

Report and Suggestions from IPEDS Technical Review Panel #54: Exploring Topical Issues in Higher Education

SUMMARY: The Technical Review Panel discussed current trends in the higher education field. Areas of focus included using IPEDS data with other data sources, the institutional research and information technology structure, monitoring data developments in student financial aid, institutional performance measures, and collecting and analyzing data on transfer students. This summary highlights several broad themes that emerged from the discussion. Comments from interested parties are due to Janice Kelly-Reid, IPEDS Project Director at RTI International, at ipedstrpcomment@rti.org by January 25, 2018.

On October 3 and 4, 2017, RTI International, the contractor for the Integrated Postsecondary Education Data System (IPEDS) web-based data collection system, convened a meeting of the IPEDS Technical Review Panel (TRP) in Washington, DC. IPEDS TRP meetings are conducted by RTI to solicit expert discussion and suggestions on a broad range of issues related to postsecondary education and the IPEDS collection. Each TRP is designed to allow the public to advise and work with RTI to improve IPEDS data collection and products, data quality, and user-friendliness. The TRP does not report to or advise the U.S. Department of Education.

RTI's specific purpose for TRP 54 was to identify and discuss burgeoning higher education topics of interest that may inform and strengthen the IPEDS data collection. To this end, RTI convened a collection of national experts to summarize and present findings from their current research.¹

The panel consisted of 49 individuals representing institutions, researchers, state governments, the federal government, higher education associations, and other experts.

Comments raised by the panel are for informational purposes. The TRP was not charged with establishing any conclusions or suggestions for changes to IPEDS. The work from this information-gathering TRP is intended to serve as a resource only and does not constitute suggestions for a specific research agenda for IPEDS. The invitation to present is not an endorsement of the research or the organizations represented by the panelists.

Background

RTI convened this TRP to elicit various perspectives from subject-matter experts on emerging issues in postsecondary education. The discussion was organized into five topic panels made up of researchers and practitioners with expert knowledge of the topic under discussion. Invited subject-matter experts were asked to prepare brief presentations highlighting key points from their recent research or work relevant to the topic. A primary objective of this informational TRP was to learn about current and emerging research in the field to gain a better understanding of how the topic intersects (or potentially intersects) with IPEDS.

Panel I: Using IPEDS Data with Other Data Sources

IPEDS data are collected at the institution level and can be aggregated to analyze trends at the institutional, state, and national levels. IPEDS data can also be combined with data from other sources, including institutional data systems, state longitudinal data systems, state postsecondary student unit record systems, federal agencies, and private sources to enable new analysis. Panelists

¹ A list of presenters is provided in Appendix A.

provided examples of how IPEDS data can and should be used with other data sources and highlighted specific challenges when combining data from multiple sources.

Examples:

- IPEDS data can supplement internal data systems to fill in gaps or verify data quality.
- IPEDS data combined with other sources can provide regional and national context to institutional measures for benchmarking.
- IPEDS data linked with data from state student unit record systems can be used to conduct enrollment pipeline analysis to identify untapped markets; to inform operational decisions related to recruitment and retention; and to calculate financial aid and debt indicators, such as student unmet need and cumulative loan debt at graduation.
- IPEDS data can be used as one of multiple data sources in a comprehensive analysis of the postsecondary landscape; to fill information gaps to support specific initiatives around issues of college access, success, and affordability; and to provide local labor market context to support initiatives to improve alignment between economic and workforce needs.

Opportunities:

- Link IPEDS data and data collected by other federal agencies. Protecting the privacy and security of student information should be a priority if administrative data from other federal sources are incorporated into IPEDS. Publishing an IPEDS UnitID/OPEID crosswalk document could be a potential short-term solution.
- Leverage existing data to streamline reporting and decrease institutional burden. Simplify other institutional reporting by using IPEDS data to satisfy compliance reporting requirements for institutions receiving funds under Title III and Title V.² For example, automate a report that institutions could use to prepopulate Title III and Title V Annual Performance Reports instead of requiring them to enter data manually.
- IPEDS cohort-based survey components (i.e., Graduation Rates, 200% Graduation Rates, Outcome Measures components) collect different levels of disaggregation across components; use different definitions to establish similar, yet different, cohorts based on credential-seeking status; and use different timeframes for calculating completion for cohorts. Aligning or streamlining the cohort-based components could improve comparability and reduce the burden associated with multiple surveys.
- IPEDS collects institutional enrollment data twice per year. The Fall Enrollment (EF) component is a snapshot of enrollment counts during the fall term, with data disaggregated by race/ethnicity, gender, student level (i.e., undergraduate and graduate level), age, state of residence, attendance status, degree-seeking status, and major field of study. The 12-month Enrollment (E12) component collects a cumulative, unduplicated headcount of students enrolled at any point over the course of an entire calendar year, but is disaggregated only by student level, gender, and race/ethnicity. Folding the EF data elements into the E12 component would streamline existing reporting and minimize burden while increasing utility of the data.

Challenges and considerations:

- The unit of analysis (i.e., campus, institution, system) is an important consideration when merging data within IPEDS survey components and across federal data systems.

² Title III and Title V of the *Higher Education Act* authorize funding and support for minority serving institutions.

- Federal data systems define institutions differently in each system and assign different identification numbers in each system, making it difficult to match data across systems.
- Changes in the IPEDS universe across a time series (e.g., consolidations, closures, mergers) and changes to institution level based on highest award level offering (i.e., defining baccalaureate community colleges based on highest degree rather than predominant degree) complicate longitudinal data pulls.

Panel II: Information Technology and Institutional Research Structure

IPEDS reporting often relies on contributions from multiple administrative units within an institution. This session explored the challenges, innovations, opportunities, and other issues experienced by Institutional Research (IR) and Information Technology (IT) offices. Panelists discussed various organizational structures and relationships that exist between IR and IT, structural and functional differences between these offices, and the interaction between the two in the context of IPEDS.

Examples:

- Although IR and IT functions are combined in some institutions, the two are housed in separate departments at most institutions. IR functions may be centralized in a stand-alone department or decentralized with IR responsibilities distributed among several functional units (e.g., human resources, enrollment services, financial aid, IT report writers, registrars, and academic units).
- Organizational structures reflect a variety of arrangements and working relationships between IR and IT. For example, reporting to the provost allows IR to focus on the academic mission of the institution but relies on an informal relationship between IR and IT; reporting to the president allows IR to be centrally involved with decision-making but can decouple IR from the academic functions of the institution and relies on an informal relationship between IR and IT; or IR is decentralized in a distributed relationship and relies on subject matter experts from each functional unit. Organizational structure can affect priorities.
- Some institutions have established data warehousing and business intelligence (BI) capabilities, which enable IR staff to run their own data analysis and data reporting, while other institutions may have dedicated IT staff involved in preparing data submission and supporting IR data needs.
- The role of IR appears to be shifting from official compliance reporting and ad hoc requests to also include comprehensive data analysis, analytics, developing interactive data visualization on key metrics and performance indicators, predictive analysis, and peer comparisons.

Opportunities:

- Understanding organizational structure could be helpful in understanding the language IPEDS should use in communicating with institutions.
- Including campus stakeholders in data governance and providing access to published data dictionaries and data validation tables can help IR offices (particularly IR offices in a distributed structural relationship model) ensure consistent and correct data reporting.
- Merging data across different enterprise systems can easily be done in the BI environment, but having developed schematic views and having end users being able to use the data effectively requires access to the necessary reporting tools.

- Service providers could facilitate better peer comparisons by providing more granular and qualitative analyses.
- Multiple offices, both at the system-level and on campus, use a shared data warehouse to tap into unit record data, which raises questions for institutions to discuss and resolve depending on their IR/IT/BI priorities. For example, what is the appropriate level of access for individual departments and campuses? What is the training required in this area to become an official user of the BI data? Enterprise systems house data that originate in separate databases and must be cleaned before being integrated into the data warehouse.

Challenges and considerations:

- Structural relationships can impact IPEDS reporting, in terms of responsiveness to changes and data quality because of lack of integration between multiple administrative units. For example, IT may be responsible for maintaining the systems infrastructure for IR data needs. When IR and IT are not structurally aligned and rely on informal relationships, changes in the IPEDS collection or data validation in response to changes in reporting standards may not have the same level of priority on the IT side. Trying to find the right ways and relationships to get that priority elevated can be challenging and time-consuming.
- Structures change both based on policy and because of staffing, making these attributes difficult to use by IPEDS but could be used by institutions accessing materials ad hoc.
- Implementing a new Enterprise Resource Planning (ERP) system can break trend lines. In general, expect to see changes in data quality after an institution implements a new student information system or ERP system. As the role of BI and IT continues to grow, it is likely that BI will require greater cooperation between IR and IT.
- Building BI capabilities and implementing data warehouses as a part of an analytics solution requires collaboration between IR and IT.
- Although some institutions incorporate student unit record information into their data warehouses (perhaps intentionally, for privacy reasons), the offices on campus that are generally involved with quality assurance are not involved in producing student financial aid records for federal reporting (e.g., common origination and disbursement for student loans) or providing data to the National Student Loan Data System (NSLDS).

Panel III: Monitoring Data Developments in Student Financial Aid

There is general legislative support for expanding the information available to consumers, particularly with respect to college costs and financial aid, but less agreement on what data to collect (and at what level of detail) or how the federal government should communicate this information to consumers. This session provided an overview of several issues on the horizon related to student financial aid, such as simplifying the existing set of federal student aid programs, Free Application for Federal Student Aid (FAFSA) simplification, student loan repayment, and institutional accountability. Panelists highlighted research findings and discussed what overlap, if any, exists within the context of IPEDS. These findings demonstrate how IPEDS cost of attendance and net price can vary within and across institutions.

Examples:

- Research shows a growing number of institutions using differential tuition, for either more lucrative majors or in high-cost majors. The average annual cost of attendance measure focuses on first-year costs and does not account for variations in tuition or pricing changes between the first year and subsequent years. Upper-level courses may have higher lab fees or

require more costly supplies relative to entry-level courses. Information about how much students can expect to pay and borrow to attend an institution can provide context for students and families when comparing institutions. However, IPEDS cost of attendance data (and resulting net price) only account for first-year costs and can result in a misleading picture of overall and beyond first-year costs to students and families.

- Room and board expenses in the cost of attendance measure are weighted by the distribution of students in each living arrangement (on-campus, off-campus independent, or off-campus with family). Research shows that on-campus students are disproportionately first-year students. If a campus is residential in nature, even for the first year, the cost of attendance is based on the on-campus housing cost even if the student later moves off-campus. As a result, disparities between on- and off-campus housing costs may result in a substantially different cost across years.
- Room and board allowances can vary between schools that share a similar geographic area. The reported room and board estimates for students living off-campus (not with family) may not reflect local living costs. These estimates may also be understated because students living off-campus (with family) may incur food and housing costs; however, room and board estimates for these students are not necessarily reported to IPEDS.
- The reported cost for on-campus students fails to capture variation in costs. Many institutions have differentiated rate structures based on the residence hall and amenities. In addition to housing, many institutions also offer a variety of meal plans of varying costs.
- Grant aid often decreases after the first year for several reasons, including institutional practices and policies (e.g., “frontloaded” institutional aid packages with more generous offers for the first year and reduced aid amounts in subsequent years, one-time private scholarships restricted to entering students that end after their first year) and students’ failure to maintain eligibility or meet satisfactory academic progress standards. Financial aid awards will change with each subsequent year of enrollment; decreases in grant after the first year can result in big jumps in net price in later years.

Opportunities:

- Consider additional net price measures. IPEDS calculates institutional net prices for two subsets of full-time, first-time degree/certificate-seeking undergraduate students: those awarded grant or scholarship aid from the federal government, state/local government, and the institution; and those awarded Title IV aid (grant, loan, or work study) by family income category. The overlap of these two groups includes students who were awarded Title IV grant aid, but data users may not be aware of this nuance. Calculating average net price and net price by income level for all students (including non-Title IV and non-grant recipients) would provide context to the existing measures, but would require institutions to collect data from non-FAFSA filers.
- IPEDS room and board cost estimates could be improved in the following ways: by collecting variations in on-campus room and board rates (e.g., min and max or 25th and 75th percentile); by providing a text box for data providers to explain methods for generating estimates for off-campus (not with family); by collecting room and board estimates for students living off-campus with family; and by including county-level estimates alongside reported estimates to add context to the data.
- Explore options for collecting additional data to improve student debt data collected in IPEDS, such as graduate student borrowing, cohort default rates, and cumulative debt disaggregated by type of credential completed.

Challenges and considerations:

- Transfer students are not represented in cost of attendance or net price measures. Information on institutional financial aid strategies for transfer students is particularly important for public 4-year institutions in states with strong articulation agreements.
- As directed by the *Higher Education Act (Sec. 472)*, cost of attendance includes “an allowance (as determined by the institution) for room and board costs incurred by the student...”³ Institutions use a variety of methods to produce these estimates but a challenge is that institutions may have limited resources to develop accurate estimates. Researchers also noted that institutions face incentives to appear as affordable as possible.

Panel IV: Institutional Performance Measures

State performance accountability models, voluntary data initiatives, and institutional efforts use performance metrics to evaluate and improve specific policies, programs, and practices. These models use comparative data on institutional performance related to undergraduate student access, progression, completion, and post-college outcomes, as well as measures that examine institutional efficiency, equity, and higher education contributions to a state or region. Often these performance measures are located within broader systems of accountability, transparency, consumer information, or decision support and are delivered through a variety of mechanisms (e.g., datasets, reports, portals, websites, interactive tools) based on the needs of the intended audience. This session provided examples of how national, state, and institutional data sources can be combined to create a more comprehensive and nuanced view of postsecondary performance, and highlighted approaches and tools to create useful and actionable information for evaluating institutional performance.

Examples:

- Capturing intermediate progression towards goal (e.g., transfer, certificate, or degree), disaggregated by student demographics and level of college preparation provides faculty, staff, and administrators with key student progress indicators. Incorporating predictive analysis provides insight on how to increase completions by improving performance in specific program areas. Institutions and systems can dig deeper into the data to conduct completion analyses by program or major and understand more fully what changes to policies and practice affect student success.
- Data matches between state and workforce data systems provide earnings data after graduation, as well as student loan debt, for graduates by degree level, major, and institution. Additional data gathered from the National Student Clearinghouse and the U.S. Department of Labor's Bureau of Labor Statistics offer a comprehensive view of labor market demand by occupation – state, regional, and national – to enable institutions to match educational offerings to workforce demand.

Opportunities:

³ *Higher Education Act (Sec. 472)* “an allowance (as determined by the institution) for room and board costs incurred by the student which -- (A) shall be an allowance determined by the institution for a student without dependents residing at home with parents; (B) for students without dependents residing in institutionally owned or operated housing, shall be a standard allowance determined by the institution based on the amount normally assessed most of its residents for room and board; and (C) for all other students shall be an allowance based on the expenses reasonably incurred by such students for room and board.”

- There is a high demand for postsecondary outcomes data, including college completion rates and time to credential, as well as workforce and labor market data on earnings, employment rates, and linkages between credentials and workforce needs. Linking or matching student data for other federal reporting (e.g., Gainful Employment) to federal wage data would reduce the burden on institutions by eliminating the need to coordinate with state department of labor and workforce departments and provide a standard, national methodology for calculating earnings using unemployment insurance wage data.
- States, systems, and institutions can take a strategic role in the implementation of tools to enhance transparency for students and provide comparative information for state and institutional leaders. A consumer tool packages similar information for the public and provides earnings, student debt, and workforce to demonstrate the value added of higher education and helps prospective and current students with college and career planning. Aggregate information on student progress through career and technical education courses into the labor market helps community colleges evaluate the effectiveness of their career and technical education programs. An accountability and transparency tool provides high-level metrics on strategic initiatives and drill-down capabilities to delve deeper into various topics to promote data-driven conversations about affordability, student success, post-graduation earnings, research expenditures, healthcare, and state economic impact. Effective data visualization tools provide accessible, accurate, and actionable information for a wide range of education stakeholders.
- Residence data by zip code instead of state provide a more complete analysis of national participation, facilitate a more nuanced analysis on overserved and underserved areas, and provide an adjustment factor for performance.
- Enrollment in remedial coursework would provide context to the IPEDS graduation rate cohort. Some accountability models use information on academic preparedness at entry (i.e., proportion of students who require remedial coursework) to calculate student progression and success metrics that reflect the mission of the school.

Challenges and considerations:

- Disaggregated data can result in small cells which can be problematic, but in order to preserve data utility it was suggested that the number of students be provided as context rather than attempt to suppress small cells.
- State, system, and institutional performance metrics vary widely in their specific dimensions and level of detail but there are many questions about institutional performance that can be adequately and accurately addressed by combining IPEDS data with student-level data. A factor to consider is: should institution level data be used to measure student behavior?

Panel V: Collecting and Analyzing Data on Transfer Students

This session examined emerging issues related to transfer and the various ways in which students utilize and navigate postsecondary education. Panelists addressed such questions as: How do institutions define transfers? How do institutions track transfer-ins and transfer-outs? Are there working definitions of transfer cohorts?

Examples:

- The pathways to postsecondary education are diverse. Among alternate pathways are co-enrollment, dual enrollment, reverse transfer, multiple movements across institutions,

systems, sectors, and states. Student enrollment behaviors are complex and do not necessarily follow the paths laid out for them (e.g., traditional 2 + 2 transfer agreements). Students engage with institutions at different times and with different levels of preparation. Broad access institutions (both 2- and 4-year) have policies allowing students with varying levels of academic preparation to enroll. There is a need for data systems that effectively track enrollment across institutions and accurately document multi-institutional enrollment and transfer behaviors but measuring mobility, migration, and transfer outcomes at the institution level is challenging.

Opportunities:

- Formal articulation agreements could be collected by IPEDS.
- Collecting data on momentum points (e.g., credit accumulation, taking and passing gateway courses, program course completion) in a national data collection would require an enrollment unit record system in addition to a student unit record system. The level of detail needed for persistence measures and other pipeline information is better tracked at the state and system levels.
- Further research is needed to better understand transfer behavior. New IPEDS Outcome Measures data could provide helpful contextual data toward that end.

Challenges and considerations:

- Articulation agreements and transfer of credit policies are not standardized. In some cases, articulation or transfer agreements clearly document the enrollment pathway between one or more institutions and outline how credits will transfer; however, the structure of voluntary transfer agreements or partnerships varies – and may be institution by institution, course by course, or statewide.
- IPEDS includes limited information on transfer student outcomes. IPEDS data collection rules do not currently distinguish between transfer type (e.g., horizontal, vertical). Although some institutions are able to identify if a degree was specifically awarded as a result of reverse transfer. Yet, policies and capabilities for tracking reverse transfer currently vary across institutions.

Next Steps

Once the TRP summary comment period has closed, RTI will review the comments and will out provide a summary for NCES based on the outcome of the TRP meeting and subsequent public comment period. NCES will review the summary to determine next steps and if applicable, submit proposed burden estimates to the Office of Management and Budget for information collection clearance. The current collection expires in 2020.

Comments

RTI is committed to improving the quality and usefulness of IPEDS data as well as strategies that might be helpful in minimizing additional reporting burden. We encourage interested parties to send any comments or concerns about this topic to Janice Kelly-Reid, IPEDS Project Director, at ipedsTRPcomment@rti.org by January 25, 2018.

Appendix A. Presenters

Panel I: Using IPEDS Data with Other Data Sources

Moderator:

Brian Prescott, The National Center for Higher Education Management Systems

Presenters:

Mamie Voight, Institute for Higher Education Policy

Angela Bell, University System of Georgia

David Tandberg, State Higher Education Executive Officers Association

Panel II: Information Technology and Institutional Research Structure

Moderator:

Nicole Ifill, RTI International

Presenters:

Rachel Boon, Iowa Board of Regents

Hank Childers, University of Arizona

Michael Gass, University of North Carolina at Asheville

Dennis Hengstler, University of Tennessee System

Panel III: Monitoring Data Developments in Student Financial Aid

Moderator:

Nichole Smith, RTI International

Presenters:

Matthew Chingos, Urban Institute

Nicholas Hillman, University of Wisconsin-Madison

Diane Cheng, The Institute for College Access & Success

Robert Kelchen, Seton Hall University

Panel IV: Institutional Performance Measures

Moderator:

Christine Keller, Association for Institutional Research

Presenters:

David Troutman, University of Texas System

Susan Lounsbury, Southern Regional Education Board

Patrick Perry, California State University

Panel V: Collecting and Analyzing Data on Transfer Students

Moderator:

Erin Velez, RTI International

Presenters:

Gloria Crisp - Oregon State University

John Fink - Community College Research Center, Teacher College - Columbia University

Jeremy Kintzel - Missouri Department of Higher Education

Tod Massa - State Council of Higher Education for Virginia