlier in the semester.

There was an old philosophy that students “have a right to fail”—that this is an institution of higher learning and faculty are not going to “babysit” them. That view has subsided. When we hire new faculty now, we generally want them to be enthusiastic about tracking their students' progress.

The students seem to appreciate the early alerts. A lot of it depends on whether they are connecting with their counselor and whether they enjoy working with them. Our retention rate is getting better, which could be tied to various things. It's not just that we have an early alert system, but that we have been making pedagogical changes, including earlier assessments, for students in the classroom.

Looking Forward

IHEP: Do you see the early alert system being used differently in the future?

I think we can expand it, and it would be helpful to ask the faculty for a little bit more in-depth information when they submit the early alert. Rather than giving us a generic alert, we can drill down and see why the alert is being created to let us know what we could provide to students to remedy the situation. The faculty could tell us if the student is struggling because of excessive absences, or if they are attending class every time but still failing, or being disruptive.

IHEP: Would you like to offer any last words of wisdom to CPA communities seeking to use new tools like these to promote a culture of student success?

When we introduce new tools, we go into it with the understanding that there will never be complete consensus. It's important to set ground rules up front, where everybody has a voice and will be recognized, but there are some things we need to move forward on even without full consensus. Moreover, I [O'Rorke] kept using the word "pilot." That's the most important word I would suggest to other schools to use. Many times people will dig their heels in, either in support of or in opposition to something. When using the term "pilot," we're saying we're going to take a look at it, go in with an open mind, and then evaluate it and determine if we want to do it. I think that saves some heartache down the road.

> "One of the biggest benefits of the early alert system was that it opened up the conversation with our faculty about their responsibility in gauging how their students are doing early on in the semester. . . There was an old philosophy that students have "a right to fail"—that this is an institution of higher learning and faculty are not going to 'baby-sit" them. That view has subsided."

Philadelphia, P.A.: How to Use a Risk-Based Statistical Model to Improve Postsecondary Student Retention

- *Peter Jones, Ph.D., Senior Vice Provost for Undergraduate Studies,* ***Temple University***

IHEP spoke with Peter Jones from Temple University to learn about the risk-based statistical model he has developed to help improve student retention. Jones describes how he utilized data the university already had to build a risk instrument that would identify students most at risk of not completing their postsecondary education. He also discusses the importance of building an academic advising corps to respond to these data and help direct students towards the supports that best meet their specific needs. Read this interview to learn how this risk instrument works and how you could develop a similar one with the data you already have at your disposal.

Goals

IHEP: What was your main goal in building a risk-based statistical model at Temple University?

I have actually been developing risk models for application in my field of criminal justice. If you have a particular outcome in mind, and you have a specific population that you need to provide services to but you have a fixed capacity to do that because of resources, then the "risk/needs principle" applies: if you could identify those people that are most at risk, rather than spreading resources evenly across an entire population, you can be much more strategic and focused. Not only do you identify the population, but you identify the factors that might be associated with the outcome.

It is pretty well documented in the literature that empirically-based risk models significantly outperform any clinical type of models. The challenge at Temple was not, of course, to reduce offenders as in the field of criminal justice, but to improve retention. But the same logic applies. We have a fixed capacity to intervene, so we really need to know with which students we need to intervene the most and what types of interventions would be most appropriate to their specific risk-based needs.

Partnership

IHEP: Could you please explain who was involved in the development of this model?

The initial development of the model involved myself and a senior director of institutional research (IR) working together. I first had to present a concept paper to the provost to convince him of the fact that this was worth doing, and after he agreed that it was, I worked with IR to create a dataset.

One of our main problems was that Temple had a bunch of different systems that didn't talk to each other. So just getting these data together would have been a huge task. We had one set of data in student registration, another set was in admissions, another set in housing, another set of data in finance, etc.

To begin with, we had to manually put those together. Fortunately, while we have been doing this, the university changed to a student information system, called *Banner*, where we now have all of these data systems essentially unified. So we can download all these data easily as one dataset, so that's made it much more feasible to do this, going forward.

IHEP: How were you able to convince the provost this was a worthwhile tool to pursue?

[In my concept paper], I argued that we would save the university a significant amount of lost money. I made estimates of what the value would be of being able to prevent the attrition of a certain number of students. If a student dropped out in the middle of the freshman year, we would lose one semester of tuition, and if they

> "Every advisor in both units agreed to participate. Each was given a caseload, and by the end of the first year in both of them, we had more than halved the attrition rate. When we were able to share that information back with the deans and the provost, the immediate decision was made that we would need to scale this up university-wide."

were in university housing, which most freshman are, we would possibly lose one semester of housing. We'd basically have an empty bed.

I then argued that every student who drops out is essentially a loss of the admissions investment in each student, which we averaged out at about $700 per student. Add that to the potential loss of our financial aid commitment to a student.

So when you add those costs together, especially for out-of-state students, and you start thinking that of the 500 that were in the highest risk category, it wouldn't be too difficult to try and prevent attrition of perhaps 100 or 200 of them—then you are talking about literally millions of dollars. And that gets people's attention pretty fast.

IHEP: Did you have to bring anyone else to the table to support this tool?

At the same time that I was pitching the idea to the provost, I was also pitching the idea to the deans and to the advising directors. The College of Liberal Arts (CLA) was the first to say they'd try this out with me.

We focused on the undecided undergraduate population, because this advising unit (Division of University Studies, or DUS) reports directly to me. Then I asked all the advisors in each unit (CLA and DUS) to volunteer. They didn't have to participate if they didn't want to. And we had discussions about what that should be like, and we agreed on two basic principles: 1) Neither central administration nor I would dictate what the interventions were like—that should be done at the college level; 2) the minimum composition of those interventions should be five confirmed contacts with the student during each semester, with three of those contacts being in person and the other two could be by phone or by e-mail.

Every advisor in both units agreed to participate. Each was given a caseload, and by the end of the first year in both of them, we had more than halved the attrition rate. When we were able to share that information back with the deans and the provost, the immediate decision was made that we would need to scale this up university-wide.

Implementation

IHEP: What data did you use to develop this model?

We started off by developing a freshman risk model, and the outcome measure was trying to predict retention to second year. At the time, we lost 16 percent of the students in the first year, and we wanted to know if we could predict who those students were going to be.

We did not develop any additional datasets. If you can develop a reasonable risk model with the data that you have already available, it may not be worth the effort to go creating new datasets just to improve your predictive ability by a marginal amount.

The datasets that we had available to us told us about students' high school performance, the major they were coming into, gender, race, financial information, housing, and if they were in-state or out-of-state. We also had a lot of self-reported data from the freshman survey, including their parents' education, attitudinal questions about their drive to attend Temple in particular and their engagement with the university before they got here. Engagement, commitment, and connection are all key features of risk modeling with regard to retention.

IHEP: Can you tell us how you used these data to develop the risk instrument?

We used basic multiple regression models to identify what subsets of variables would predict the outcome of a student remaining until the second year. The next evolution of the model realized that we needed to replace the single snapshot at the beginning of the freshman year with two models—one from freshman fall and another from freshman spring—because then we know their fall performance: the grades they got, the number of credits they registered for, whether they dropped out of any courses, and the mid-semester evaluations.

So now we've got two risk models predicting retention to the next semester, and we repeated both models for the two semesters of their sophomore year. Then we decided to also focus on the first and the second semester of a transfer student's time at Temple.

“We did not develop any additional datasets. If you can develop a reasonable risk model with the data that you have already available, it may not be worth the effort to go creating new datasets just to improve your predictive ability by a marginal amount.”

So we went from one model to six models, and we recognized that a student who was at risk in the first model may no longer be at risk in the second model. A student, for example, who is identified as at-risk starts to work with academic advisors. So we recognized that students can move in and out of target populations, and that's where we are now with a new model.

We also changed the methods from regression models to an approach called "configural analysis," where we are now putting together time series datasets so that we can advance the modeling from six snapshots of a student to a real-time dynamic model that will essentially track a student from the day they arrive right through the first two years. To give you an example, a student who comes in who is not high-risk may in the sixth or seventh week get a mid-semester evaluation from the faculty reporting that things are not going well. Or we may hear from financial services that the student has come in and asked for more money because the father has lost a job. That combination of factors may push the student into a very high-

risk category, and so rather than wait for the beginning of the spring semester to do a re-evaluation of risk, the risk model will change immediately, and that will come to our attention. And the intervention needs to begin as quickly as possible. Now that's where we want to get, but we're not there yet.

IHEP: Can you explain how the risk-based statistical model works?

So what happens is, if you are starting with a freshman, the amount of information that you know about that student is restricted to a set of variables about their high school record. Regression models try to identify variables that have predictive power across the entire population and will have little value when applied to small subsets in a population.

What we need is a model that allows us to identify risk factors that differentiate for subsets of the population, so we decided not to use generic regression models and instead use dendrograms, or configural analysis. This method searches through the various predictors, identifies which predictor is the best one on its own of predicting the outcome, and then ticks that variable.

But let's say that variable is broken into three different groups. It then asks for each one of those subgroups, "What's the next best predictor?' So the model becomes fairly complex quite quickly because the combination of predictors might be different for different subgroups of the population.

"As we learn more from semester to semester, we change the model, and that's the logic behind it. Risk models should not be generic. I know that people have the opportunity to go and purchase risk models from vendors, but they should be very cautious about that. What works at one institution may not work at another. They should change over time as you learn more about your population."

Let's take an example: The very first predictor for freshmen in their fall semester was Pell Grant receipt. The overall attrition rate for that semester is around about eight percent. The Pell predictor then divided into four further categories: 1) no Pell eligibility, 2) students who had full Pell, 3) recipients who got a very small amount of Pell, and 4) students who were getting between about $1,200 and $2,800 in Pell. This last group meant the families were poor enough that they qualified for substantial Pell, but they didn't have enough disposable, available income to cover the shortfall between Pell and the true, full cost of education. For these students, the attrition rate was much higher than the other subgroups at almost 18 or 19 percent.

And then for each of those Pell sub-groups, other predictors come into play as you keep developing the model. In the end, you might have a model that says, for "no Pell eligibility" students, the next best predictor is whether or not they intended to work. Then that also breaks down into three further groups: those who do not intend to work, those who are going to work less than 20 hours, and those who are going to work more than 20 hours and so on. The idea is that the model keeps on breaking predictors and groups down until, in the end, you get some fairly well-defined small groups.

The point is, with this model, you may find that even though the non-Pell-eligible population, as a whole, only has an attrition rate of six percent, there could be subgroups in the same population where the attrition rate is significantly above the overall base rate.

As we learn more from semester to semester, we change the model, and that's the logic behind it. Risk models should not be generic. I know that people have the opportunity to go and purchase risk models from vendors, but they should be very cautious about that. What works at one institution may not work at another. They should change over time as you learn more about your population.

IHEP: How much does this modeling cost to develop? Did you engage a third party vendor?

There is no cost to the creation of the risk models, other than people's time. We chose not to engage a third party vendor. Many third party vendors typically provide a dashboard. They look at the data you've got and provide you with a risk model, but you still have to provide the guts of the model. Otherwise, they will give you somebody else's logic, and that doesn't help. There is no way that you can avoid developing an institution-specific risk model that is validated and tested, and it has to change each year.

There was one area that did cost us some money. I realized from the outset that the front line of the intervention needed to be the academic advisor. Advisors could typically handle most of the issues themselves, but in other cases, they were also crucial to be able to direct students to other support programs that could meet their needs. We didn't have enough advisors, and we also had retention problems amongst the advisors. Our one-year turnover rate for academic advisors, six years ago, was 18 percent.

I convinced the president and the provost that we did need to invest in the interventions through advisors. Otherwise, this whole thing was an empty shell. In a period of five years, we basically doubled our academic advising staff, from about 53 or 54 advisors to about 105.

Impact

IHEP: How much impact do advisors have on supporting student success?

The other thing that we did to address advisor retention was focus on their professional development. Advisor salaries were essentially dependent on whatever college they were in. Some were reasonably paid; others were very poorly paid. If you were an advisor and you stuck to the job for 25 years, your title and job description never changed. Your relationship to the faculty was essentially perceived very much as a clerical worker rather than a colleague. With the help of Temple's Human Resources department, we developed a professional ladder, and we've grown the one level of academic advising into multiple levels (Advisor 1, Advisor 2, Senior Advisor, and Principal Advisor). We developed university-wide guidelines for the expertise required at each of those levels, as well as salary minimums. Since then, our advising retention has improved dramatically and we had a turnover of just four percent last year.

So we send the lists of at-risk students to the advisors in each college, and we identify what the risk factors are that put the specific student at risk. We then enabled advisors to better support those students by creating a large enough number of advisors and allowing them to do their jobs with some respect. We have made some policy decisions here at Temple that have taken away the need for advisors to do mindless clerical tasks, registering students for classes because they have holds and so on, when students can register for the classes themselves easily.

IHEP: Can you give an example of how the risk model has led to connecting at-risk students with supports?

Our coordinator of risk prevention programs runs monthly networking meetings where we bring together stakeholders from across the university to discuss what they are doing, what's working, what's not working.

For example, the Business School did not feel comfortable approaching students at risk and saying, "You have been identified as an at-risk student." So what they did is they created a program called the Future Leaders Program. They then contacted the at-risk students, never mentioning the word "risk" at all, and said, "We have a program called Future Leaders, and we think that this would be a great fit for you if you'd like to participate." Of course, many of the students said yes. So now they meet with faculty, engage with advisors, as well as prepare for careers and so on. It is hugely successful from a retention point of view.

IHEP: Speaking of retention, have you seen your retention rate increase as a result of using this data tool to identify at-risk students?

Temple's first- and now second-year retention rates have been improving. When you look at national figures on freshman retention, they just do not budge, and if they do, it's by a tiny amount. Ours has gone from 84 percent, which is by no means bad for a large public urban, to almost 90 percent after six years. We have also seen increases in sophomore retention, and both of those are now beginning to translate into improvements in our four-year and our six-year graduation rate, all of which has had the impact of moving us up in the rankings. So the provost is extremely happy. It didn't really cost much in the way of investment and we have seen tremendous gains.

> "[Our retention rate] has gone from 84 percent, which is by no means bad for a large public urban, to almost 90 percent now."

Looking Forward

IHEP: Would you like to offer any last words of wisdom to CPA communities who are thinking about developing a similar risk-based statistical model to help identify and support at-risk students?

My main advice for any institution thinking to do this is: do not do it ad hoc. Do not rely on an external consultant, who will give you a list of 25 risk factors that have been culled from the literature, tell you to look at your incoming population, and identify any student who has more than 10 of these 25 traits as at-risk. First of all, that means you could well be wrong. There is no evidence to suggest that those risk factors apply in your institution. Secondly, if you do this, there is a good chance that you are going to miss the students who are really at risk, and you are going to include in your intervention students who are not at risk.

Institutions should sit down and plan this conceptually. They should ask themselves important questions to help determine if they can build a risk instrument: Do I have the data? What can I do with what I have? How well do they work? Don't worry about going out and getting other datasets. Work with what you have. That's number one.

And then when I know who is at risk and I have a sense of how many those are, I can choose how many I want to intervene with. More important questions to ask yourself: Is it going to be centrally based? Is it going to be decentralized? Are the advisors buying in, or do they not want to do it? Asking those questions and assessing your capacity is really crucial. If we hadn't addressed the basic structural problems we had with academic advisors, I don't think we would have had the success we've had.

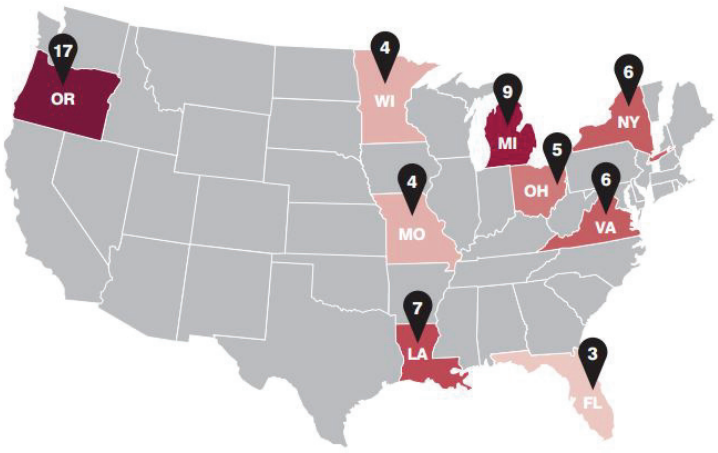
Project Win-Win:

How to Use a Degree Audit to Improve Institutional Outcomes

IHEP's Project Win-Win can help communities increase associate's degree completion rates by helping their local institutions identify students who have left college without obtaining a degree. Community college students may "stop out" with a significant number of credits (often even more than the 60 typically required for an associate's degree), and in good academic standing, for various personal or financial reasons. Sometimes minor bureaucratic issues are standing between students and their degrees, like an unpaid parking ticket or an "opt-in" institutional policy that requires students to fill out additional paperwork and pay extra fees for a degree in their completed coursework.

"Degree audits" (i.e. full reviews of student transcripts) can help institutions turn students previously viewed as non-completers into completers, and help strengthen communities by awarding their hard-working students with the degrees they deserve. Audits also reveal that many stop-outs were just 15 credits or fewer shy of completion, and can prompt more rigorous outreach efforts to bring those former students back to cross the finish line toward an associate's degree.

Project Win-Win is an evidence-based strategy that helps instituitons identify these students to award degrees and/or bring them back to finish degrees. It's a win for institutions, who increase their graduation rates and increase system efficiency. It's also a win for former students who can see the economic and personal benefits of holding a degree, as well as for current students who may avoid the same barriers to degrees in the future. This fact sheet provides high-level guidance on how institutions can implement the Win-Win model on their campuses. The work and results of this endeavor, involving 61 institutions awarding associate's degrees (including community colleges and four-year institutions), can serve as a guide for other institutions and communities seeking to replicate it. For two years, institutions tracked, sorted, contacted, recruited, and supported former students to help them earn their associate's degrees. By August 2013, **60 institutions reported retroactively awarding associate's degrees to 4,550 former students and re-enrolling 1,668 near-completers.** We present key strategies, highlights and lessons learned below.



Sixty-one postsecondary institutions in nine states participated in Project Win-Win.

Institutions that do not meet the recommended criteria below can still participate in degree audits, but should seek assistance in meeting these criteria or the audits may be more difficult. Once the institution meets the stated criteria, it is primed to begin moving through the following Win-Win implementation sequence. Along each step of the way, institutions are likely to encounter various challenges. Based on the experience of our Project Win-Win partners, we have recommendations for how to navigate around these barriers and keep the work moving steadily forward.

Step 1: *Identify the Students Your Institution Wants to Consider (Your Universe of Interest)*

Set parameters for the criteria that must be met by former students to include them for consideration in the degree audit, such as completion status, number of credits earned, dates of attendance, and GPA.

Challenges

- Institutions may encounter missing data, variables, or links between datasets when seeking students who fall into the project's parameters
- Data inaccuracies and duplicates can create issues

Recommendations

- The default set of parameters included in Win-Win were: students who earned 60 credits or more, had a cumulative GPA of 2.0 or higher, never earned a credential from another institution, and had not been enrolled for the most recent three semesters
- Set aside students with major barriers to completion like significant debt, low GPA, or an insufficient number of credits
- Identify your universe of interest in less than one week

STEP 2: *Remove Students Who Received Degrees from Other Institutions or Re-Enrolled Elsewhere from the Audit*

Use National Student Clearinghouse data and state data systems to identify students who can be removed to refine the list of students under consideration.

Challenges

- State data systems may offer limited usefulness or responsiveness in providing data to institutions for matching

Recommendations

- Go directly to the National Student Clearinghouse for data matching
- Institutions must comply with FERPA privacy laws while sharing data with states and the National Student Clearinghouse

Is Your Community Ready for Win-Win?

Institutions in your community can prepare for a degree audit initiative by first assessing whether they meet the following recommended criteria:

- The institution is a full member of the National Student Clearinghouse
- The software governing the institution's student data system has not been changed since September 2008
- The institution has identified its stated policy for awarding degrees
- The institutional data system contains the following elements:
  - Student IDs that can be matched to both state systems and National Student Clearinghouse records
  - Term dates for student's first attendance
  - Transfer flags indicating whether the student was a transfer-in, the number of credits transferred in, and the type of school (e.g. private 2-year) from which the student transferred
  - Dates for the most recent term in which the student was enrolled
  - The aggregate number of credits counted towards a degree that were earned by the student
  - Cumulative student GPA in courses with credits that count towards a degree
  - Student's race/ethnicity and gender
  - Student's date of birth, so that age at the date of first enrollment can be determined

Lessons Learned: Tips for a Successful Degree Audit

- **Get the right team in place:** You'll need experienced registrars, research officers, academic officers, counselors, and advisors—and individuals who are each able to see the audit through from beginning to end
- **Determine and build data capacity from the start:** Student-level data systems must include markers like transfer flags, first date of attendance, and GPAs in majors, and be tested for accuracy and consistency before being used to audit individual students' degrees
- **Know what is needed to track students and build a tracking system:** Students are highly mobile, and data-sharing agreements and National Student Clearinghouse membership help institutions find students to award degrees or invite them to re-enroll
- **Move at a deliberate pace, aiming to complete the project in 18 months:** Taking longer may result in duplicative work
- **Record time and resources spent on the work:** Use this information for future cost-benefit analyses so audit work can continue for other students' records

STEP 3: *Perform Degree Audits to Identify Students Eligible for Degrees and Students Near Degree Completion*

Designate the degree types and course catalog requirements to use. Your audit team will need to be knowledgeable about course requirements and able to dedicate time and attention to see this work through.

Challenges

- Over-reliance on software during audits may result in accuracy issues
- Missing institutional data, such as transfer flags, and inconsistent data markers may create confusion when reviewing records

Recommendations

- Be prepared to manually review student records for accuracy
- Assess and improve data systems for clearer record-keeping and smoother tracking of students' degree completion status
- Set more inclusive course requirements, especially for college math

STEP 4: *Award Degrees to Eligible Students and Re-Enroll Students Near Completion*

Locate and contact students using a variety of resources and incentives, leaving time for meaningful engagement efforts.

Challenges

- Figuring out how to locate and contact potential degree recipients can be difficult; some institutions used white page websites with limited success, while other institutions asked state governments to contact students.

Recommendations

- Shift from opt-in to opt-out policies so that students must actively decline an offered degree, rather than fill out additional paperwork (and pay a fee) to actively accept an offered degree
- Incentivize and support students close to degree completion to re-enroll and continue education
- Show potential re-enrollers that the institution cares by sending personalized letters and making phone calls

For more information, please see Searching for our Lost Associate's Degrees: Project Win-Win at the Finish Line (full report) and Project Win-Win at the Finish Line (companion brief)

Additional Resources

Learning from High-Performing and Fast-Gaining Institutions: Top 10 Analyses to Provoke Discussion and Action on College Completion *(2014: The Education Trust)*

This practice guide describes how campus leadership can use data management systems to help underserved students complete college. It demonstrates how data are key to understanding problems, designing interventions, facilitating ongoing inquiry, and monitoring student progress. The guide presents case studies from eight colleges, and focuses on monitoring and addressing credit accumulation, remediation, gateway courses, and degree completion.

Searching for Our Lost Associate's Degrees: Project Win-Win at the Finish Line and Project Win-Win at the Finish Line: Issue Brief *(2013: Institute for Higher Education Policy)*

This report and issue brief companion reveal the results of Project Win-Win's national efforts to help colleges identify former students in order to retroactively award the associate's degrees they had earned; colleges also reached out to former students who were close to qualifying for a degree to invite them back. These resources contain a step-by-step breakdown of the Win-Win and degree audit process, best practices, and lessons learned that institutions can use to implement Win-Win at their own schools.

Data Collection and Use at Community Colleges *(2010: The National Center for Higher Education Management Systems)*

This paper details the process that community colleges can follow to collect data on their students over time in order to track student outcomes during and after enrollment, as well as to better design their curricula and academic interventions. It describes how colleges can use longitudinal data systems to track cohorts of students over time as they progress academically and graduate, or after they leave or transfer out of programs. It also describes the many remaining challenges in data collection and use at community colleges.

Integrated Planning and Advising Services: A Benchmarking Study *(2014: Educause)*

This study provides higher education leaders with an evaluation of Integrated Planning and Advising Services (IPAS); these online tools provide holistic information for college students, faculty, and staff in an effort to promote timely degree and credential attainment. IPAS is comprised of four major components: advising, early alerts, educational progress tracking, and degree auditing. This study details how IPAS-related tools have been used in institutions and provides recommendations for higher education leaders.

Chapter Five:

How to Use Community-Level Data to Benchmark and Report Progress

Educational attainment is a community-wide mission. Entire metropolitan areas and regions can enjoy both economic and civic benefits when more residents gain postsecondary education that prepares them to be valuable members of the workforce and society. Students engage with a variety of organizations and service providers as they prepare for college and career success, and no single provider can be responsible for the entire community's education outcomes.

Community stakeholders are encouraged to share data about the outcomes of their services, programs, and initiatives with each other and with students and families. Open data promote accountability and action. As community stakeholders report data, everyone can study both the big picture and the details to learn how best to plug leaks in the education pipeline, use resources efficiently, and invest in underserved populations. With access to various data, like the retention and graduation rates of each local K-12 and postsecondary institution, and by using data from peer communities as benchmarks, communities can assess how they are doing, how far they have come, and how much further they need to go. Backbone organizations—the lead coordinating partners of local education initiatives—can take charge of convening partners to provide these data. Below are a few examples of tools that can be used to share community-level data:

Baseline Reports: *Does your community want to let important stakeholders know where the community and its institutions currently stand in terms of moving various student populations through the education pipeline?* These reports are often produced and disseminated at the start of a community-wide education initiative to share goals and timelines publicly (e.g., 60% of residents will have a postsecondary credential by 2020). Developing these reports can be essential exercises in bringing community partners to the table to determine shared goals, metrics, and definitions. They also enable partners to agree on a path moving forward to address the areas of improvement highlighted in the report.

Progress Reports: *Does your community want to share progress made on key community indicators?* These annual reports provide stakeholders the opportunity to transparently identify areas that are doing well or need new approaches or resources. As tools to both celebrate progress and motivate partners to drive toward greater improvement, they help maintain momentum in the community work.

Dashboards: *Does your community want to offer readily accessible information to students of all ages and community members?* Dashboards are online tools that do just this. They may be updated and modified at any time, can take many forms, and share a variety of indicators per the specific goals and focus of the community. A community that wants to improve educational outcomes among its African-American or Latino residents may post a variety of indicators by race or ethnic group; meanwhile, a county that is concentrating its resources on promoting retention and completion at its community colleges may provide more detailed data on these institutions. Interactive dashboards are highly customizable based on the topic of interest or the informational needs of the user. They are often excellent sources of disaggregated and longitudinal data.

This section of the guidebook features an **interview with a community leader in Spokane, Wash.** who explains how their initiative's baseline report has been used to build their community partnership on a foundation of open data and shared accountability. Another **interview with staff at 55,000 Degrees in Louisville, KY**. explains how they developed their Interactive Educational Data Dashboard, and includes a ***Tableau* software handout** to explain how you can create a similar dashboard. Finally, this chapter ends with a list of **additional resources** where you can find more information on community-level data tools.

Spokane, Wash.: How to Promote the Sustainability of Your Attainment Initiative Using Baseline and Progress Reports

- *Amy McGreevy, M.Ed., Executive Director,* ***EXCELerate Success***

IHEP spoke with Amy McGreevy from EXCELerate Success, a new collective impact initiative in Spokane, Wash., about the organization's baseline report and upcoming progress report. McGreevy says these reports have helped strengthen their partnership as local organizations and institutions establish shared data measurements and build a culture of trust and data-informed action. Read this interview to learn how these reports have made their partnership more sustainable and for advice on creating engaging reports with personalized stories from the community.

Goals

IHEP: EXCELerate Success published a baseline report in June of last year (2014). What did you hope to accomplish by developing this report?

The report provides us with a baseline regarding our community data indicators with which the entire EXCELerate Success partnership is concerned. The report gives us a window into what's going on in Spokane County as it relates to students' retention and completion at the postsecondary level, as well as many other indicators in the cradle-to-career continuum. We have used the report and its information as a starting point with our partners to talk about what really needs to change in order to improve outcomes for our students.

We'll release an update on our indicators every year in our annual report; as we learn and refine our measures and indicators, the reports will look different. I'm hoping that every year the reports will give us a picture of the strategies that our network is using, and how different institutions are increasing students' retention and completion rates throughout their college careers.

IHEP: At this stage, who is the primary audience for your data reports?

It's for the benefit of our partners as well as the wider community. Our partnership is still pretty young and we're still establishing and implementing different strategies. We're starting by building the case for the cradle-to-career work with our partners. Our goal for EXCELerate Success is for the individual community members to relate to our work so that they feel connected to the larger movement, which is centered on improving the lives of all families in Spokane County.

Partnership

IHEP: Why are data reports—or data in general—important for gaining buy-in for your partnership's work?

You can't un-know data. You can think or feel a certain way; you have an intuitive feeling about what is probably going on with students. But with data, we can pinpoint it and make comparisons across the opportunity gap for different students. Data are not a call to action in and of themselves—that's key. Data can tell you something, but you need to make them work for you in order for them to do something.

For example, we look at the retention rate for community college students in Spokane County. I want to know how the retention rates are different for non-traditional versus traditional students, for low-income students, for first-generation students. That will allow us to understand where to focus our work. We have five very different postsecondary institutions in the community, with different delivery methods and models. We are able to look at what each institution is doing and see if one college is moving the needle a bit faster than another.

It's beneficial for institutions to be able to see their own data through a different lens, as if from an outside perspective. They are trying to work on these issues internally, and this is a different way to approach it.

> “Data are not a call to action in and of themselves—that's key. Data can tell you something, but you need to make them work for you in order for them to do something.”

“The reports allow us to do exactly what collective impact is set up to do: align organizations along shared measures. Essentially, what we’ve done here is built shared expectations, shared definitions, and shared measures across partners.”

IHEP: What role do the data reports play in bringing partners to the table for this cradle-to-career attainment work?

In our postsecondary attainment group, one of the struggles we had early on was trying to determine what exactly we mean by “retention.” How will we report this information, and do we have a shared definition across institutions? That has been a great opportunity to bring people together, especially across the different institutions, and to be able to bring the community colleges and four-year institutions together at the table to use the same definitions. Our data currently tell us that if a student leaves the community college to go to a four-year institution but they didn’t finish their AA, they are considered a drop-out. This is a common problem with tracking students from community colleges. We were able to bring the different institutions to the table and ask, “How are we, in Spokane County, going to track this information?” We were able to establish a definition across the institutions that says if a student is retained between institutions, and we know about it and can track it, then that student is considered successfully retained, not a drop-out.

What’s fantastic is that we were able to engage all the institutions, as well as many community-based organizations, in this process. We have CBOs that are working on counseling and coaching students through postsecondary education, so they can help with data collection, student tracking, and information sharing. The reports allow us to do exactly what collective impact is set up to do: align organizations along shared measures. Essentially, what we’ve done here is built shared expectations, shared definitions, and shared measures across partners.

IHEP: Are the data reports used for finding funding for the initiative?

Right now we’re trying to identify on-the-ground strategies to focus on. As we get closer to designing our strategies, and as we try to coordinate more resources, tools, and activities that are closer to the students themselves, we’ll talk to funders or different organizations about how to align resources, and data comes in handy then. We’ll say our data are telling us to increase our retention rate by this much to see significant improvements, and we have identified strategies A, B, and C to do that. So we will need that institution or external organization providing support to align resources and funding to these three strategies. But it’s not so much about finding additional funding as it is about utilizing the resources and funding we have in better ways.

Implementation

IHEP: How do you decide which indicators to include in your report? Are you sharing every indicator EXCELerate Success is tracking, or are you choosing a selection to share?

We are in the process of deciding that for our upcoming report, the second report. I anticipate we will focus on the priority areas where we’ve already established networks. Our four priority areas where we will have more in-depth data analyses are: kindergarten readiness, reading at grade level, high school completion, and postsecondary attainment. We’ll still try to pair the data with stories. And for the indicators that do not have established networks, we will probably use more story-telling to talk about what efforts are underway in the community.

IHEP: Let’s talk more about storytelling as a tool. How do you pair your data with narrative stories in your report, and what does that achieve?

It’s wonderful to look at numbers, but if we don’t pair them with actual examples and stories about the impact on students and families, the numbers alone fall flat. We care about people, so we need to make sure that the data always relate to a personal story. In our report, you’ll end up seeing the data paired with examples of on-the-ground impact and how it’s engaging the community in a significant way. When you talk about, say, what a different type of coaching model means to a non-traditional student trying to return to school, telling that story makes it more real for the partners to see their individual impact, as well as the collective impact of the group.

“It’s wonderful to look at numbers, but if we don’t pair them with actual examples and stories about the impact on students and families, the numbers alone fall flat. We care about people, so we need to make sure that the data always relate to a personal story.”

Impact

IHEP: Do you want different partners to have different takeaways from your reports, or do you expect all partners to come away with the same message?

It's a little bit of both. On a higher level, I'd like everyone to walk away with the same message, about the ways in which we are trying to influence change and movement along these specific indicators or outcomes. I want all the partners to understand the broader message of EXCELerate Success and its purpose, but also to understand their individual purpose within this work. It's going to look different for different partners, for good reason.

For example, one university has a very specific role within the postsecondary attainment work because of what it does with first-generation, low-income students; students with disabilities; and its multicultural programs. It has great advising models and instructional models aimed at impacting those students we're trying to help retain in postsecondary work. We would want them to come away with an understanding that these are the things they directly connect to and this is how they could position themselves within the scope of EXCELerate Success.

IHEP: Communicating data effectively is key; how do you present a report that people are going to want to look at?

You need to use data in a way that strikes people, first and foremost. Make sure the data are visually clean, easy to understand, and connected to some sort of personalized narrative or story. You also have to make sure you are telling a story throughout the report that connects what's happening in kindergarten readiness to what's happening at the postsecondary level. The challenge in getting people to invest in early childhood efforts is that results are not going to be seen until 16 to 20 years later. You can throw graphs and information into a booklet and that's fantastic, but to get people to read it, they need to see their kids in it, and they need to see their community and their work in it. For me the test is, if I looked at this report at the doctor's office, would I want to pick it up?

IHEP: What about communicating data to each organization or institution? How are they prepared for what will be published?

If we're going to include data in the report saying something about a partner, we will present that information to them early on to be respectful. At the same time, we won't exclude information just because it makes a partner uncomfortable. We do want to make sure that the information we're releasing is appropriate and that it actually tells the right story. That is why we want everyone to agree on a common definition or measure, so that when data come out, we can interpret them and describe them in a better, more consistent way. We don't want to trick people with data.

It's very important to be transparent and honest about how you're using and interpreting data. It builds trust. When groups and people are nervous about using data, it's often because there isn't a trusting relationship built with those people who are reporting or working with the data.

All of our partners on whom we are reporting are at our table. They're on the leadership team, they're in the networks. So really, they're the ones who are probably going to help us pick out the data to report, and they understand that this is meant to serve a larger goal rather than to just represent their institution. Most of the information we're presenting that is specific to a particular school district or institution is pretty widely and publicly known. It's going to get a little bit tricky as we collect data that are more at a school level or neighborhood level. We need to make sure we are sensitive to the fact that we're talking about real people and a real community.

We are going to have a struggle with our indicator for reading at grade level. Washington State moved to the Common Core State Standards, completely switching their assessment for third grade reading. We are anticipating very bleak reports back from that data. Everyone knows that and is aware of that. We know this, we're going to report them anyway, but we're also going to tell the story about all this work happening to make sure that next year is going to improve.

IHEP: Speaking of challenges, what is the biggest challenge you confront in reporting data and how do you overcome it?

It's really easy to just talk about data; it's hard to move groups of people to act on them. I think that is especially true in the postsecondary world, because we're always afraid that we don't have all the data. It's like how we're afraid we don't always have all the right people at the table. No, we don't always have all of right people and right information, but we do have lots of the right people and lots of the right information. We're really trying to build a space in our community for people to take courageous leaps of faith, to make systemic changes that go against our comfort zones. At a certain point, we just have to act on the best knowledge and with the best people that we have at hand.

If we're not a little bit uncomfortable, we're not changing or growing. We should be working with what we know, but we also have to push ourselves a little. We build these invisible walls, and if we don't break those down, we aren't going to accomplish what we really want.

> “We're really trying to build a space in our community for people to take courageous leaps of faith, to make systemic changes that go against our comfort zones. At a certain point, we just have to act on the best knowledge and with the best people that we have at hand.”

Louisville, K.Y.: How to Report Data to Communities through an Interactive Data Dashboard

- *Mike Kennedy, Technology and Data Manager,* ***55,000 Degrees***
- *Lilly Massa-McKinley, Ed.D., Senior Director of Project Management,* ***55,000 Degrees***

IHEP spoke with Mike Kennedy and Lilly Massa-McKinley from 55,000 Degrees in Louisville, KY. about their interactive education data dashboard to learn how communities could develop similar tools. 55,000 Degrees is a public-private partnership with a mission to increase the number of postsecondary degrees in Louisville by 2020. Kennedy and Massa-McKinley provided background on their dashboard, describing where they have attained data over time and the culture within both 55,000 Degrees and Louisville that promotes data transparency and a growing thirst for information. Read this interview to learn why they use the *Tableau* software platform for their dashboard and which features make it useful for their work.

Goals

IHEP: What were you trying to achieve for 55,000 Degrees by developing this interactive online data dashboard?

We had data, which we wanted to make available for the community to use in an intuitive fashion, and there were more than we could report in a progress report. The data are disaggregated in many ways by demographics, by school, by year, etc. We wanted to make sure different groups and issues could be explored, and to hold schools accountable and sometimes celebrate them. Our partners love the dashboard. This year we linked it through the progress report, so we're trying to bring more awareness of it to other community leaders and organizations.

IHEP: Could you please describe the overall culture toward reporting data in Louisville?

Initially there was some resistance to the idea of the dashboard from different institutions, but now they're on board with it. Our city is pretty big on open data. Our mayor is big on putting all of the city data out there about metro government. We have had different conversations about how we can get all of the community data in one place so different people can access them. Most of the data we're publishing are public to begin with; it's been easier for journalists around here to write stories when they don't have to go digging quite as far. I've sent links a couple of times to a local newspaper here, and I've seen the dashboard link embedded in a post from Public Radio.

Our executive director, Mary Gwen Wheeler, has been so supportive of using data to drive action and using them to align strategies. Our organization has always been all about data—even the name of our initiative is a number. If leadership isn't interested in data, are they really going to invest the time it takes? Are they going to be patient with the things you need? These are questions communities have to ask themselves.

Partnership

IHEP: How did your partners react to the development of this dashboard as a data tool?

At first, our board of directors and different partners had concerns about this dashboard. They thought an institution would be singled out, or if you could see every single high school by their college- and career-readiness indicators, then it would make some schools look really bad. It would raise awareness of how poorly we were doing in some schools and how well in others. There was a lot of concern initially that there would be this huge community outrage towards some of our partners who were at the table, working hard. But Dr. Dan Ash, who was our director of research and data analysis at 55,000 Degrees, was committed, saying we had to get these data out there and everything had to be transparent. If we looked at the data more, we'd be able to rally more support from people who care about helping these high schools because they'd become aware of the disparities.

While there was fear from some of our education partners, our business community did not back down. They argued we had to make these data public because only then would we have accountability and know where we need to focus efforts. So there was a split among our partners and the board, but we decided to move forward and, ultimately, it has not been used as a tool to point fingers. It has been used to identify solutions and significant areas where we need to focus our efforts.

IHEP: Once you decided you wanted a dashboard, how did you start developing it?

Early on, I [Kennedy] and Dr. Dan Ash primarily brainstormed the dashboard. First we curated our data to see what we had, what we wanted and didn't have, and what variables we had. We mapped

> At first, our board of directors and different partners had concerns about this dashboard. They thought an institution would be singled out...We had to get these data out there and everything had to be transparent. If we looked at data more, we'd be able to rally more support from people who care about helping these high schools because they'd become aware of the disparities.

out everything, drawing pictures of everything. Then one of the big questions we had starting out was about drilling down into the data. You could put a million different variables in multiple-choice filters on these visualizations in the dashboard, but the user could be easily confused. We wanted to limit the different ways you could drill down at certain times, so we looked at other sites that had dashboards. Take, for example, *The New York Times* and *The Chronicle of Higher Education*. We looked at how they set up their filters and we made decisions about how many schools you could view at one time, how many races, things like that.

IHEP: Who is involved in putting together and reviewing the dashboard?

Every year, I [Kennedy] will put together a draft of the different indicators and show it to Lilly [Massa-McKinley] as it goes along; we both do analyses for the progress report. I'll show it to the rest of the 55,000 Degrees staff periodically. Mary Gwen Wheeler has a lot of good feedback and asks questions like whether we can show the data in different ways or find more data, and double-checks if they're right. It's a very collaborative process. We also send the data once a year to our data committee, made up of higher education data folks and other data people from around Louisville. We ask them to check their institutions' data and get their feedback. We also get feedback from the board of directors a couple of weeks before we release the data to the public.

Implementation

IHEP: Tell us about the software platform you use for your dashboard, *Tableau*.

The first year that Dan and I [Kennedy] were working with data for the organization, we used some SAP software, *Xcelsius*, to do the dashboard. It was okay, but limited. I had to get creative with different things to make it do what I wanted, and then export it into Flash, so it wasn't mobile-friendly. We started exploring other options, but we were primarily drawn to *Tableau* because of costs. We use *Tableau Public*, completely free of charge. I started playing around with it and found that it was pretty intuitive to use. There's a good online community as well with lots of different users, so if you have a question about something, odds are that someone else has already asked and answered it on the message board.

Tableau became a publicly traded company and they continue to update their software very frequently. Every version is better than the last. It's really great. We put all our data in Microsoft Excel and then use the free version of *Tableau*. It's all public data. It should be noted that *Tableau Public* does not allow you to link with a database, and you can't hide your data. Neither of those two things affect us, so we use the free version without problems.

IHEP: What sort of software programs do you use along with *Tableau*?

Tableau has a plug-in for Excel, just called "*Tableau* plug-in." By clicking a button, it reformats the data on your spreadsheet to a *Tableau*-friendly format. I [Kennedy] highly recommend using that; I've found it makes things easier. Also, as we're designing the dashboard, all the visualizations are embedded in a WordPress website, so we can decide how we want to display all the data. It takes a while to make sure all the fonts and colors are consistent. But once your template is set up, the process of incorporating data from new sources each year becomes quicker.

IHEP: When the first dashboard launched in 2011, how long did it take to complete? And how long does it take to complete an update now?

The first one took a really long time, because we were pulling all the data for the first time. A big part of this is setting up your spreadsheets in the right way so that the data are easily visualized. A spreadsheet that looks good to a human is probably going to look terrible to whatever software you're using, and vice versa. So there's a bit of a learning curve around that.

Nowadays our main analysis work takes place August through October, ideally. Mike mocks up some work in *Tableau*. We do a lot of writing. We work with our graphic designers in October and November and then have a release in December. But you have to start sending your data requests far in advance. You can't get those out too early. In June we may resubmit our data request to some state agencies and then hope to hear back from them by October. Mike makes drafts in WordPress, then spends a little over one week making the dashboard each year. Then you have to build a few days in your timeline to get feedback from everyone. We are really trying to report the freshest data possible every year, but even IPEDS doesn't tell you when things are going to come out. For example, their net price and enrollment data came out toward the end of November, and we had a December 2nd release date, so we scrambled to get that information in the progress report.

> "You have to start sending your data requests far in advance. You can't get those out too early."

IHEP: Where do you find the data that you show on the dashboard?

If you compare the very first report we released to the most recent one, it's night and day as far as the indicators we use and our analysis of them; that happens through practice and continuous improvement. We have a couple of very important data sources, such as the Census and IPEDS. We also get so much data from Kentucky Higher Education Assistance Authority (KHEAA). They have access to high school data and connect it to college data, as well as the FAFSA and financial aid data. They are also the keepers of the summer melt data, meaning college intenders versus attenders. KHEAA can even provide us with data from our Catholic high schools that don't participate in the National Student Clearinghouse, so they don't even know themselves what their college-going rates are.

KHEAA gives us FAFSA data by zip code, FAFSA completion by ACT score range, college-going by ACT range, college-going by zip code. We choose to publish college-going by high school and ACT by high school, which come from the Kentucky Department of Education. We don't publish FAFSA data on the dashboard, but we use them for our action networks around high school to college transition. Some of the data we get are more for internal use; there's a lot more to the story than a number would really tell.

The more data you have, the more questions you want to ask, which leads to requesting even more data and asking more questions. The data we have now have been built up over four years of asking questions.

IHEP: What sort of challenges have you encountered with attaining or using data for the dashboard and how have you overcome them?

We want to know if students are being retained by other institutions, not just the ones they started at, so we're thinking of ordering our own subscription to the National Student Clearinghouse Student Tracker data so we can ask more questions about retention. We also have had issues with the college graduation indicators because IPEDS only reports first-time, full-time students, so we are hoping a National Student Clearinghouse subscription will help with that issue as well.

Definitions from our data sources change over time. The state changed the formula from an average freshman graduate rate to a cohort graduation rate, so the numbers jumped about 10 percent. Another example is that Ivy Tech Community College used to report campus-specific data to IPEDS, but now they only report system-wide data. Ivy Tech South Central Campus is a huge player in Louisville's attainment efforts, so we have to have their data. We worked with the institutional research department at that campus to get it, but sometimes their definitions and formulas are a little different than what IPEDS is using.

IPEDS has also used different definitions of race over time. There were three different formulas they used for defining "African American" over the past decade. That's where we worked with our data committee. They're the ones reporting data to IPEDS so they understand the nuances, and we talk about whether we should put the new data on a different chart, separate from the previous figures, or write a note to explain the change in the dashboard. Sometimes we just can't get certain indicators anymore and have to stop including them in our report and dashboard. We take what we can get.

Impact

IHEP: How is the dashboard being used?

The dashboard is a living document. The more data you put out, the more questions you have. For example, about a year after we launched the dashboard, the African American community launched an initiative called 15K Degrees, where they said 15,000 of the 55,000 Degrees will be from the African American community. This underscores the importance of race-based data, so we added race for every available indicator. As the African American community is trying to figure out how we are doing as a population, as 55K advances and is trying to figure out where to focus our efforts, it's become useful to have the education attainment rate available in every conceivable way. We can break it out by age group and gender and so on, see who is really doing well and who isn't.

We also talk about peer cities a lot too, and how are we doing in Louisville in comparison. That's always been a big question and I had some time to tackle it at one point last year. I pulled the education attainment rates for our fifteen competitor cities and put it all into *Tableau*. I sent that around internally to different people, including the Mayor's office. Enough people liked it and said we should put it in on the dashboard, so we did.

> The dashboard is a living document. The more data you put out, the more questions you have…The data we have now have been built up over four years of asking questions.

Looking Forward

IHEP: How would you like to see the dashboard used in the future?

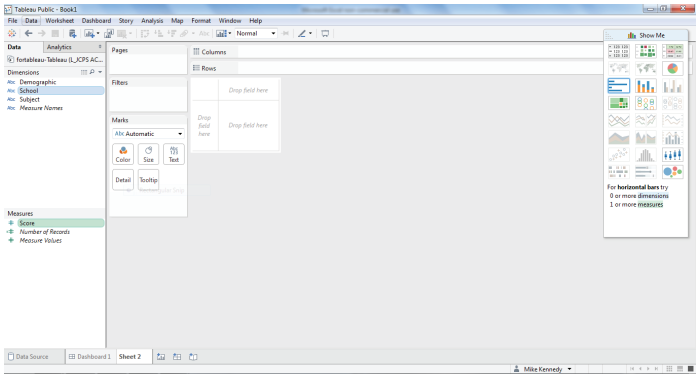
We wish that more community organizations, after-school-time providers and parents would use the dashboard. The progress report is the easy-to-understand piece, and we see community organizations and others citing data from our report all the time. They need to use the dashboard to look at the specific populations and schools they serve, otherwise they are only talking about aggregate data. Maybe there is a barrier because they can't print it out. There is a significant amount of community education work that needs to go along with creating this kind of dashboard so that it can be used in all possible ways. We have focused on making our progress report accessible to the community and maybe next year we need to look more at getting the dashboard in front of more groups, and helping them to be users and consumers of data in a more orderly, intentional way.

Creating an Education Data Dashboard

1. Download Tableau Public 9.0 for free[1]
2. Install the Tableau Add-In for Microsoft Excel.[2] This is not required, but it makes reformatting your data much easier.
3. Reformat your spreadsheet such that each data point has its own row (this is where the plugin helps). Save the sheet.

	A	B	C	D
1	**School**	**Demographic**	**Subject**	**Score**
2	Atherton High School	African American	English	16.5
3	Atherton High School	African American	Mathematics	17.6
4	Atherton High School	African American	Composite	17.8
5	Atherton High School	African American	Reading	18.0
6	Atherton High School	African American	Science	18.6
7	Atherton High School	All Students	Mathematics	20.5
8	Atherton High School	All Students	English	21.1
9	Atherton High School	All Students	Science	21.4
10	Atherton High School	All Students	Composite	21.4
11	Atherton High School	All Students	Reading	22.1

4. Open Tableau. Click *Connect* > *Excel* and select the file. On the next dialogue, double click the worksheet with the reformatted data, and click *Sheet 1* on the bottom menu.
5. Select at least one dimension, hold CTRL and select at least one measure. Then click the Show Me and select the chart type you want.



6. Rearrange the measures and dimensions on your Columns and Rows shelves until the graph looks generally how you would like it.
7. For any measure or dimension you would like to disaggregate, right click on it and select *Show Quick Filter*. After the filter is displayed, you can select the down arrow in the top right corner to edit the filter's settings.
8. Once you have a visualization set up, select *Dashboard* in the top menu, then *New Dashboard* to create a dashboard.
9. Now drag the sheet you just created onto the dashboard. Here you can add titles, images, notes, and adjust the size of the dashboard from the left menu. It's recommended that you set a static size.
10. After you have created your dashboard, select *File* > *Save to Tableau Public As...* You will have to create an account if you don't have one.
11. Once it has saved to the Tableau server, you can click the *Share* button on the bottom right corner for a sharable link or embed code.
12. You're done!

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1 tableausoftware.com/public/download

2 http://kb.tableausoftware.com/articles/knowledgebase/addin-reshaping-data-excel

Additional Resources

Bring on the Data: Two New Data Tools from Strive *(2012: StriveTogether)*

This brief demonstrates how communities can report data online through the Community Impact Report Card and Student Success Dashboard (SSD) tools. The Community Impact Report Card presents easily understandable indicators to track population-level outcomes and progress toward community goals. The SSD integrates academic and non-academic data across multiple systems to facilitate the tracking of collaborative efforts, supporting continuous improvement, evaluation, and research.

Partnerships for College Readiness *(2013: Annenberg Institute for School Reform)*

Using collaborations around data in the College Readiness Indicator Systems project as a basis, this report discusses how school districts, postsecondary institutions, and community-based organizations have built partnerships to improve college readiness. It examines the emergence of community-led umbrella organizations involving CBOs, elected leaders, philanthropy, and business. It takes a closer look at such organizations in New York, Boston, and Dallas and examines common challenges and lessons learned for effective partnerships.

Postsecondary Data Resource List *(2015: Institute for Higher Education Policy)*

IHEP's Postsecondary Data Collaborative, or PostsecData, has compiled an extensive list of resources that will be of use to anyone interested in accessing or better understanding postsecondary data. This resource list contains dozens of examples of dashboards and documents that communities and initiatives around the country have used to report data.

Using Data to Advance a Postsecondary Systems Change Agenda *(2013: OMG Center for Collaborative Learning)*

This issue brief shares lessons learned from the Bill and Melinda Gates Foundation's Community Partnerships portfolio, whose communities developed and implemented multi-sector strategies in place-based initiatives to raise the number of low-income students with a postsecondary degree or credential. Lessons revolve around building relationships and structures to support data use and interpretation; disaggregating data; targeting data; and making use of a wide range of data skills across partners.