Improving Student Attainment Requires More from Higher Education Data

All of us in higher education understand that data dictionaries, storage systems, interoperability specifications, business intelligence (BI) systems, and dashboards serve the operational core of our colleges and universities. But it’s also important for all of us to recognize that some policy needs require engaging information resources beyond the institution. An increased focus on data-informed accountability and transparency, emphasizing student learning outcomes and college completion, brings new demands for the IT organization.

Numerous stakeholders are exercising influence and expressing their increased expectations. Students and parents are scrutinizing their investment, administrators are balancing shrinking resources with growing demands, governments and citizens are asking for measureable outcomes, key influencers are increasing their support (and inquiries), and faculty are simultaneously engaged and uneasy. These demands require new political and personal relationships, as well as an understanding of cultural differences, legal interpretations, diverse technical platforms, vendor communities, and varying traditions regarding data governance. Change is in the air.

Several initiatives reflect these increasing demands and can help in understanding them: the Common Education Data Standards (CEDS), Statewide Longitudinal Data Systems (SLDS), and pending changes to the Family Educational Rights and Privacy Act (FERPA).

**Common Education Data Standards (CEDS)**

CEDS (http://commoneddatastandards.org) is a set of education data elements and their definitions that enable education stakeholders to exchange clear and consistent information supporting improved academic outcomes by students.

The concept of data standardization is not new. What makes CEDS different is the breadth of purpose, a full P–20 (preschool through higher education) scope, and the broad voluntary support and resources necessary to ensure its success. Simply put, CEDS expands the goals of improving comparability and increasing quality. This is a unique opportunity for the postsecondary education community to advance its traditional commitments to analysis and continuous improvement and to more effectively connect with pre-K–12 and, ultimately, labor/workforce systems.

Two closely aligned yet distinct CEDS activities are under way: (1) the National Center for Education Statistics (NCES) Stakeholder Group (http://nces.ed.gov/programs/ceds/), which represents a broad range of education stakeholders, is developing standards including definitions and formats, and (2) a group of partners, the Consortium (http://commoneddatastandards.org), is supporting CEDS advocacy, communication, adoption, and implementation. The Consortium’s managing partners are the State Higher Education Executive Officers (SHEEO) and the Council of Chief State School Officers (CCSSO). The Post-secondary Electronic Standards Council (PESC), the Schools Interoperability Framework (SIF) Association, and the Data Quality Campaign (DQC) are also Consortium partners.

NCES has reached out to the education community for input on CEDS development. Its postsecondary Stakeholder Group represents multiple perspectives and is focusing on the data elements for IPEDS (Integrated Postsecondary Education Data System) reporting in version 2.0, keeping in mind that

- postsecondary education and its related data requirements can be different from K–12 requirements,
- a large number of postsecondary institutions are independent institutions,
- not all institutions are included in state-level data systems, and
- the common thread for all postsecondary institutions is IPEDS reporting.

The postsecondary sector’s strength derives from its diversity, but capitalizing on that strength requires participation from institutions of all types, both within and across states, as well as from the associations that represent them. Thus it is essential that the entire postsecondary community actively engage in the CEDS review process. NCES and the Consortium invited community input on the first draft of CEDS Version 2.0 in July–August 2011. (Version 1.0, primarily addressing K–12 data elements, was released in September 2010.) The second draft of Version 2.0 will be available for reaction in October–November 2011, with the final draft due in early 2012. We encourage EDUCAUSE members to participate, both to inform the final shape of the standards and to begin considering the benefits and implications of their use.

**Statewide Longitudinal Data Systems (SLDS)**

Data standards are only one component of the data-informed policy environment. Closer collaboration beyond institutional borders is essential for increasing educational attainment in the United States. This collaboration increasingly includes data exchanges and longitudinal data collections—two separate concepts that have each been part of the education operational
environment for decades. They multiply their impact, however, when they are combined to produce multi-source longitudinal data systems. Students are no longer confined to a single location, and neither are their data.

The most ubiquitous examples of data exchange include the electronic exchange of application and transcript information. Enrollment Management offices routinely acquire data about prospective students to support recruiting and to leverage financial aid. Many institutions maintain complex enterprise-wide data warehouses as well as collections of longitudinal data such as those managed by the Institutional Research office.

Regardless of where the data are located, many critical questions cannot be answered by a single institution alone. The most challenging include transition questions such as: “Which incoming students most need remediation?” and “What happened to students who left without a degree?” Some questions—such as, “What remedial courses should we offer this fall?”—have immediate operational considerations. Other questions, such as those about the ultimate success of former students by program or the economic impact generated by an institution, have a broader policy focus. All of these challenges require data sharing with external parties including other institutions, K–12 schools, and state agencies. Most require knowledge of student outcomes over time and therefore require the ability to collect and access shared data over time.

Institutions and states have a long history of exchanging data to respond to these needs. In the late 1960s, Southern Regional Education Board (SREB) members started sharing data. A decade later, the Higher Education Data Sharing (HEDS) consortium began sharing data among independent institutions. Since then, hundreds of decentralized data-sharing agreements have moved the inquiry process forward. A current example is a four-state pilot project from the Western Interstate Commission for Higher Education (WICHE) to develop a multi-state longitudinal data exchange with K–12, postsecondary, and labor partners. The benefits of such longitudinal data sharing are numerous and include support for improved operations, better understanding of student transitions, and consistent comparability of productivity and outcome measures. These benefits accrue to institutions, government stakeholders, the general public, and students themselves.

While states have been capturing longitudinal data on their own for many years, the Federal Statewide Longitudinal Data Systems Grant Program (http://nces.ed.gov/programs/slds) has encouraged and accelerated this activity. The systems funded by the program between 2005 and 2010 are examples of longitudinal data sharing on an unprecedented scale. Forty-one states and the District of Columbia have received at least one SLDS grant. The program's early rounds focused on K–12; subsequent rounds have required collaboration between K–12 and postsecondary institutions and state agencies. These evolving systems predate CEDS but are logical candidates for its early adoption.

However, given the legitimate concerns that statewide collection of student-level data raises, the ongoing development of such systems must include rigorous security and privacy-protection measures to preserve student privacy while enabling the valuable benefits the systems are intended to produce.

Family Educational Rights and Privacy Act (FERPA)

This spring, the U.S. Department of Education proposed revisions to the FERPA regulations that provide much-needed clarity around their application to SLDS development (http://www2.ed.gov/policy/gen/guid/fpco/ferpa/index.html). The revisions also provide for stronger privacy and security protections; clarify prior interpretations that prevented use of student data for evaluation, research, and accountability purposes; and clearly permit limited sharing of appropriate data. To further support the FERPA regulations, NCES has established a Privacy Technical Assistance Center as a resource for education stakeholders (http://nces.ed.gov/programs/ptac/).

Rather than sacrificing the legitimate use of data to inform education decision-making and improve student achievement, the proposed regulations call for stronger protections regarding data maintenance, access, and use, including stricter penalties for inappropriate use. We can and must support security and privacy protections for individual student records without undermining the legitimate uses of unit record data.

Moving Forward

Nobody disagrees with the goal of increased educational attainment by students, and few would disagree with the objectives of data-informed accountability and transparency, especially concerning learning outcomes and student success. A reasonable debate exists, though, over the role of unit-level data, the value of data standards, and the appropriate use of data for the common good while protecting student privacy.

These issues are linked in any consideration of campus data, information, and IT infrastructures. Common education data standards and longitudinal data systems are valuable resources and need not undermine student privacy and data protection under FERPA. They are complementary efforts that share the common goal of appropriate data usage to support students’ improvement and that address the common need to understand what happens with students independent of their current “time and space.” Ultimately, the CEDS and SLDS efforts will be the resources that can help higher education institutions reach these goals.

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