What Is CEDS and How Can Universities Use It?

The Common Education Data Standards initiative hopes to align colleges and universities on how they report student and faculty information.

by Andy Viano

Data is a language, and getting the world of higher education to speak the same one is at the heart of what the Common Education Data Standards initiative is trying to achieve.

It's an ambitious goal, one that has been in the works for more than a decade inside the National Center for Education Statistics, a division of the U.S. Department of Education. Back in 2009, when CEDS was first being developed, the problem wasn't that no standard existed to...
define certain data in higher education. In fact, it was the opposite situation.

“At the time, we kind of had no standards because we had too many standards,” says Ross Santy, associate commissioner for the Administrative Data Division at NCES. “It started from this recognition that we need some sort of connective tissue. We need a reference point. We need a dictionary with option sets so we can all say, ‘we hold these things in common.’”

Santy has been part of developing, coordinating and sharing CEDS since its inception, and he says the purpose of a common standard has always been to make life easier on everyone involved, especially as data analytics become more important for IT university departments and are being leveraged to promote student success.

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Colleges and universities can communicate best internally if they share the same language, and that goes for communicating with other institutions as well. It also helps them communicate clearly and easily with the federal government, which requires reporting to determine student financial aid, accreditation and more.

To achieve compliance with the standard, Santy and others connected to CEDS have taken a methodical and collaborative approach, relying on insights from higher education stakeholders. These stakeholders voluntarily follow the standards and also help evolve them through workgroup meetings that have grown larger and more involved over the years.

While higher education institutions have continuously engaged CEDS for help with things like government reporting, the goal is to adopt an agreed-upon set of standards at the very basic level of data collection — for demographic information, for example — so institutions don’t need to edit their data for every partner or agency that requests it.

“Without that set of standards and a community and a conversation that’s focused on interoperability, collaboration and cost-savings, you
wind up continuing to have these conversations in little pieces," says Santy.

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**What Are Common Education Data standards (CEDS)?**

CEDS is being developed at all levels of education, from pre-kindergarten through what the government calls postsecondary education, roughly defined as any kind of learning after high school.

When CEDS began 13 years ago, some groups, including the Postsecondary Electronic Standards Council (PESC), had already been trying to achieve a united standard across the country, though the nonprofit had plenty of competition. Michael Sessa, PESC's longtime president and executive director, says it didn't take much convincing for his group to welcome CEDS as a partner.

"We want to lead, but we also can't leave anyone behind," he says. "That's the primary thing. Not everybody's going to use the PESC standards, even though we're a nonprofit and we think we're the best. Most organizations that you find will say, 'Standards are great, as long as you use ours,' and that's an anti-standards message. So, what we do with CEDS is we align as closely as we can."

In a technological sense, that alignment is necessary to avoid the pitfalls that plague competitive industries — just consider the smartphone. If an Apple iPhone user wants to connect via FaceTime with a long-distance relative, they'll need another solution if that relative is using an Android operating system. In data analytics, that means getting as many stakeholders as possible to share a vocabulary so that data can be moved from one analytics tool to another without a major overhaul.

"The consequence is being left out and having the technology inadvertently drive policy, and that's why CEDS is so important."

*Michael Sessa, President and Executive Director, Postsecondary Electronic Standards Council*
That's where CEDS comes in. Information can be shared most easily if standard definitions, option sets and technical specifications agree, something the workgroups that set and adjust the standards are managing. Colleges and universities using different definitions, option sets or technical specifications will have a lot of work to do to make their data shareable.

The fallout from incompatible standards is far more consequential than a missed smartphone connection, however. It can mean leaving behind colleges and universities that don't have the staff, time or wherewithal to adjust data to a different format for whatever analytical purpose a tool, agency or collaborator is looking for.

"The consequence is being left out and having the technology inadvertently drive policy, and that's why CEDS is so important," says Sessa. "You say standards are anti-competitive, and they should be, because everybody needs a seat at the table."

**How Does CEDS Help Institutions Manage Their Data?**

One of the most significant evolutions CEDS has made in recent years is to pivot from not only setting the standards but sharing tools to make work simpler for higher education institutions.

CEDS now offers three tools on its website — Align, Connect and myConnect — and all three help colleges and universities adopt the standards and provide insight into some of the data being shared by participating CEDS institutions.

Align helps users align their data elements with the standards. Connect helps users answer policy questions and match up with reporting requirements. And myConnect gives colleges and universities the opportunity to see their data elements alongside published data.

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CEDS itself, Santy says, does not collect any student-level data. Instead, it is compiling what he calls "high-level aggregates" as part of the Integrated Postsecondary Education Data System. That data includes, for example, enrollment data broken down by demographic categories, the number of applications a college or university receives and accepts, and more.

"It's all these various things that, from a public transparency and program and policy reporting standpoint, have been determined to be
necessary for some specific purpose or just beneficial to the country, like graduation rates and outcome measures," says Santy. "But they're all at the aggregate level."

**How Can Your Institution Get Started?**

Since CEDS is a voluntary program, no institution must participate, but as positioned by Santy, Sessa and others, the ambition of CEDS is to be a helpful tool that can prevent further headaches down the road by standardizing data.

In the spirit of sharing that data and those standards for widespread adoption, the standards are now available through open-source sharing on GitHub, which Santy says fits into the spirit of his department's "come one, come all" philosophy of developing them.

While workgroups are no longer the only part of CEDS, they are still operating, and the most recent workgroup drew more than 70 participants, a more than threefold increase from the early days.

Colleges and universities that do wish to participate in CEDS should ensure they have sufficient data storage to keep the information secure, and that they have a data center that is properly powered and cooled.

More information and access to all the CEDS tools can be found at ceds.ed.gov.

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