Envisioning the 21st Century National Postsecondary Education Data Infrastructure

Student Success and Information Technology Themes

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Joanna Grama
We will delete this slide before submitting our deck. It is to keep us on track with the abstract.

Joanna Grama,
Today’s Speakers

- Jamey Rorison, Senior Research Analyst, Institute for Higher Education Policy
- Archie Cubarrubia, Vice Provost, Institutional Effectiveness, Miami Dade College
- Ben Miller, Senior Director Postsecondary Education, Center for American Progress
- Joanna Grama, EDUCAUSE, Director of Cybersecurity and IT GRC Programs
Agenda

- Introduce IHEP project
- High level project findings
- SURD
- IPEDS
- Information security and privacy concerns
- Panel discussion
IHEP Project
Project Overview

- Develop technical and policy options for improving the national postsecondary data infrastructure to inform state and federal data policy conversations
We Need Quality Data to Answer Critical Questions

- Policymakers, the public, students, and institutions can’t answer key questions about student access, success, and equity, like:
  - How many non-traditional students attend college and do they successfully complete credentials?
  - Do students who do not graduate transfer to other colleges and earn degrees, or do they drop out altogether?
  - How much debt are students accumulating in college, and can they repay their loans?
  - Are students obtaining employment in their field after college, and what do they earn?
  - How much are students learning in college, and how are they contributing to society?
Our Current Data Infrastructure
Envisioning the National Postsecondary Infrastructure in the 21st Century

America’s students, policymakers, and institutions need better information about our postsecondary system, especially in this era of rising college costs and stagnating completion rates. To address this problem, IHEP convened an expert working group to develop targeted recommendations for improving the national postsecondary data infrastructure. Below, explore the resulting series of 11 policy papers designed to inform state and federal data policy conversations.

Creating a Thriving Postsecondary Education Data Ecosystem

High Level Findings
Guiding Principles

- Must advance student equity and success
- Must result in increased efficiency in data collection, reporting, and use
- Must result in flexibility and agility that allow the ecosystem to address data needs today and 20 years from now
- Cannot come at the expense of privacy
Recommendations

- Improve the capacity of institutions to report accurate, timely, and relevant data
- Collect new data elements; eliminate others
- Improve access to data
- Keep individual data private and secure
- Improve linkages between existing datasets
- Remove legal barriers to data use
Considerations

- Data Governance
- Data Standards and Definitions
- Data Use
- Data Policy
- Data Resources
- Privacy and Security
- Institutional Capacity to Produce Quality Data
Challenge to the Field

- How can we optimize our existing data systems to allow actors to function more efficiently with each other and together by reducing redundancies and burden and increasing access to more useful data?
- Intentionally transitioning from a national postsecondary data infrastructure to a national postsecondary data ecosystem
Today’s Panel

1. Building a Student-Level Data System

2. Putting the “Integrated” Back into IPEDS: Improving the Integrated Postsecondary Education Data System to Meet Contemporary Data Needs

3. Understanding Information Security and Privacy in Postsecondary Education Data Systems
Building a Student-Level Data System
Why We Need a Student-Level Data System

- **Overall**: Fill knowledge gaps
- **Feds**: Contextualize results for aided students, national completion picture
- **Institutions**: Earnings data, better transfer tracking, financial aid performance
- **States**: Better earnings data, transfer and completion tracking, state aid performance
- **Students**: More personalized info for decision-making
Six Necessary Components

1. Complete picture of enrollment
2. Disaggregate by major subgroups
3. Collect information on non-federal aid and price
4. Link to other federal data
5. Report back to institutions and states
6. Publicly release data
Other considerations

- Leverage existing reporting processes
- Only collect necessary items
- Replace existing collections where possible
We Are Closer Than You Think

- Most required reporting already done to NSC or NSLDS
- Major needed additions?
  - Data on students who do not receive federal aid
  - Race
  - Credit accumulation
  - Non-federal aid and price
Recommendation: Joint FSA/NCES System

- Data reported to Office of Federal Student Aid (FSA)
- FSA handles matches with other federal agencies (e.g. SSA for earnings)
- FSA sends data back to schools and states for their own use
- National Center for Education Statistics handles public-facing release and researcher access
Putting the “Integrated” Back into IPEDS: Improving the Integrated Postsecondary Education Data System to Meet Contemporary Data Needs
## Strengths/Weaknesses of Current IPEDS

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<th>STRENGTHS</th>
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| - Includes broad coverage of institutions and high compliance rate  
- Subject to rigorous quality control standards, managed by a statistical agency (National Center for Education Statistics [NCES])  
- Offers historical consistency  
- Reduces security concerns through use of aggregate data  
- Informed by regular input from community about metric design  
- Disseminated effectively and made accessible to stakeholders in a variety of formats  
- Provides strong investment in training for data reporting and data use  
- Functions at a relatively low cost, compared with more complete infrastructure redesigns | - Does not flexibly adapt data collection to address changing instructional delivery models, student behaviors, or varying data needs  
- Certain metrics do not reflect all students enrolled at the institution, including part-time and low-income students  
- Does not effectively address student mobility/transfer  
- Fails to capture data on students’ post-college outcomes  
- Requires aggregate reporting by institutions, which can be burdensome for low-resourced colleges  
- Does not facilitate collection of program-level data  
- Difficult to remove or change data elements once added to IPEDS, even if no longer useful |
Anatomy of an IPEDS Change
Recommendations for Improving IPEDS

1. Collect data on key performance indicators that fully reflect 21st century students.
2. Streamline IPEDS components to reduce institutional burden and produce more relevant data.
3. Create strategic linkages between IPEDS and other systems that already collect valuable data.
4. Create a single campus level identifier for every institution of higher education.
5. Use IPEDS data to simplify institutional reporting on federal grants.
Resource/Technology Considerations

- Improved technology infrastructure to allow for linkages to other non-IPEDS data
- Technology enhancements to make best use of IPEDS data
- Cost of adding elements to IPEDS to institutions.
- Added value of streamlining current IPEDS collections and linking to other data.
- Long-term benefit of improved IPEDS system
Understanding Information Security and Privacy in Postsecondary Education Data Systems
Concerns

1. Volume: the amount of data collected and the number of records collected about any one individual.
2. Sensitivity: the level of discretion required in handling the data elements collected, and the potential variations between different systems.
3. Access: who is permitted to look at big data collections (as well as the underlying IT systems) for the purposes of querying the larger collection.
Recommendations

1. Adopt a risk-based approach to understanding information security and privacy threats and vulnerabilities.
2. Establish and adhere to a baseline set of information security protections.
3. Establish and adhere to a baseline set of privacy standards.
4. Implement a collaborative governance structure that includes addressing information security and privacy throughout the national postsecondary education data infrastructure.
Panel Discussion
Questions for Panel *(this slide will NOT be shared)*

For Jamey:
You make recommendations about streamlining IPEDS and eliminating data elements, but you also recommend for a substantial amount of additional data collection. How can you make the case to policymakers and institutions that these recommendations are worth the effort?

For Ben:
Your paper outlines the value and conceptual and technical feasibility of creating a federal student unit record system. What would it take to change the narrative of conversations so we can make actual progress?
How do you envision institutions and policymakers using information from a federal student unit record system?

For Joanna
What are the main security and privacy concerns about protecting the data used in the national postsecondary education infrastructure, and how can we best meet these data protection concerns?
Why are you suggesting the use of best practices as opposed to a discrete list of recommendations to be implemented in the technology used in the ecosystem?
Help Us Improve and Grow

Thank you for participating in today’s session.

We’re very interested in your feedback. Please take a minute to fill out the session evaluation found within the conference mobile app, or the online agenda.