

Institute of Education Sciences
National Center for Education Statistics

ADMINISTRATIVE DATA AND ANALYSIS OF PANEL DATA

NISS Technical Expert Panel • June 2018

EXECUTIVE SUMMARY

The National Center for Education Statistics (NCES) conducted their first collection of administrative data on postsecondary education in 1966, almost immediately upon establishment of the Center, with continuing collections through today. The Integrated Postsecondary Education Data System (IPEDS) was initially fielded as the Higher Education General Information Survey (HEGIS). Now this data repository contains over five decades of consistently gathered administrative data on postsecondary education. Data in IPEDS effectively documents the changes over time to educational policies, practices and outcomes. These data include detailed information on institutional characteristics, student population information, financial aid information and information on outcomes.

While IPEDS data is rich and complex due both to longevity of the data and to the diversity of the population of institutions included, it also is difficult for users to navigate. Currently the value of these data is not sufficiently realized. As changes in education occur over years, the impact of some changes may only become evident in subsequent years. NCES administrative data collections comprise a unique and highly valuable resource for evaluating change and the impacts of interventions.

The NCES charged a panel of technical experts to focus on the potential of publishing longitudinal summaries of these administrative data to make this resource practically and effectively useful to decision-makers and others. In addition, the panel was asked to address two specific issues for NCES reports:

1. Issues involved in objective, policy-neutral representation of longitudinal trends present in the extensive longitudinal database of administrative information, and
2. Issues of appropriate summarization of data gathered as a census rather than as a probability sample.

The panel met at NCES on May 22-23, 2018, supplemented by teleconferences.

Primary Recommendation

Develop a vision for longitudinal analysis and reporting to meet the needs of decision-makers, policy-makers, researchers and other NCES data users.

1. **Manage Research Assets:** Immediately proceed to develop a series of publications of trends and analyses of change. Publications should be of two kinds: informational publications in a standard format for regular (annual) production and more detailed research reports on a few selected topics

each year. Topics should augment the in-depth reports currently commissioned by NCES and should emphasize research that is uniquely possible via NCES resources.

Scientific integrity should be the hallmark of NCES of both kinds of publications.

2. **Manage Data Assets:** Undertake the structuring of the NCES data collections in a cloud-based structure that will facilitate multiple uses and data linkages within NCES, across the Department of Education, and with other agencies. Create a Vision for 2020 (and beyond) for the use of NCES data and needs for access and analysis. Start now to curate NCES data to facilitate longitudinal analysis for external as well as internal use.

Details and specific recommendations for implementation are included in the final section of the full report.

Responses to Specific Questions

Objective, policy-neutral representation of longitudinal trends first requires determining which information is needed at the full population level and which is needed at the subgroup level. Note that aggregate reporting for the population may not be meaningful for subgroups.

Summarization of data gathered as a census rather than as a probability sample does not pose a technical difficulty in reporting although probability-based standard errors or other uncertainty statements are not possible. Summarization should use sufficiently sophisticated analytic methodology to match the complexity of data and be flexible to changes.

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