# SUGGESTIONS FOR IMPROVING IPEDS DISTANCE EDUCATION DATA COLLECTION

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# INTRODUCTION

For more than 150 years, distance education (DE) has offered students the ability to acquire new knowledge, technical skills, certifications, and credentials through a range of evolving communication technologies (Simonson, 2012). Even in its earlier forms – offered via correspondence, the radio, or as audio and video recordings – DE has been a convenient and, typically, affordable way for individuals to access education and reach their personal and professional goals. DE has been particularly effective at serving students who have historically been excluded from traditional "brick-and-mortar" learning, such as students who are older, care for dependents, are disabled, live in rural areas or abroad (e.g., military families), and/or work full-time (Parsad & Lewis, 2008; Radford, 2011).

The growth in DE offerings and enrollments over the past 30 years is due in part to the ability of DE providers to quickly adapt to the changing higher education landscape and leverage new technologies to enhance student learning and engagement (Caruth & Caruth, 2013; Lease & Brown, 2009; Ryan & Young, 2015). DE learning environments now include the use of synchronous and asynchronous online learning tools that take place entirely online (i.e., e-Learning) or involve a combination of online and in-person instruction (i.e., hybrid/blended-learning). Although these new learning modalities can be expensive to design and implement, successful DE providers are able to achieve economies of scale by spreading the high cost of initial investment in communication technologies across a potentially large group of students to keep programs affordable (Moore, 2013).

The projected demand for global higher education in general, and DE specifically, over the coming decades has also fueled competition between existing colleges and universities, as well as emerging higher education providers, to expand and/or develop DE courses and programs of study and invest in ways to enhance the DE student experience (Caruth & Caruth; Lease & Brown; Ryan & Young). According to Gallagher and LaBrie (2012), DE today is a "mainstream and mature market" (p. 66) that is becoming increasingly complex as higher education institutions and other educational providers vie for national and global student enrollment.

To evaluate this quickly evolving and increasingly influential segment of the higher education landscape, the U.S. Department of Education's (ED) National Postsecondary Education Cooperative (NPEC) of the Integrated Postsecondary Education Data System (IPEDS) commissioned this research paper to examine how institutions collect, maintain, and report their DE data so that a Technical Review Panel (TRP) could consider how IPEDS might better collect DE data through its Fall Enrollment, 12-month Enrollment, Completions, and Institutional Characteristics survey components. IPEDS allows for individual institutional comparisons and trend analyses, and collecting better data on DE will improve consumer information and transparency. In addition, the Office of Inspector General (OIG) has

recommended the Department of Education collect additional distance education data to help prevent future instances of fraud and abuse. The 2008 NPEC paper and TRP on this topic examined the extent to which distance education had grown and introduced distance education data elements. Thus, the purpose of this paper is to further refine existing distance education survey questions, and determine whether additional information needs to be collected.

This paper sought to answer the following four research questions:

1. What are the definitions of DE, and DE programs and courses?
2. What is the current DE landscape (e.g., institutions offering DE, range of DE programs offered, DE student enrollment)?
3. To what extent is IPEDS capturing the current DE landscape?
4. How can IPEDS DE data collection be improved to better represent the current landscape?

NPEC-IPEDS commissioned Coffey Consulting, LLC (Coffey) to conduct a review of the DE literature, analyze relevant IPEDS data elements, and conduct informational interviews with a purposive sample of stakeholders. A detailed description of the methodology, including interview protocols, can be found in Appendix A. It should be noted that this paper, like all NPEC-commissioned research, is exploratory in nature and intended to provide background information for future TRPs as they consider how IPEDS can best capture information related to DE programs and courses, enrollment, and learning outcomes.

# Literature Review

## History of Distance Education

While often considered a modern innovation, DE has existed in the United States since the late-1800s as a way to provide personal, educational, and professional advancement opportunities outside of the traditional residentially-based college experience (Lee, 2017; Verduin & Clark, 1991). Although DE has become synonymous with “online learning,” this mode of instruction began as correspondence coursework delivered through the postal system. DE has evolved over the past 150 years to include a variety of formats – from radio, television, and audio and video cassettes to synchronous and asynchronous web-based platforms (Hoskins, 2013; Lease & Brown, 2009; Lee, 2017). The purpose of DE has also expanded to include credential-bearing adult education programs and, more recently, informal micro-credentials and digital badges, as well as continuing its traditional focus on providing self-improvement courses in the arts, literature, home economics, and professional skill development.

DE began to grow in popularity in the years following World War II as veterans sought to begin or finish their higher education studies (Sherron & Boettcher, 1997). Later, the open learning movement of the 1960s and 1970s – driven by both democratic ideals and political and economic concerns over the nation's global competitiveness – contributed to the expansion of DE opportunities and an increase in government investment in postsecondary DE programs (Lee, 2017). The advent of new communication and educational technologies, particularly after the National Science Foundation granted educational institutions access to the Internet in the early 1990s, spurred the creation of online programs at traditional "brick and mortar" colleges and universities, as well as the establishment of institutions whose sole function is to provide online education (Saba, 2011). More recently, DE has evolved to include massive open online courses (MOOCs) and open educational resources (OER) initiatives, such Cousera, Khan Academy, and MIT's OpenCourseWare (Caruth & Caruth, 2013).[1] Taken together, these new forms of DE have broadened access to both non-traditional and traditional learners (Lease & Brown, 2009; Lee, 2017) and have helped legitimize DE as a valued and viable postsecondary option (Casey, 2008).

DE has not been without contention; access to federal financial aid for DE coursework, considerations for training DE faculty, and concern over class sizes in online coursework continue to be much debated (Caruth & Caruth, 2013), as well as issues of instructional quality and student outcomes (Baron & Crooks, 2005; Powers & Gould, 2013), the extent to which DE is suited for all disciplines (Abdel-Salam, Kauffmann, & Crossman, 2007), and organizational structure (Saba, 2011). In addition, declines in state and federal funding over the past several decades and the increasing adoption of market-based policies and values have commodified DE such that higher education institutions compete with one another for a share of the DE market as a way to generate revenue (Lee, 2017). As DE becomes more mainstream, higher education institutions will need to balance increasing demand for DE programs with investment in new educational technologies, innovations in DE pedagogy, and any future regulatory requirements (Saba, 2011; Sharples, 2014).

## Definitions of Distance Education

DE is commonly defined as learning through which the teacher and student are separated either by time and/or geographic space, with some definitions also specifying that this separation is bridged through the use of technology (Casey, 2008; Lease & Brown, 2009; Lee, 2017; Moore, Dickson-Deane, & Galyen, 2010; Simonson, Schlosser, & Orellana, 2011). Over time, the advent of new technologies has necessitated the use of new terms to distinguish

[1] The University of Phoenix, a private for-profit four- and two-year postsecondary institution, is perhaps one of the most well-known DE providers, enrolling 368,550 students in 2015-16. Many public universities and colleges have also established a strong DE presence, such as Rio Salado College, a public two-year institution that is entirely online.

between emerging forms of DE, such as online education/e-Learning and hybrid/blended education (Moore et al., 2010; Spector, 2009). While some scholars use online education and e-Learning interchangeably, others define them as two distinct entities distinguished by the types of technologies used to deliver the education – that is, some scholars describe e-Learning as education delivered through the Internet in addition to other electronic mediums such as CD-ROMs, satellite, and television, whereas online education has been defined as education delivered through Internet or web-based mediums alone (Lee, 2017; Moore et al., 2010; Ryan & Young, 2015). When used interchangeably, online education/e-Learning has been generally defined as the bridging of the space between the teacher and the student through the use of web-based technologies (Lee, 2017; Moore et al., 2010; Ryan & Young, 2015).

Recently, the extent to which online education is delivered exclusively or partially online has led to a further distinction between "hybrid" or "blended" learning – terms that are also frequently used interchangeably – and wholly online distance education. Hybrid/blended learning has blurred the once-distinct lines separating traditional and DE, and is defined in the literature as the delivery of education through a combination of instructor- and technology-led instruction (Alammary, Sheard, & Carbone, 2014; Spector, 2009). Notably, no standard guidelines exist that delineate how much of the education must be delivered via technology versus in-person to qualify as online or DE (Alammary et al., 2009). Within this vacuum, scholars, states, and institutions have attempted to create such guidelines, examples of which include: 1) the classifying of hybrid/blended courses as low-, medium-, or high-blend based on the extent to which technology- and traditional-instruction is integrated (Alammary et al., 2009), and 2) the creation of internal cutoffs establishing minimum amounts of hybrid/blended education delivered through technology required to be considered online or DE (Sykes & Parsad, 2008).

The multiplicity of terms and definitions for DE presents a number of challenges, some of which include replicating successful programs and collecting data across institutions (Moore et al., 2010; Sykes & Parsad, 2008). There are also several other national survey efforts focused on understanding DE enrollment and investment (table 1a). Within this landscape, NCES has attempted to capture data on postsecondary DE enrollment through the IPEDS surveys. The current IPEDS definition of DE specifies that all instruction must be delivered entirely online and excludes hybrid/blended coursework from data collection. The IPEDS definition includes two requirements: 1) that the teacher and the student are not in the same location and are connected through at least one technology source, and 2) that the education provides "regular and substantive interaction" (NCES, n.d.). This definition also provides guidelines for the acceptable technological mediums that can be used to deliver coursework labeled as DE, such as Internet, audio conferences, or DVDs (NCES, n.d.). IPEDS also distinguishes between DE courses and programs, delineating that a DE course is one in which the content is delivered to

the student through DE only, and a DE program is one in which all courses comprising the program are completed exclusively through DE (NCES, n.d.).

**Table 1a. DE/Online Education National Surveys and their Components**

| Sponsoring Organization(s) | DE Definition | DE Survey Components |
|---|---|---|
| IPEDS | "Formal interaction which uses one or more technologies to deliver instruction to students who are separated from the instructor and which supports regular and substantive interaction between the students and instructor, either synchronously or asynchronously."<br><br>A **course or program** in which the instructional content is delivered *exclusively* (100%) via distance education (requirements for coming to campus for orientation, testing, or academic support services do not count towards 100% requirement). | • institutional DE course offerings, whether all the institution's programs are exclusively online, and at what level the institution offers DE courses or programs (Institutional Characteristics survey)<br>• enrollment in DE courses (exclusively and some), and location of students enrolled exclusively in DE courses, by undergraduate/graduate level and degree/non-degree seeking status (Fall Enrollment survey)<br>• whether programs are offered exclusively via Distance Education by CIP code (Completions survey) |
| Babson Survey Research Group, in later partnership with the College Board, conducted an annual DE enrollment survey of degree-granting institutions open to the public in the United States since Fall 2002. This survey effort was discontinued when IPEDS began collecting DE information in Fall 2012 and was replaced with a new publication analyzing DE enrollment, which Babson publishes with support from e-Literate and WICHE Cooperative for Educational Technologies (WCET). | **Online courses** were defined as those for which at least 80 percent of instruction is delivered online.<br><br>**Hybrid/blended** courses were defined as courses for which between 30 and 79 percent of instruction is delivered online. | Core data collected in each iteration:<br>• number of students taking at least one online course<br><br>Examples of special topics:<br>• institutional attitude and engagement with online education<br>• faculty acceptance and training<br>• growth expectations for online enrollment<br>• reasons for and barriers to online coursework/programs<br>• online programs by discipline<br>• strategies to serve online education students<br>• perceptions about competition for online enrollment |
| The Southern Education Regional Board's (SREB) State Data Exchange has collected data on higher education and student enrollment in SREB's 16 member states since 1969-1970. The *SREB Fact Book on Higher Education* is published biennially, and has expanded to include a measure of DE participation. | The SREB uses the term "e-Learning," and defines it as instruction for which more than 50 percent of the content is delivered electronically. | The SREB collects data on undergraduate and graduate student credit hours taken as e-Learning and correspondence courses. |

| Sponsoring Organization(s) | DE Definition | DE Survey Components |
|---|---|---|
| The Instructional Technology Council (ITC), which is affiliated with the American Association of Community Colleges (AACC), has conducted an annual survey of e-learning practices since 2004. | ITC defines DE where at least 70 percent of the coursework needed to complete the program is available online.<br>**Online courses** are defined as those for which at least 80 percent of instruction is delivered online.<br><br>**Hybrid/blended courses** are defined as courses for which between 30 and 79 percent of instruction is delivered online. | • number of online programs offered and students enrolled in online learning<br>• online learning administration and supervision, and staffing levels<br>• faculty training<br>• student experience<br>• online learning platforms<br>• compliance with the American Disability Act (ADA)<br>• perceptions of the quality of online and traditional course offerings<br>• challenges online administrators have with online education, faculty, and students<br>• online learning student retention rates |
| The Campus Computing Project has conducted an annual survey on the role of information technology (IT) in higher education since 1990. While this survey focuses primarily on institutions' policies and plans for computing and IT services and resources, it has evolved to include survey items related to online/DE IT investment in resources and technology, and administration. | **Online courses** are defined as those for which at least 80 percent of instruction is delivered online. | • importance of supporting online/DE programs and courses<br>• effectiveness of investment in online course/program technology resources/services<br>• outsourcing of online program activities and instruction<br>• timeline for development/update of online/DE IT plan<br>• importance of instructional applications/resources and outsourcing of IT services<br>• if, and when, the college plans to outsource key elements of online programming<br>• who on campus online/DE programs report to<br>• percentage of full- and part-time faculty who have taught an online course |

*Note*: Coffey Consulting has analyzed the Campus Computing survey since 2000 (previously as JBL Associates, Inc.).

An added challenge to defining DE and hybrid/blended coursework are the reporting requirements of higher education accrediting bodies. While most accreditors use the same definition of DE as IPEDS, most do not specify how much of a course must be delivered via technology to be considered DE (table 1b), with the exception of the Higher Learning Commission. And, only two of the eight accrediting bodies define hybrid/blended courses and/or programs, but neither specifies a specific percentage of the courses/programs that students must take via DE to qualify as hybrid.

**Table 1b. DE/Online Education Definitions of Postsecondary Accreditors**

| Accreditor | DE Definition(s) |
|---|---|
| Accrediting Commission for Community and Junior Colleges (ACCJC), Western Association of Schools and Colleges | IPEDS definition without "exclusive" requirement (no minimum threshold). |
| Higher Learning Commission (HLC) | IPEDS definition with the following minimum requirements:<br>• **DE course**: 75% or more of instruction and interaction via DE.<br>• **DE program**: 50% or more of required courses may be taken via DE. |
| Middle States Commission on Higher Education (MSCHE) | IPEDS definition without "exclusive" requirement (no minimum threshold). |
| New England Association of Schools and Colleges (NEASC-CIHE), Commission on Institutions of Higher Education | No overall DE definition<br>• **DE programs**: those in which 50% or more of the credits required to complete the program are offered via DE |
| Southern Association of Colleges and Schools Commission on Colleges (SACS COC) | IPEDS definition without "exclusive" requirement; "majority" of instruction occurs when instructor and students are separated, but no specific minimum threshold. |
| WASC Senior College and University Commission (WSCUC) | No definition available |
| Distance Education Accrediting Commission | IPEDS definition without "exclusive" requirement (no minimum threshold).<br>• **Hybrid courses**: those in which face-to-face instruction is combined with DE. |
| Accrediting Council for Independent Colleges and Schools | IPEDS definition without "exclusive" requirement (no minimum threshold).<br>• **Hybrid/blended programs**: those in which "a percentage" of the required courses can be completed or are required to be completed online. Institutions are required to provide the percentage of online instruction in hybrid/blended programs.<br>• **Hybrid/blended courses**: those in which traditional instruction is mixed with online instruction. Institutions are required to provide the percentage of online instruction in hybrid/blended courses. |

## Current State of Distance Education

As discussed above, DE delivery has increased and changed substantially over time. While correspondence courses still exist, the majority of DE learning takes place via the Internet and makes use of new communication technologies, such as pre-recorded video lectures, online learning platforms, tutorials, games, blogs, and discussion boards (Ryan & Young, 2015). DE continues to be primarily offered by educational institutions, but massive open online courses (MOOCs), such as those offered by Coursera, Udacity, and EdX, have changed the DE landscape in recent years by allowing thousands of users to access content at the same time – often for little or no money (Waldrop, 2013). Unlike public and private college and university DE programs, MOOCs do not confer actual credentials or official course completions. However, Coursera is seeking accreditation and does offer a certificate of completion for their "Signature Track" courses, but this certificate does not count as college credit and does not signify enrollment at the course's host university (Ryan & Young, 2015). In addition to more traditional academic offerings, DE is also used for corporate training opportunities, online continuing

professional and personal development, and access to education for students in the military (Nazarinia & Schumm, 2011).

Among postsecondary institutions, four-year institutions are increasingly using technology to help students complete general core coursework. The University System of Georgia (USG), for example, launched virtual general education stand-alone course offerings, called "eCore," in 2000 (Morris & Finnegan, 2009). A case study, however, found some program management challenges as enrollment in the program continually increased each year, including maintaining adequate faculty, provision of adequate student services, and inadequate student information systems for record maintenance. USG reports that all of its online coursework, including cCore, undergoes extensive quality control assurances, including supplemental training for faculty and Southern Association of Colleges and Schools (SACS) accreditation criteria (Griffin & McGuire, 2017).

Hybrid or "blended" learning approaches have also become increasingly popular delivery mechanisms, combining technology and in-person instruction (Alammary, Sheard, & Carbone, 2014). Technology now allows for virtual meetings and synchronous instruction, meaning that the lecture or discussion takes place live between the instructor and students, rather than being recorded and used asynchronously (Spector, 2009). This is another form of "hybrid" learning in the sense that students have the flexibility of taking coursework at a distance, by not needing to commute to a campus, while also having the benefit of interpersonal interaction. In this sense, the "boundaries between distance and traditional education" are increasingly "blurred" (Spector, 2009, p. 159). Institutions are more likely to use technology for asynchronous coursework than other types of DE delivery, however, as it allows students to access the lecture at a time and place of their choosing (Parsad & Lewis, 2008).[2]

Western Governors University (WGU), a private not-for-profit university based in Utah, is often cited in the DE literature for its unique competency-based model (Garn, 2009; McCafferty, 2014). Following the establishment and success of WGU, several states, including California, Florida, Kentucky, and Michigan, formed virtual universities. Unlike WGU, however, these state-level virtual universities were intended to support existing traditional campuses rather than to create a separate, independent entity, and use a more traditional pedagogic model. More recently, WGU has established "locally-branded" colleges in several states (Kolowich, 2011). For example, in 2011 Indiana decided to partner with WGU to create WGU Indiana, a state supported version of WGU, instead of expanding the online education programs offered by existing state colleges and universities.

McCafferty (2014) argues that DE providers need to offer innovative coursework components, such as competency-based education and modularized learning (e.g., stackable credentials), to

[2] Percentage reporting using technology to a "large" or "moderate" extent.

remain competitive. Gallagher and LaBrie (2012), on the other hand, credit Northeastern University's online education success to their strategic use of data and analytics to understand what needs exist among employers and tailor new programs to meet those needs, along with the use of hybrid/blended learning, investment in faculty development, and investing in online enrollment management.

With the fast-paced evolution of DE course and program offerings, technology, and providers, ensuring the quality of DE instruction and programs is also of vital importance. Two organizations in particular have sought to protect students from fraud and standardize the DE industry. The Distance Education Accrediting Commission (DEAC) is a private, non-profit organization that has offered accreditation for distance education secondary and postsecondary education institutions since 1926. There are currently 84 DEAC-accredited institutions, 79 of which are postsecondary degree-granting institutions. The National Council for State Authorization Reciprocity Agreements (NC-SARA) is a voluntary agreement between more than 1,400 postsecondary institutions in 47 states and the District of Columbia to adhere to national standards for DE courses and programs with the shared goal of making interstate online course enrollment easier. Membership also affords students with expanded access to DE offerings in other states and a process for filing and resolving complaints. NC-SARA also collects DE enrollment data from participating institutions. As DE continues to evolve, institutions and other educational providers will need to ensure quality while expanding accessibility and responding to market demand.

## Distance Education Outcomes

The empirical literature documenting the efficacy of DE student outcomes specifically is both limited and mixed, although there is a body of research indicating that students enrolled in online learning and hybrid/blended courses do as well or better than students enrolled in traditional in-person courses (Bowen, Chingos, Lack, & Nygren, 2012; Kirtman, 2009; Means, Toyama, Murphy, Bakia, & Jones, 2010; Power & Gould-Morven, 2011; Wu, 2015). ED's meta-analysis of 50 online learning studies, while focused on K-12 education, is seminal to the literature on DE. The study found that K-12 students enrolled in online learning had outcomes that were moderately higher than students enrolled in in-person instruction (Means et al., 2010). This was particularly true for students in hybrid/blended learning environments, which the authors attributed to the additional learning experiences and instructional support students in hybrid courses receive compared with students receiving in-person instruction.

Research on the online experiences of postsecondary students is limited. Wu (2015) reviewed 12 recent studies examining the learning outcomes of postsecondary students enrolled in online and in-person coursework and found that the three more methodologically rigorous studies, in which used randomization or quasi-experimental strategies, showed little to no difference in course performance and persistence. Likewise, Kirtman (2009) compared the

learning outcomes and experiences of graduate students enrolled in a master's degree program in education and found no significant difference on paper grades or final exam scores. Data from the same course were collected over a period of two years (three sections online, three sections in-person), with the only difference between the sections being the mode of delivery; all sections were taught by the same instructor, and students received the same course materials and assignments, and participated in the same learning activities. Bowen et al. (2012) also found no difference in outcomes between postsecondary students randomly assigned to a hybrid, interactive online statistics course and an in-person statistics course. However, the Community College Research Center's (2013) examination of online and in-person course outcomes at two large statewide community college systems found that students enrolled in online courses were more likely to withdraw, had lower course grades, and were less likely to persist and earn a degree. These findings were particularly true for students enrolled in developmental education coursework.

While this review of the DE literature on student outcomes is not exhaustive, the mixed findings underscore the complexity of measuring the effect of DE enrollment on student learning given the multiple definitions of DE, differences in instructional quality, student motivation, and academic preparation. It may be the case that some subject areas and students are better suited to DE learning environments. Despite the continued investment in DE learning platforms and programs, additional research is needed to rigorously evaluate how various types of DE affect student learning and to what extent DE outcomes meet or exceed in-person instruction for diverse student groups and subject areas.

# NCES Distance Education Data Collection

IPEDS began capturing DE enrollment and institution-level data in 2012-13. Prior to that, NCES released results from the Postsecondary Education Quick Information System (PEQIS) survey on DE, based on responses from 1,600 Title IV institutions (Parsad & Lewis, 2008). PEQIS collected information about online and hybrid/blended courses, which it defined as those that have "…a combination of online and in-class instruction with reduced in-class seat time for students" (Parsad & Lewis, 2008, p. 1). However, PEQIS did not provide a standard cutoff for the percentage of a course required to be delivered via technology to qualify as exclusively online or hybrid/blended. This resulted in a much larger estimate of DE enrollments than is reported by IPEDS: PEQIS reported that over 12 million students were enrolled in some type of DE coursework in 2006-07, twice the number reported by IPEDS as being enrolled in DE coursework in Fall 2015.[3]

[3] In addition, PEQIS collected 12-month enrollment data which may also explain the larger estimate than IPEDS fall enrollment data.

NPEC commissioned a paper on DE for a TRP on the topic in 2008 to assess the prevalence of DE in higher education and need for additional IPEDS DE data. The 2008 paper focused on state-level DE data collection, variances in definitions across states, challenges to data collection, and considerations for national-level data collection through IPEDS. At that time, IPEDS only collected whether or not distance learning was offered through the Institutional Characteristics survey component. The TRP suggested making the following changes, some of which were implemented in 2012, as indicated below:

**Table 2a. Proposed and Accepted Changes to IPEDS DE Definitions, 2008 and 2012**[4]

| Term | 2008 Definition | 2008 TRP Recommendation | Current (2012 additions) |
|---|---|---|---|
| Distance Education | "An option for earning course credit at off-campus locations via cable television, internet, satellite classes, videotapes, correspondence courses, or other means." | "Education that uses one or more technologies to deliver instruction to students who are separated from the instructor and to support regular and substantive interaction between the students and the instructor synchronously or asynchronously." | 2008 Recommendation |
| Distance Education Course | n/a | n/a | A course in which the instructional content is delivered *exclusively* via distance education. Requirements for coming to campus for orientation, testing, or academic support services do not exclude a course from being classified as distance education. |
| Distance Education Program | n/a | n/a | A program for which *all* the required coursework for program completion is able to be completed via distance education courses. |

[4] IPEDS Technical Review Panel #23 documentation, 2012

**Table 2b. Proposed and Accepted Changes to IPEDS DE Questions, 2008 and 2012**[5]

| Survey Component | 2008 Questions | 2008 Recommendations | Current Questions (2012 additions) |
|---|---|---|---|
| Institutional Characteristics | Special learning opportunities offered by your institution (distance learning option) | Are distance learning opportunities offered at your institution? At what level?<br>Number and percent of courses offered completely online<br>Number of programs offered completely online | Does your institution offer distance education courses?<br>Are all the programs at your institution offered exclusively via distance education programs?<br>Please indicate at what level(s) your institution offers distance education opportunities (courses and/or programs) |
| Completions | None | By CIP Code and degree level:<br>Is the program available to be completed completely online? | By CIP Code and award level:<br>Is this program offered as a distance education program? |
| Fall Enrollment | None | Part A (enrollment by race/ethnicity and gender):<br>Add 2 columns:<br>1) students enrolled in ALL distance education<br>2) students enrolled in ANY distance education | Part A enrollment distance education tables:<br>1. Exclusively, some, or no distance education courses by level (undergraduate/graduate) and degree-seeking status.<br>2. For those enrolled exclusively in distance education courses, location (in/outside U.S./state or unknown) by level and degree-seeking status. |
| 12-Month Enrollment | None | None | None |
| Graduation Rates | None | None | None |
| Finance | None | None | None |
| Human Resources | None | None | None |
| Student Financial Aid | None | None | None |

In addition to the above changes, IPEDS provides the following definitions and information in frequently asked questions (FAQs) related to DE programs and coursework:[6]

- <u>Enrolled exclusively in distance education courses offered at your institution</u>: Students who are enrolled only in courses that are considered distance education courses at your institution.
- <u>Enrolled in some but not all distance education courses offered at your institution</u>: Students who are enrolled in *at least one course* that is considered a distance education course, but are not enrolled exclusively in distance education courses. *Note:*

[5] IPEDS Technical Review Panel #23 documentation, 2012
[6] Source: Current IPEDS survey components and instructions

*Requirements for coming to campus for orientation, testing, or academic support services do not exclude a course from being classified as exclusively distance education. Similarly, if a student is taking instructional portions of their program entirely online, but are then required to complete a practicum, residency, or internship, the student can still be considered enrolled in entirely distance education courses.*

- Hybrid (response to FAQ): Hybrid courses are not considered by IPEDS as distance education. Students enrolled in "hybrid" courses should be reported as "not enrolled in any distance education courses."

NCES has also collected information regarding DE through its sample surveys. Both the Beginning Postsecondary Students (BPS) and the National Postsecondary Student Aid Study (NPSAS) include survey items asking whether students have taken courses taught entirely online and if their entire degree program was online. These data can be disaggregated by student and institutional characteristics and tracked for outcomes such as retention and graduation rates, in comparison with non-distance education students. The sample survey data are available for public use through an online data tool.

## Data Analysis

NCES provided the most recent, provisional 2015 IPEDS data for analysis, representing 4,448 degree-granting institutions, from survey items related to DE enrollments and offerings. The analyses of these data that follow provide a snapshot of the current landscape of distance education in postsecondary institutions.

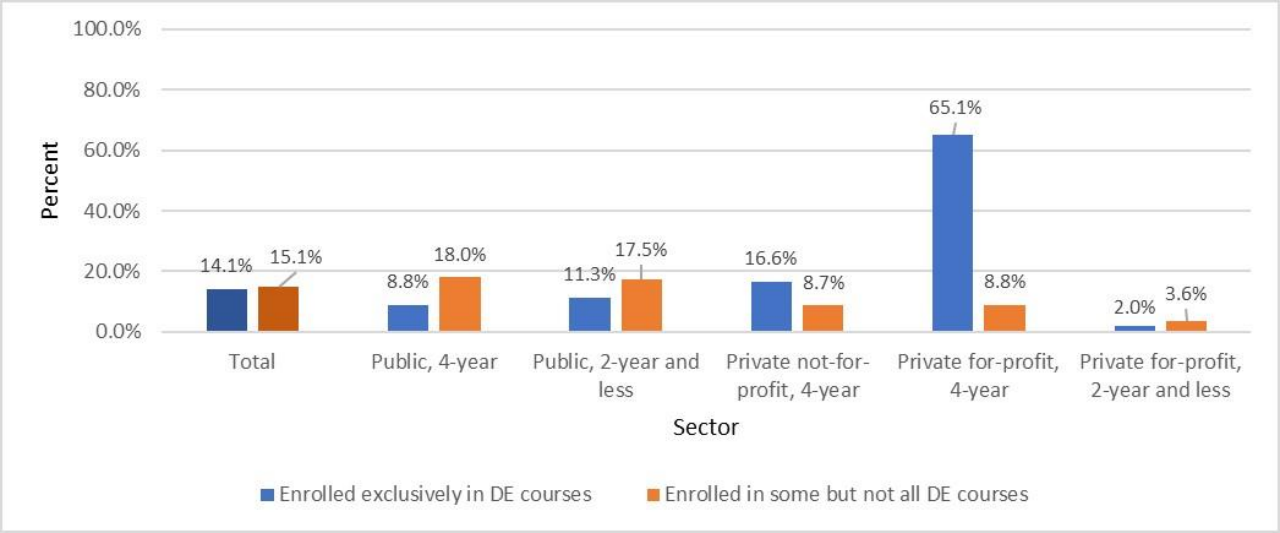
### *Distance Education Enrollments*

Across all institutions, 29 percent, or just over six million postsecondary students, are enrolled in either some or all DE coursework (figures 1 and 4). Note that per the IPEDS definition, this enrollment rate reflects only coursework that is entirely online (not hybrid). The highest DE enrollment rate is at private, for-profit four-year institutions, where nearly three-fourths (73.9 percent) of students are enrolled in at least one online course, with the majority of these students (65.1 percent) enrolled exclusively in DE courses.

Public, four-year; private not-for-profit, four-year; and public, two-year and less-than-two-year institutions each enroll roughly one-fourth of their students (26.8 percent, 25.3 percent, and 28.8 percent, respectively) in some or all DE courses, while private, for-profit two-year and less-than-two-year institutions enroll the smallest share of DE students (5.6 percent). This is likely because private, for-profit two-year and less-than-two-year institutions offer predominately career-oriented professional programs (e.g., cosmetology, allied health, and the culinary arts) that often require in-person, hands-on components. Students at private not-for-profit, four-year colleges are more likely to enroll *exclusively* in DE courses (16.6 percent), compared with

students at public two-year and less-than-two-year and public four-year institutions (11.3 percent and 8.8 percent, respectively).

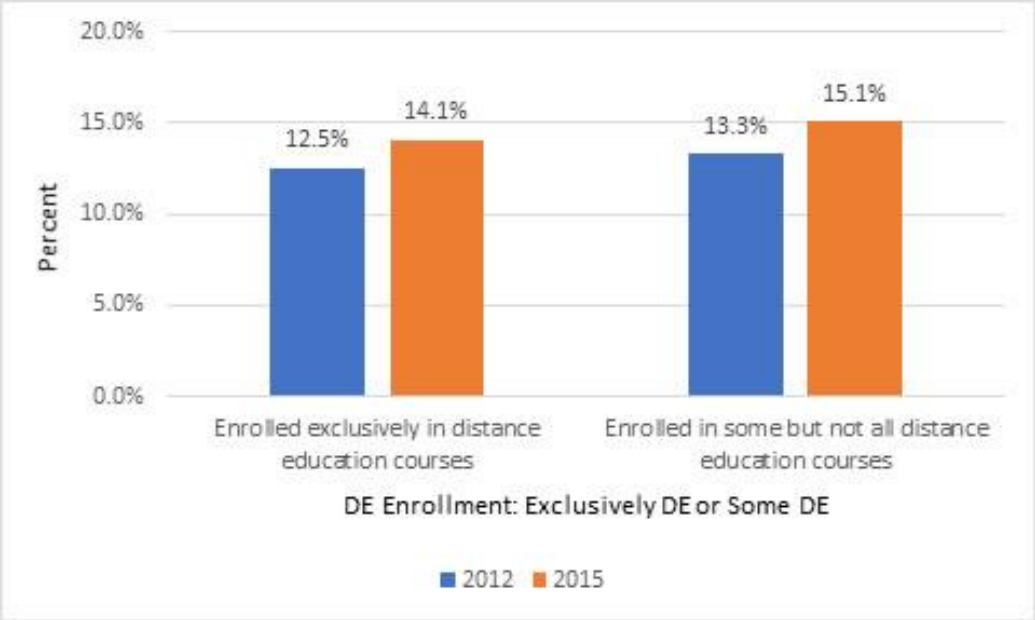
**Figure 1. Percentage of all students enrolled in DE courses, by sector, 2015**




*Source: NCES, IPEDS Fall Enrollment survey component, Fall 2015 [provisional data]*

The percentage of all postsecondary students enrolled in DE courses, both exclusively and some courses, has increased by about 2 percentage points since 2012 (figure 2).

**Figure 2. Percentage of all students enrolled in DE courses, 2012 and 2015**

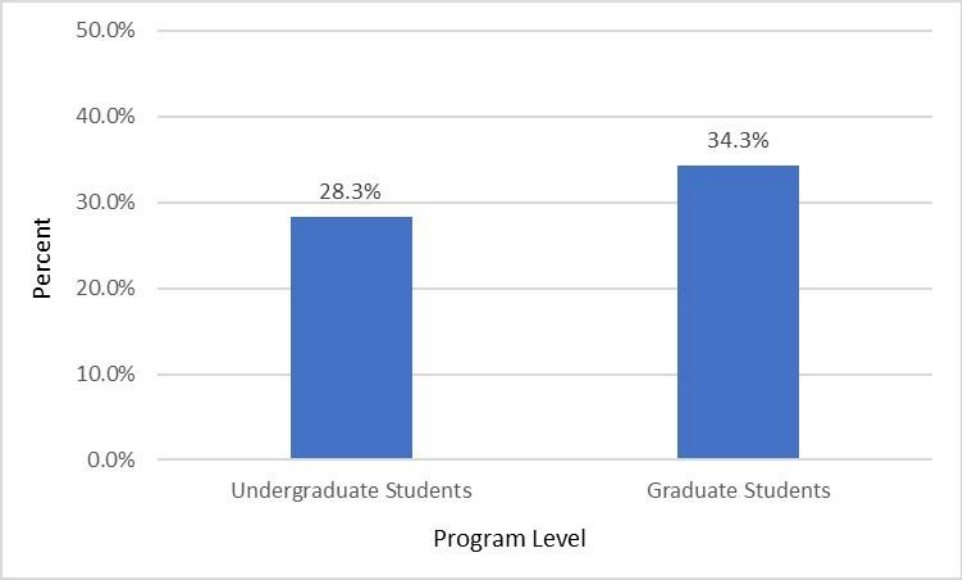



*Sources: NCES, IPEDS Fall Enrollment survey component, Fall 2015 [provisional data]; Ginder, S., and Stearns, C. (2012). Enrollment in Distance Education Courses, by State: Fall 2012 (NCES*

*2014-023). U.S. Department of Education. Washington, DC: National Center for Education Statistics. Retrieved May 22, 2017, from http://nces.ed.gov/pubsearch.*

Of the three million graduate students enrolled in postsecondary institutions, 1 million, or 34.3 percent enroll in at least some DE courses, compared with 28.3 percent of undergraduates, or five million out of 17.6 total undergraduates in 2015 (figure 3).

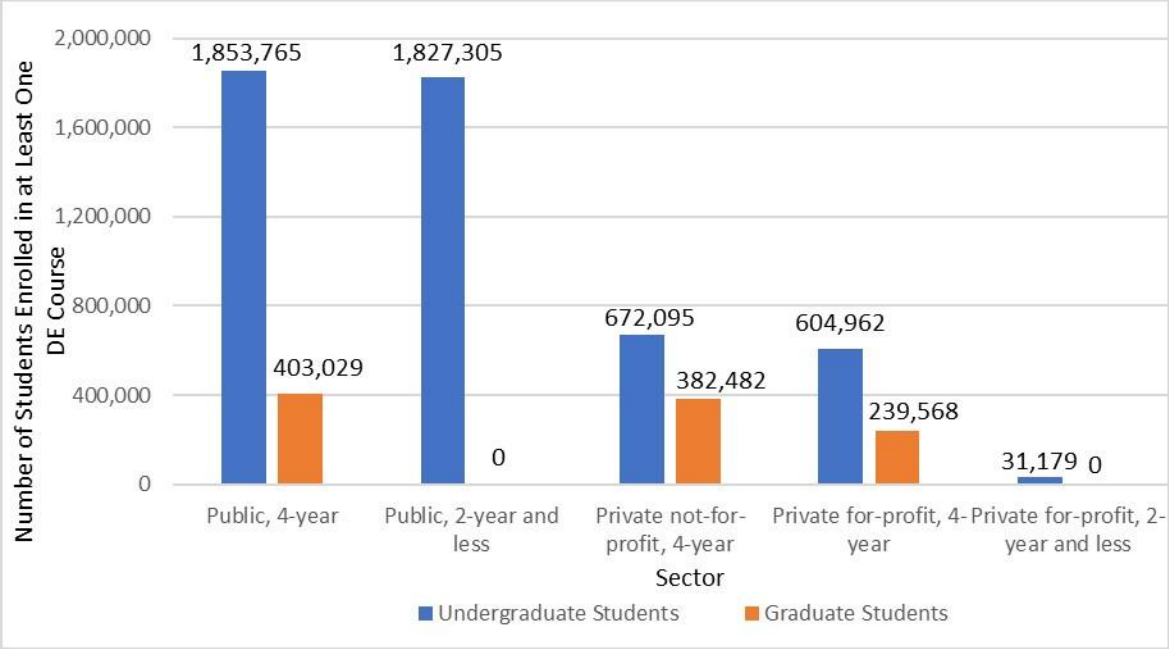
**Figure 3. Percentage enrollment in at least some DE courses by program level, 2015**




*Source: NCES, IPEDS Fall Enrollment survey component, Fall 2015 [provisional data]*

Public four-year institutions enroll over two million students in at least some DE courses, higher than any other sector, followed by public, two-year and less-than-two-year colleges at approximately 1.8 million (figure 4). Private, not-for-profit and for-profit four-year institutions enroll roughly the same proportion of DE students in graduate-level DE coursework.

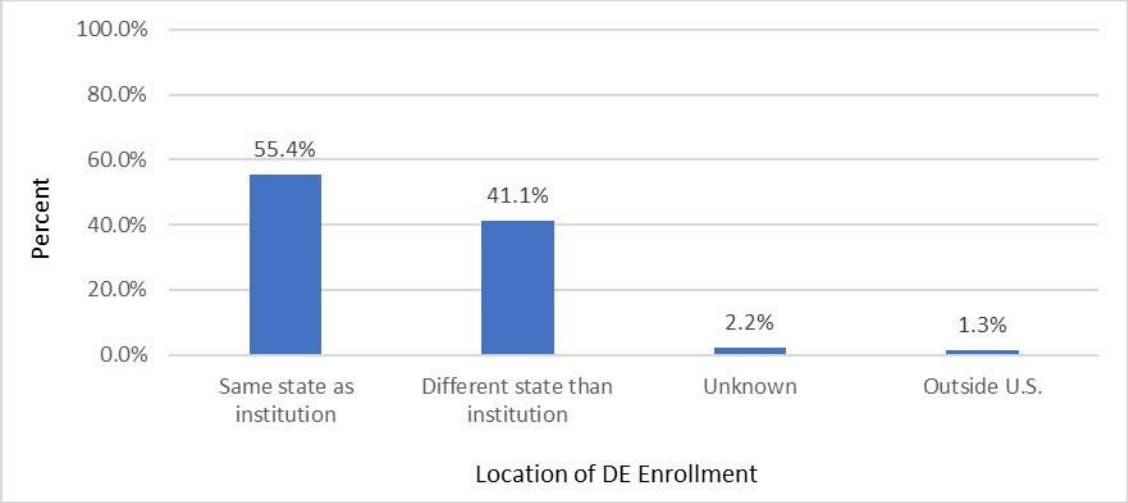
**Figure 4. Number of students enrolled in at least some DE courses by program level and sector, 2015**




*Source: NCES, IPEDS Fall Enrollment survey component, Fall 2015*

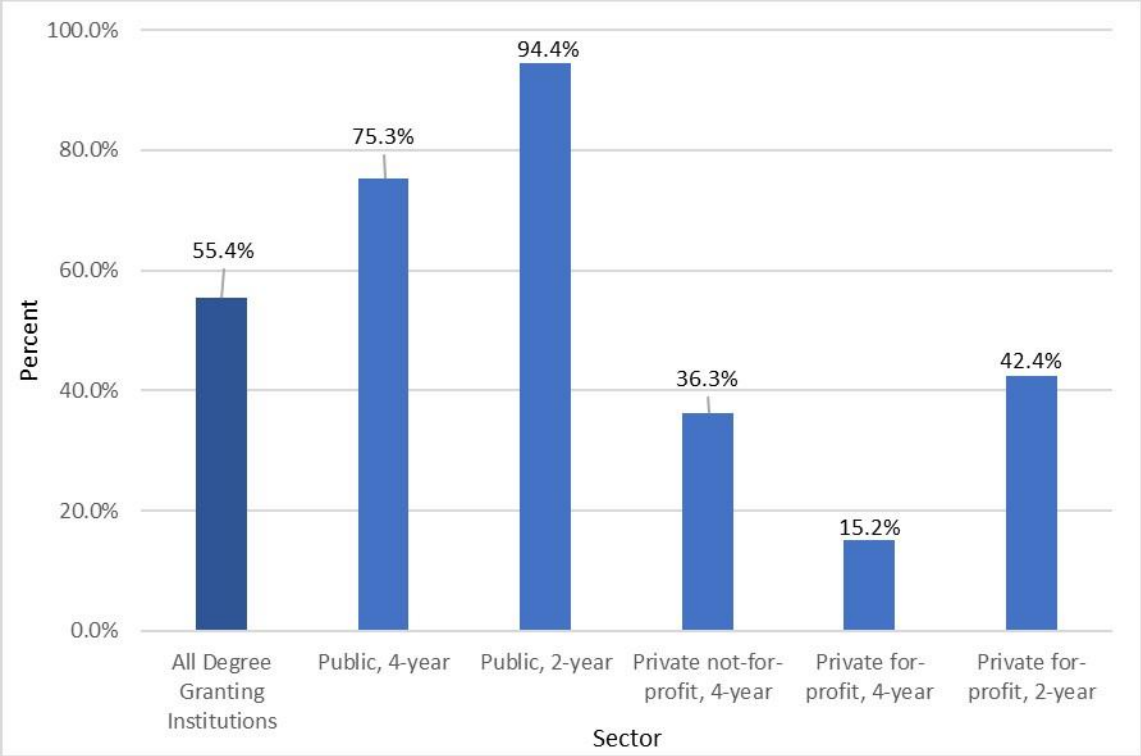
At degree-granting institutions, just over half (55.4 percent) of students enrolled exclusively in DE courses enroll at institutions in their state of residence (figure 5a). Forty-one percent enroll in DE courses in other states, and the remainder (3.5 percent) reside either outside the U.S. or their location is unknown. The percentage enrolling in DE course within the same state is higher for public institutions than for private institutions (figure 5b). Online students at for-profit, four-year institutions are the least likely to be located in the same state as the institution where enrolled (15.2 percent), and students at public two-year and public four-year are the most likely to be located in the same state (94.4 percent and 75.3 percent, respectively).

**Figure 5a. Percentage distribution of all students enrolled exclusively in DE courses at degree-granting institutions by location**




*Source: NCES, IPEDS Fall Enrollment survey component, Fall 2015 [provisional data]*

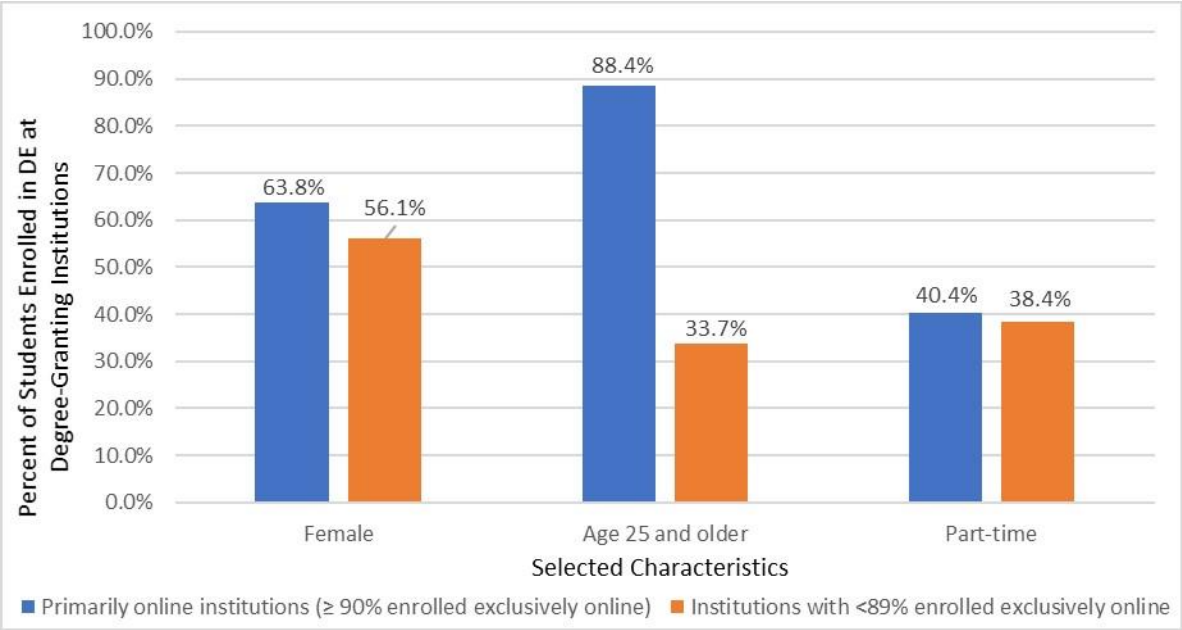
**Figure 5b. Percentage of students located in the same state as the degree-granting institution where enrolled exclusively in DE courses, by sector**




*Source: NCES, IPEDS Fall Enrollment survey component, Fall 2015 [provisional data]*

Students at primarily online institutions[7] (defined as institutions that enroll 90 percent or more of their students exclusively online) are more likely than their peers at other institutions to be female, aged 25 and older, and enrolled part-time (figure 6). The difference in the percentage of students aged 25 and older is particularly notable: 88.4 percent of students at primarily online institutions versus 33.7 percent of students at all other institutions. This agrees with the literature and observations by interviewees that DE students are more likely to be non-traditional in terms of age, family, and work status, as DE may be a convenient offering to those with work and family demands.

**Figure 6. Percentage of students enrolled at degree-granting institutions by selected student characteristics and level of DE enrollment, 2015**

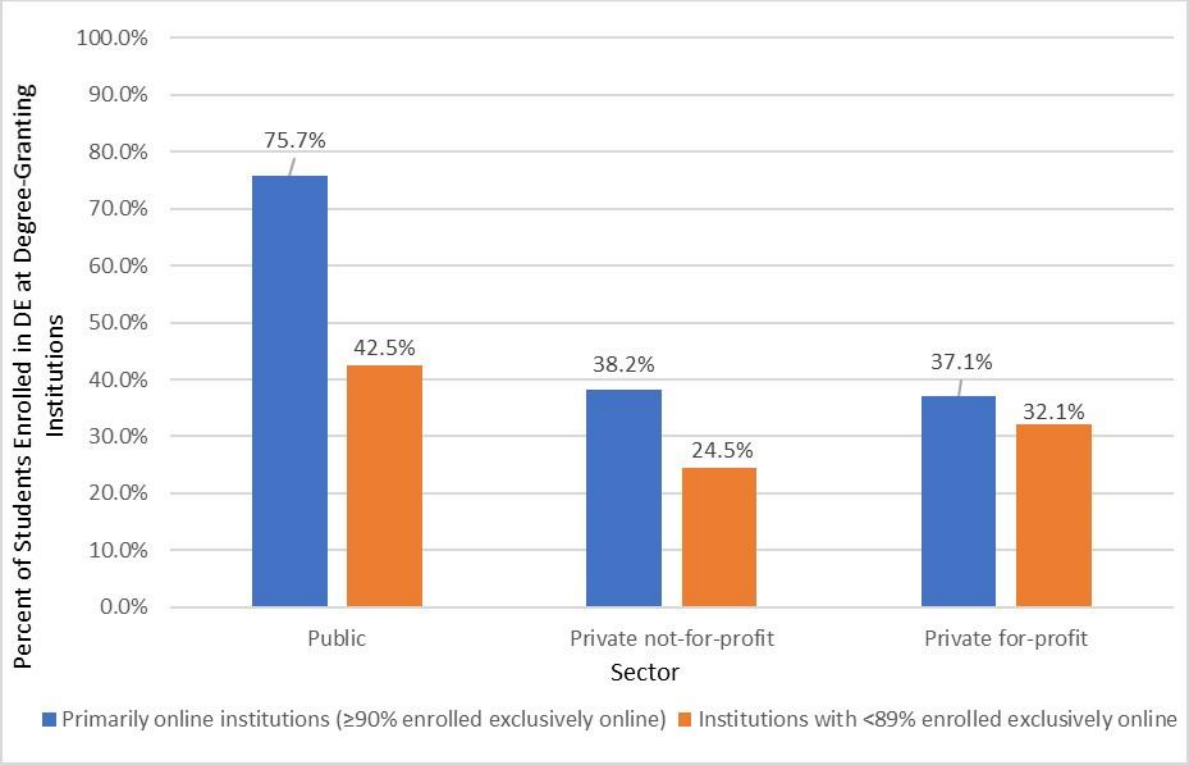



*Source: NCES, IPEDS Fall Enrollment survey component, Fall 2015 [provisional data]*

At public institutions in particular, primarily online institutions enrolled more part-time students than other degree-granting institutions – 75.7 percent compared with 42.5 percent (figure 7).

[7] Including 67 degree-granting, Title IV institutions located in the United States (not including outlying areas). Does not include administrative units.

**Figure 7. Percentage of students enrolled part-time at degree-granting institutions by institutional control and level of DE enrollment, 2015**




*Source: NCES, IPEDS Fall Enrollment survey component, Fall 2015 [provisional data]*

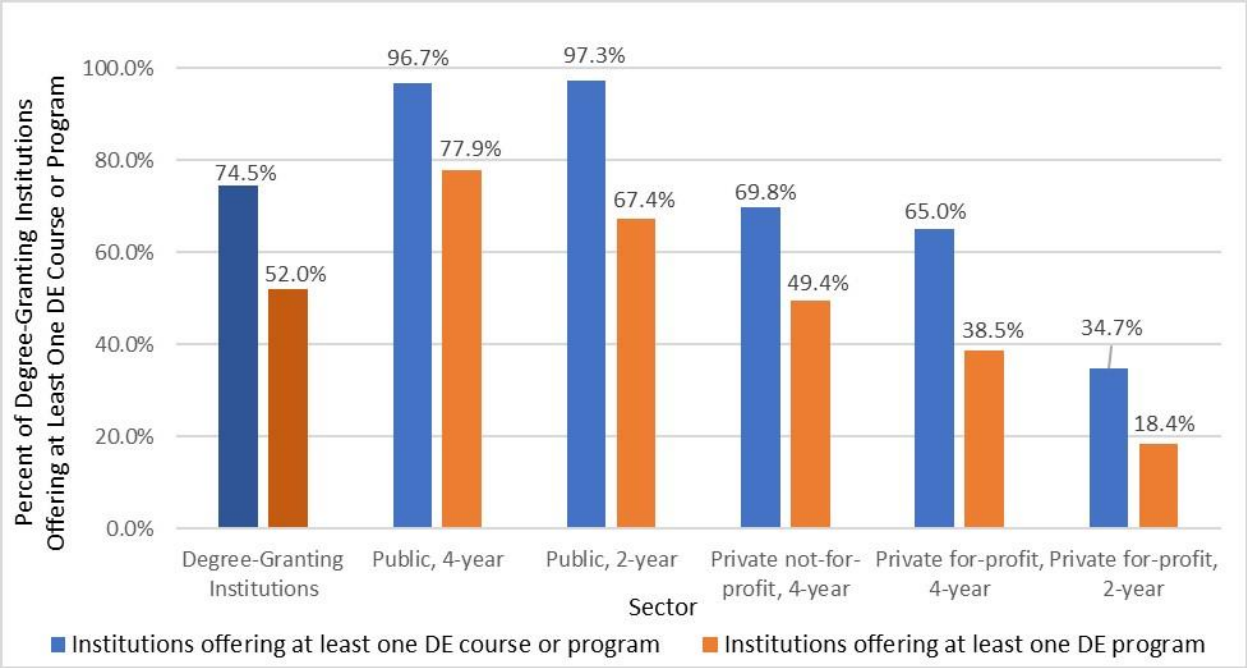
### *Institutions Offering Distance Education Courses and Programs*

The majority (74.5 percent) of all degree-granting institutions offer DE opportunities – defined as at least one DE course *or* program (figure 8). A lower percentage (52.0 percent) – but still over half – of all institutions offer at least one DE program. Nearly all public institutions offer DE opportunities (97 percent of public four-year and public two-year institutions), followed by a majority of private, not-for-profit four-year institutions and private, for-profit four-year institutions (69.8 and 65.0 percent, respectively). Private, for-profit, two-year institutions are the least likely to offer DE opportunities (34.7 percent), perhaps due to the hands-on nature of many of the programs offered at these institutions (e.g., cosmetology, allied health, culinary arts).

Public four-year institutions are the most likely to offer at least one DE program (77.9 percent), followed by public two-year institutions (67.4 percent), and private, not-for-profit four-year institutions (49.4 percent). It is interesting to note that while private, for-profit institutions are the least likely to offer DE courses and programs relative to other sectors (figure 8), private, for-profit, four-year institutions enroll the largest percentages of students in these programs (figure 1). The majority of students enrolled at private, for-profit four-year institutions (65 percent) are

enrolled exclusively online, yet only 38.5 percent of these institutions offer online programs. This may be explained by large student enrollments at relatively few large, online institutions. For example, 75 percent of all students taking at least some DE courses at private, for-profit four-year institutions are concentrated within only 20 such institutions (or 3 percent of all private, for-profit four-year institutions). It is also possible that students in this sector are enrolling in individual classes online at these institutions, rather than online programs. In addition, DE enrollment at for-profit institutions is on the decline, while public DE enrollments are increasing (Allen & Seaman, 2017).

**Figure 8. Percentage of all degree-granting institutions that offer at least one DE course or program by sector, 2015**




*Source: NCES, IPEDS Institutional Characteristics and Completions survey components, Fall 2015 [provisional data]*

Degree-granting institutions offered over 50,000 DE programs in 2015 (table 3), which were fairly evenly distributed by sector. Public four-year and private, not-for-profit four-year institutions offer more master's degree programs via DE than other types of programs, although the number of bachelor's degree programs at the private, not-for-profit four-year institutions is very close to the number of graduate programs, at just over 5,000. While the number of DE programs offered at private, for-profit four-year institutions is comparable to most other sectors, these programs are primarily located in a small number of institutions.

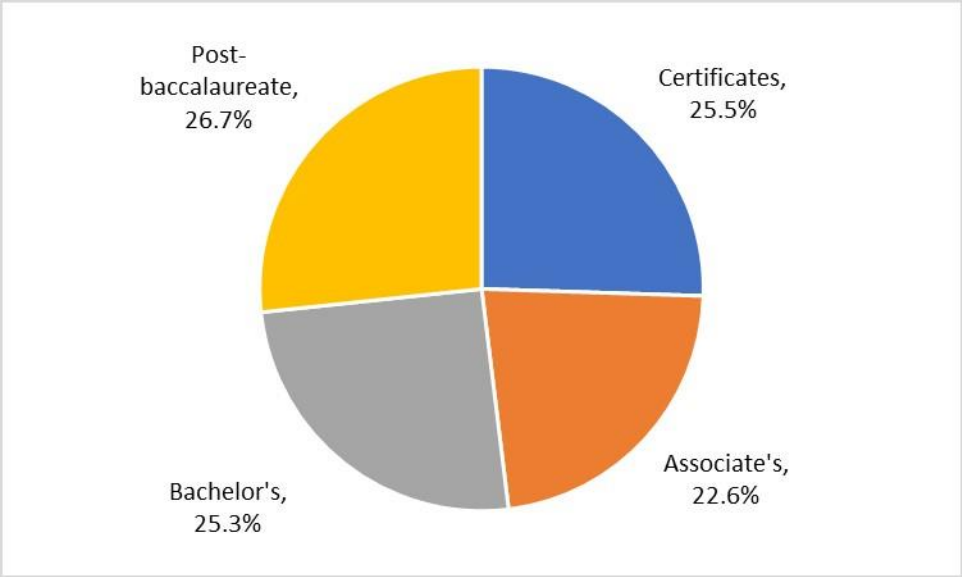
**Table 3. Total number of DE programs at degree-granting institutions by award level and sector**

| Sector | TOTAL | Certificates | Associate's | Bachelor's | Master's | Doctoral |
|---|---|---|---|---|---|---|
| **Total** | **52,372** | **13,359** | **11,810** | **13,234** | **12,736** | **1,234** |
| Public, 4-year | 13,658 | 3,074 | 1,072 | 3,866 | 5,124 | 522 |
| Public, 2-year | 11,424 | 5,360 | 6,064 | N/A | N/A | N/A |
| Private not-for-profit, 4-year | 14,582 | 2,224 | 1,262 | 5,132 | 5,512 | 452 |
| Private for-profit, 4-year | 11,590 | 2,234 | 2,762 | 4,234 | 2,100 | 260 |
| Private for-profit, 2-year | 1,118 | 466 | 650 | 2 | N/A | N/A |

*Source: NCES, IPEDS Completions survey component, Fall 2015 [provisional data]*

The distribution of DE programs by award level is also nearly even, by certificates programs (25.5 percent), associate's degree programs (22.6 percent), bachelor's degree programs (25.3 percent), and post-baccalaureate programs (26.7 percent) (figure 9).

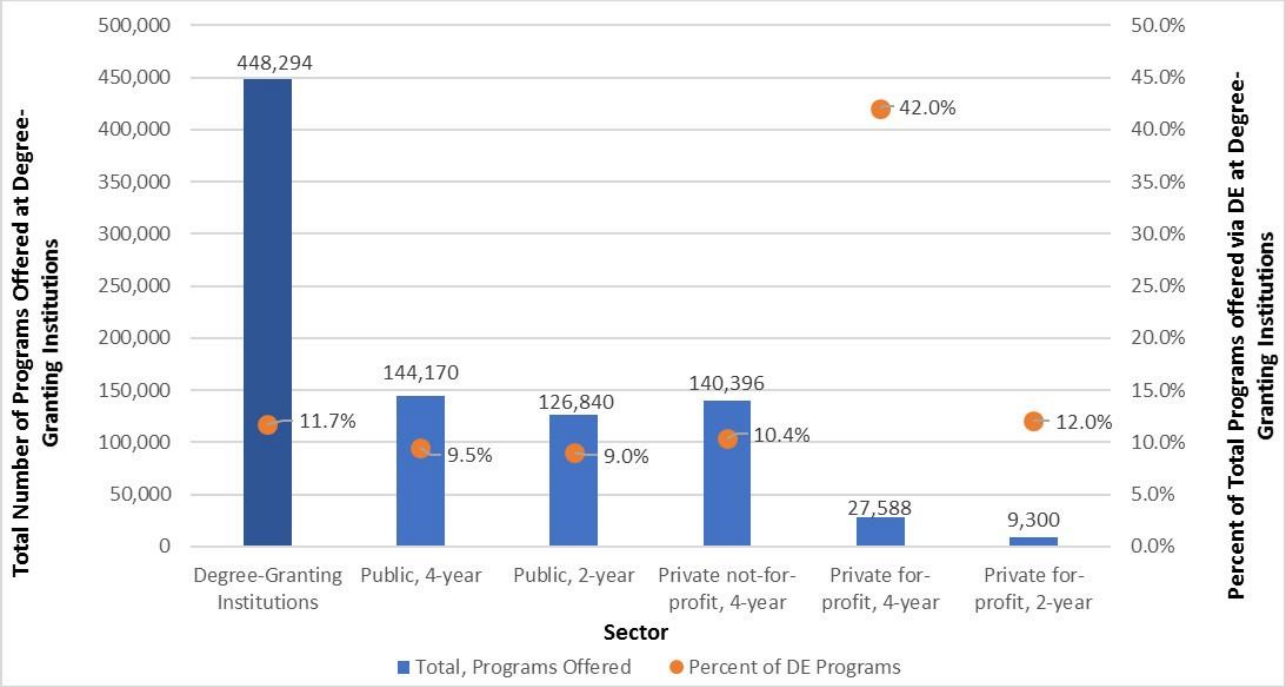
**Figure 9. Percentage of DE programs at degree-granting institutions by award level**




*Source: NCES, IPEDS Completions survey component, Fall 2015 [provisional data]*

DE programs represent 11.7 percent of all programs offered by degree-granting institutions (figure 10). DE programs represent the highest proportion of all programs at private, for-profit institutions, where they comprise 42 percent of programs.

**Figure 10. Number of total programs offered and percentage of DE programs at degree-granting institutions by sector**




*Source: NCES, IPEDS Completions survey component, Fall 2015 [provisional data]*

Table 4 shows the top 10 largest distance education programs available entirely online at degree-granting institutions, by number of programs offered. Business is the largest, at 6,801 programs available online, or 24.3 percent of all programs in that CIP code, followed by health, education, computer sciences, homeland security, and liberal arts. A complete list of programs by award level is available in Appendix B (Table A5). Note these data represent entire programs available online – not individual courses, as reported by each institution.[8]

[8] IPEDS Completions Survey component data may overestimate the number of DE programs available, as institutions indicate two-digit CIP codes with any DE programs available, but those CIP codes may also include in-person/on-site programs.

**Table 4. Top 10 exclusively DE programs by two-digit CIP code at degree-granting institutions**

| CIP Code | CIP Name | DE TOTAL | Non-DE TOTAL | % DE |
|---|---|---|---|---|
| 52 | Business Management, Marketing, and Related Support Services | 6,801 | 21,217 | 24.3% |
| 51 | Health Professions and Related Programs | 4,463 | 26,759 | 14.3% |
| 13 | Education | 3,120 | 19,387 | 13.9% |
| 11 | Computer and Information Sciences and Support Services | 2,306 | 9,465 | 19.6% |
| 43 | Homeland Security, Law Enforcement, Firefighting and Related Protective Services | 1,600 | 5,049 | 24.1% |
| 24 | Liberal Arts and Sciences, General Studies and Humanities | 1,154 | 3,216 | 26.4% |
| 39 | Theology and Religious Vocations | 635 | 2,376 | 21.1% |
| 44 | Public Administration and Social Service Professions | 566 | 2,621 | 17.8% |
| 15 | Engineering Technologies and Engineering-related Fields | 516 | 8,165 | 5.9% |
| 14 | Engineering | 491 | 6,340 | 7.2% |

*Source: NCES, IPEDS Completions survey component, Fall 2015 [provisional data]*

# INFORMATIONAL INTERVIEWS

Interviews with representatives of nine postsecondary institutions and state entities provided an in-depth look at DE trends. In addition, interviewees were asked to provide feedback regarding current IPEDS DE definitions and questions, and whether they had any suggestions for changes to IPEDS that would help it more accurately reflect the landscape.

Below is a list of the institutions and state agencies represented; each individual interviewed has a role in data collection and reporting (detailed methodology and interview protocols can be found in Appendix A).

- Public, four-year institution (large)
- Public, four-year institution (comprehensive)
- Private, non-profit four-year institution
- For-profit, primarily online institution
- Non-profit, primarily online institution
- Community college district
- State board of regents
- State coordinating board
- State four-year system

## TRENDS

Interviewees noted that DE offerings are increasing across institution types, particularly at public four-year institutions. A representative from one public four-year institution noted that

online education has grown so much at their institution it is "uncommon to find a student not enrolled in some kind of online class."[9]

One state institution's online presence has grown rapidly since it began offering online programs approximately five years ago as an effort to raise revenues as state funding declined. The ability to offer coursework online "forces institutions to be competitive and innovative," particularly in states like California where physical space is limited. Online coursework not only increases access to out-of-state students but also provides additional revenue to institutions.

DE offerings allow institutions to reach working, adult, rural, disabled, and other place-bound students who otherwise would not have access to postsecondary coursework. For non-traditional students in particular who are working and raising families, traditional in-person coursework "doesn't work for them." One interviewee noted that as DE enrollments grow, it is no longer just a vehicle to serve non-traditional students, but also serves traditionally-aged students who are technologically savvy and comfortable with the online platform. In addition, many first-time students are working part-time while enrolled, and interested in options for flexible scheduling.

Interviewees have seen growth at both undergraduate and graduate levels, and in business, engineering, and nursing fields in particular. At one public regional institution, general studies is a "very popular" online program and at a state system, the online core curriculum is "rapidly" growing. In addition to programs, interviewees noted an increase in individual classes available online, including introductory and gateway courses which are often offered as hybrid options. Community colleges in the district interviewed offer courses in subjects including math, government, history, English, biology, psychology, economics, physical education, philosophy, and art. Core online courses are transferable to any public university in the state.

Institutions see recent increases in DE offerings as a response to a rise in both technological ability and market demand; institutions are "catching up with the times." In addition to increasing access to postsecondary coursework for students to whom location and schedule would otherwise be barriers, DE can lower the cost of coursework to students. One online institution noted it has not raised tuition in nine years, and includes textbooks with tuition, which are available online. However, among public institutions, DE tuition-setting policies vary by state. In fact, in some states such as Georgia, the cost of in-state tuition is higher for online courses than for in-person courses, due to additional fees (Griffin & McGuire, 2017).

[9] Note that respondents were interviewed about DE courses and programs, *not* about coursework technological components.

## INSTITUTIONAL/STATE DISTANCE EDUCATION DEFINITIONS

The institutions interviewed indicate whether courses are online or on campus through the course section codes. While many campuses collect information about hybrid coursework, the definitions vary:

- The four-year state system defines five DE course section categories as follows:
  - "Technology Enhanced" – technology is used to deliver instruction, but no classroom sessions are replaced by technology.
  - "Hybrid delivery" – up to 50 percent of class sessions are delivered via DE.
  - "Partially at a Distance" – between 50 and 95 percent of class sessions are delivered via DE, and some visits to campus are required.
  - "Distance Delivery" – more than 95 percent of class sessions are delivered via DE, students may be required come to campus for an exam or orientation.
  - "Entirely at a Distance" – 100% of class sessions delivered via DE; no campus visits required.
- The state board of regents reports DE programs only, not courses, and only those that are offered completely online (100 percent). Enrollment and degrees awarded in these programs are tracked as strategic plan metrics.
- The state coordinating board uses the following eight categories to define DE courses:
  - On-Campus; Distance-Hybrid; Synchronous
  - On-Campus; Distance-Hybrid; Asynchronous
  - On-Campus; Distance-Electronic; Synchronous
  - On-Campus; Distance-Electronic; Asynchronous
  - Off-Campus; Distance-Hybrid; Synchronous
  - Off-Campus; Distance-Hybrid; Asynchronous
  - Off-Campus; Distance-Electronic; Synchronous
  - Off-Campus; Distance-Electronic; Asynchronous

Each of the components is defined as follows:

- On-Campus: "Instruction is received by the learner in a space located on a campus site that has been approved as such…The site must be one that is treated as a campus…for reporting purposes (e.g. classroom building on the main or a branch campus).
- Off-Campus: "Instruction is received by the learner in a space that is not on a site approved as a campus…Such spaces may include leased facilities funded through the institution's operating budget, or the student may be completely remote from any institutionally managed facility (e.g., at home)."
- Distance-Electronic: "Apart from a face-to-face orientation or initial class meeting, for formal instruction, the instructor and learner use electronic means to interact 100% of the time (understood in terms of Carnegie credit hour equivalency)."

  - Distance-Hybrid: “For formal instruction, the instructor and learner share the same physical space less than 50% of the time (understood in terms of Carnegie credit hour equivalency). Electronic delivery is used for the balance of instruction.”
  - Synchronous: “During electronic interaction, the instructor and learner interact mostly at the same time (e.g. video conference, teleconference, or [e-learning platform] live session).”
  - Asynchronous: “During electronic interaction, the instructor and learner interact mostly at different times (e.g. discussion board or podcast).”
- The large, public institution specifies that students must be on campus at least once a semester for a class to be considered hybrid. Online courses are defined as those with 100% of instruction delivered via internet. This institution distinguishes course sections offered for online program students from online courses provided to campus students.
  - For hybrid courses, the institution uses a notes field to describe the components required on campus. The course section notes are visible to students when they register. Faculty can select from a fixed note, or a free-form note with additional details about online and in-person components.

    The fixed note states:

    “A hybrid course combines face-to-face instruction and web- or computer-based learning in an educational environment that is non-specific as to time and place. Common features of hybrid courses include the delivery of the syllabus, lectures, readings and assignments on web pages; discussions and presentations through online message boards, e-mail and chat software; interactive tutorials and labs; and on-line assessments (or any combination of the above). In a hybrid class, a significant part of the course interaction takes place online and students can expect to spend at least as much time as they would in an on-campus section of the course.”
- The public comprehensive institution uses the state board of regents’ definition of 50 to 99 percent online for a course to be hybrid; online courses are 100 percent online.
- The small private institution with only five hybrid courses per year codes these sections with an “h,” for example “101h.” Programs can include some hybrid “here and there” but are classified as either completely online or on campus.
- The community college district collects both 100 percent online and hybrid coursework. The institutional research office which submits IPEDS data did not know the definition of hybrid used; relatively few courses are reported as hybrid and are defined by faculty at individual campuses.

**Table 5. Summary of interviewee DE Course Definitions**

| Interviewee | DE course definition | Hybrid DE course definition | Other categories |
|---|---|---|---|
| Public four-year institution (large) | 100% online | Faculty-defined; a "significant part of the course interaction takes place online and students can expect to spend at least as much time as they would in an on-campus section of the course." | This institution distinguishes between online course sections offered for campus students and those offered for online program students. |
| Public four-year institution (comprehensive) | 100% online (state board of regents definition) | 50-99% online (state board of regents definition) | |
| Private, non-profit four-year institution | 100% online | Faculty-defined | |
| For-profit online institution | 100% online | n/a | |
| Non-profit online institution | 100% online | n/a | |
| Community college district | 100% online | Faculty-defined | |
| State board of regents | n/a | n/a | Reports distance education programs only, not courses, and only those that are offered completely online (100%) |
| State four-year system | 95% online | Hybrid: up to 50% online<br><br>"Partially at a Distance": 51-94% online | "Technology enhanced" – no class sessions online |
| State coordinating board | 100% online | 50-99% online | Synchronous/asynchronous, On-Campus/Off-Campus |

## IPEDS Feedback

When asked about the current IPEDS DE question and definitions, respondents indicated overall satisfaction and did not have any immediate suggestions for changes. Respondents felt their data systems define DE in ways that are compatible with IPEDS data collection.

When probed further for additional information about DE that would be helpful to collect, respondents made suggestions, with caution that any changes or additions should be considered in tandem with potential burden to the institutional researchers. Some respondents knew of other institutions that initially faced confusion when the current DE questions were added, but the IPEDS Help Desk was able to address those questions and they are now comfortable with the information being collected.

Respondents suggested carefully considering the need for additional information, and whom that would benefit. Some suggestions were offered as "nice to have" data but not necessarily worth the additional burden, for example collecting information about tenure status of faculty teaching online coursework, and tuition and fees for online coursework. This type of information would be useful for both prospective students and researchers but may be more appropriate for state-level or sample survey data collections.

Below are the more commonly suggested additions or changes to IPEDS DE data elements:

- **DE Outcomes** – several interviewees felt it would be interesting to know outcomes of students enrolled in DE (i.e., graduation rates or completions) in comparison with those of on-campus students. Some are already tracking this at the institution or state level and would like to make comparisons at the national level. It was noted that the Completions survey asks if programs can be completed online, not if students did complete the program online, and there is no way to distinguish between degrees awarded online as opposed to on campus. Respondents felt this information would be useful, *if* this would be relatively easy to add, particularly as online coursework becomes more prevalent. Some respondents thought it would not be worth the burden this additional information collection would impose.

  One respondent suggested collecting this information at the degree level through the Completions survey – in addition to the checkbox currently in place indicating whether programs are available online, an additional question could indicate whether completions took place in traditional, online, or hybrid settings. Once data providers have had enough time to learn to identify this information properly, the question could be broken out further by program major level. Another respondent indicated an interest in disaggregating such information further by student characteristics such as race/ethnicity and gender.

- **DE populations** – Interviewees noted that the IPEDS traditional cohort of first-time/full-time students used for the graduation rate metric is not reflective of the majority of DE students who tend to be older, working, enrolled part time, transferring in prior credits, and enrolling continuously throughout the year. This has ramifications for other survey components and data dissemination, as described below.
    - **Continuous enrollment:** Institutions with large DE enrollments not only serve non-traditional students but also tend to enroll students continuously throughout the calendar year. A representative from the for-profit online institution noted that students enroll nearly every week, or 50 times throughout the year. The Fall Enrollment survey, however, uses a three-month window, thus excluding other students enrolled throughout the year. One institution has nearly twice as many students in the 12-month Enrollment survey as in the Fall Enrollment survey. This discrepancy has "ripple effects" for published retention and graduation rates, which the Outcomes Measure survey helps to address. While these institutions' student totals are counted in the 12-month Enrollment survey component, the public relies on College Navigator for information about the institutions' enrollments and graduation rates, and College Navigator uses Fall Enrollment data.

  Respondents suggested better reflecting their non-traditional student populations through College Navigator, by publishing the 12-month Enrollment and/or Outcomes Measure survey components' data for the public. However, the 12-month Enrollment survey does not currently collect information about distance education. Therefore, questions would need to be added to the 12-month Enrollment survey about distance education to more accurately represent populations at these institutions before publishing this information online. It was also suggested to use the 12-month Enrollment survey to calculate graduation rates for these institutions.

- **Hybrid DE** - Respondents did not feel strongly about adding a hybrid data collection option to IPEDS, and stressed the need to weigh the burden of collecting the additional data with what benefit it would provide the public. Others felt there are too many varieties of hybrid coursework to collect across institutions in a uniform manner. It may also be difficult for institutional researchers to know the exact percentage that faculty teach online in each course. At both the large public institution and the community college district, the hybrid definition is left open to interpretation by the individual faculty, while other interviewees indicated using a 50 percent minimum threshold.

One respondent felt it would be useful for students to know about hybrid courses and suggested collecting this information at the program level, as the course level may be "cumbersome." This change could be made to the checkbox on the Completions survey, to indicate whether programs are available online or as hybrid options.

- **DE Location** – One state-level interviewee with large numbers of online institutions and enrollments in the state expressed concern that state enrollments can be misleading; local policymakers pushing for higher state educational attainment rates may not understand that a recent increase in enrollments does not actually represent in-person state enrollments. This interviewee felt that NCES can better help the public understand what the data mean through increased reporting of distance education data and explanations. Another geographic challenge raised is that IPEDS asks where online students live, and institutions have the permanent address but not the address where students are living that term.

# RECOMMENDATIONS

Based on feedback from interviewees, analyses of the DE data, review of IPEDS documentation, and a scan of the literature including external DE datasets, the following recommendations seem to be the most feasible given the constraints of institutional burden and existing data structures.

1. **Improved instructions** – IPEDS' DE data collection could benefit from additional clarification to definitions and instructions. While interview respondents expressed satisfaction with current IPEDS DE data collection and did not express confusion over current terminology, one interviewee misinterpreted "some" DE coursework on the Fall Enrollment survey to mean hybrid coursework, and one state agency referred to students taking a mix of online and on campus classes as hybrid students in their DE reporting. However, IPEDS does not currently collect data about hybrid coursework, most commonly defined as a mix of in-person and online instruction.

   Currently, clarification about not including hybrid coursework is included in the FAQs. Institutions that have questions about whether or not to include hybrid coursework can contact the IPEDS Help Desk, and respondents indicated that questions are typically resolved through the Help Desk. However, stating directly and more prominently on the DE Fall Enrollment survey form that hybrid DE coursework is not to be included in IPEDS data collection would help to eliminate any confusion that might still exist.

2. **12-month Enrollment survey** – Currently, DE enrollments are only collected on the Fall Enrollment survey. However, online institutions are more likely to enroll students

continuously throughout the year, and would benefit from reporting DE enrollments on the 12-month Enrollment survey. The resulting data would more accurately reflect the total institutional enrollments, which in some cases are nearly double those of the fall. This recommendation should be weighed against potential burden the addition would place on all respondents to the 12-month Enrollment survey.

3. **Hybrid data collection** – While the majority of respondents collect information about hybrid courses, some defining multiple categories within hybrid coursework, respondents overall did not view the collection of data about hybrid coursework to be necessary at the national level when taking burden into consideration. Should there be an interest in collecting hybrid DE data through IPEDS, it will be important to carefully review existing varying state and institutional parameters to determine a standard threshold that could be implemented without imposing excessive additional reporting burden.

   It is noteworthy that the PEQUIS DE enrollment estimates were twice those of IPEDS because of the inclusion of hybrid coursework and the 12-month enrollment data collection timeframe. Adding hybrid coursework categories would likely greatly increase the DE enrollment estimates of IPEDS. Also noteworthy is the practice of external DE datasets to employ a more inclusive definition of DE than IPEDS' definition of all instructional components online (i.e., 80%, Table 1). IPEDS will likely need to retain its definition of exclusively online coursework to allow for longitudinal comparisons, but may wish to consider the addition of various levels of hybrid coursework to allow for compatibility with external datasets.

   The interview respondents' examples, as well as those provided in the literature, can be taken into consideration when formulating a hybrid coursework definition. Among these examples, and in agreement with IPEDS DE definitions, one commonality seems to be excluding non-instructional course components when setting the percentage thresholds for online or on campus categories. This specification would help in setting a common hybrid definition for IPEDS. In addition, the use of "seat time" in the PEQIS definition may be another way to further specify this requirement. Once a definition of hybrid is agreed to, this could be added as a sub-checkbox to the Completions survey component's DE indicator as suggested above.

4. **Dissemination** – Currently, prospective college students and other members of the general public access IPEDS data about institutions through College Navigator, which includes the Fall Enrollment survey component data and graduation rates based on first-time, full-time cohorts. As discussed above, the 12-month Enrollment survey would

better represent online institutions that enroll students throughout the year. In addition, a survey component such as Outcome Measures may better reflect institutions for which the majority of students do not fit into the Graduation Rate survey cohort.

In addition, College Navigator does not currently indicate whether an institution is primarily online under "General Information;" rather, DE is listed under "Special Learning Opportunities." It would be helpful for students to know that an institution is primarily online, particularly since the location of the institution is listed under General Information, and may be misinterpreted as the location where classes take place (for primarily distance institutions, the location of their corporate headquarters is listed).

Data from the Institutional Characteristics or Fall Enrollment surveys' DE questions could be used as a DE indicator or additional institution type to more clearly label which institutions are online when students conduct a search. IPEDS may also want to consider replacing the location (city and state), which appears with the institution name in search results, with "Primarily Online" since the location for online institutions only represents the corporate headquarters, not a location where classes take place.

5. **Outcomes** – Some interview respondents expressed an interest in comparing outcomes such as completion rates of students enrolled in DE courses or programs with those on campus, either through the Completions, Graduation Rates, or Outcome Measures survey components – *if* this addition does not impose a great deal of burden. As one interviewee suggested, it may be easiest to add a DE row to the "Completers by Level" table, in addition to reporting the number of completers by race/ethnicity and gender, for each award level. This would impose less burden than having to report the number of DE completers for each CIP code.

# CONCLUSIONS

The results of this exploratory research indicate that postsecondary DE offerings and enrollments continue to expand, and institutions and states have developed varying definitions and categories to track DE trends and outcomes. Based on the small sample of state and institutional representatives interviewed, the DE data elements collected in IPEDS adequately reflect the DE landscape without imposing excessive burden. However, information about hybrid coursework and DE outcomes would be useful additions to the data collection, providing the additional survey questions do not impose a great deal of burden. Clarifying DE instructions and definitions and better representing DE student populations would also be beneficial to students and researchers using the data.

The rapid growth of DE will necessitate continual data collection recalibrating and evaluation to ensure the current DE landscape is accurately captured. DE demands frequent check-ins on data collection, making steady collection for trends complicated, if not challenging. It is difficult to predict the DE delivery modes that will become available as technology advances. In addition, traditional on-campus students may enroll in various degrees of hybrid coursework at higher rates given incoming students' comfort level with technology and institutions' need to stay innovative to compete for enrollments. While it is difficult to predict the degree to which advances will occur and the rate at which online enrollments will increase, it is important to keep in mind the capacity of proposed changes to adapt to future developments, while at the same time allowing for longitudinal comparisons with past data collections. Recommendations for data collection changes resulting from this research should take into account this need for flexibility and uniformity, while also considering the potential burden placed on data reporters.

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# APPENDIX A. METHODOLOGY

For this paper, analyses of the following qualitative and quantitative data sources were used to determine whether existing IPEDS distance education (DE) questions and definitions are adequate or would benefit from any changes or additions:

- **Review of the literature:** U.S. Department's National Library of Education provided the authors with an extensive list of research publications relevant to postsecondary DE, which offer information about the current landscape of DE, trends in DE over recent years, and developments in data collection systems pertaining to DE.
- **Data analysis:** Coffey Consulting analyzed data provided by NCES from the following IPEDS survey components for the most recent year (Fall 2015): 1) Institutional Characteristics; 2) Fall Enrollment; and 3) Completions. Descriptive statistics were used to analyze data disaggregated by institutional sector, award level, student characteristics, and where possible, longitudinal trends.
- **Informational interviews:** To further examine the DE landscape and assess how well IPEDS currently reflects that landscape, Coffey Consulting conducted nine informational interviews with representatives of state higher education agencies and postsecondary institutions. The purpose of these interviews was to gain a richer understanding of trends in the DE landscape, solicit feedback about DE-related questions and definitions on IPEDS survey components, and collect suggestions for changes or additions to questions on these survey components related to DE.

Coffey Consulting sent follow-up emails to interviewees with reference sheets containing all DE-related question and definitions excerpted from IPEDS survey components to solicit additional feedback. The interview protocols and reference sheet can be found below (Exhibits A1-A2).

## EXHIBIT A1. INTERVIEW PROTOCOL

**Coffey NPEC Distance Education Interview Protocol**

Thank you for taking the time to speak with us today. Coffey Consulting is conducting this research on behalf of the U.S. Department of Education's National Postsecondary Education Cooperative, or NPEC, to assess the current landscape of distance education and how well this landscape is reflected in IPEDS (Enrollment, Institutional Characteristics, Completions survey components). We would like to learn more about your institution's/agency's distance education coursework and programs (in terms of both delivery and student enrollment), and any suggestions you have for IPEDS distance education reporting.

*Note: Your responses will remain anonymous, we will not name any institutions/individual respondents without permission in the final report.*

*First, please tell me about distance education at your institution/in your state:*

- How many distance education programs/courses does your institution(s) offer? In what fields?

- What is your largest distance education program/course?
    - What level (undergrad/grad)?
    - What field/CIP?
    - How long has the course/program been in place?
    - How many students enrolled this past academic year?
    - (for programs) How many courses/credits are required? Are there other requirements to complete the program?
    - Are there any in-person components? If so what/how much?

*Distance Education landscape*

- What trends, if any, have you observed with distance education programs and coursework at your institution? In the state? What are the drivers of these trends?

*IPEDS Distance Education data collection*

- Have you experienced any challenges identifying and reporting distance education courses, programs, or enrollment with your existing data systems? Please describe.
- How could IPEDS be improved to allow for more accurate reporting of distance education coursework and programs at your institution?
    - What changes, if any, would you make to the definitions or instructions of the following survey components:
        - Institutional Characteristics survey
            - Distance education courses

        - Distance education programs
    - Enrollment survey
        - Distance education courses
    - Completions survey
        - Distance education programs (should institutions be asked to report on DE courses for this survey component?)

*For all suggested changes:*

- Would this be important information to gather at the federal/national level?
- What are the costs/benefits in terms of burden of getting at this level of granularity?

*Other Distance Education reporting*

- How are distance education courses/programs defined internally at your institution/in your state for data collection purposes? Do you report on distance education courses/programs internally using the same definitions as IPEDS (i.e., "some" or "all" coursework online)?
    - If not, what definitions/categories do you use?
- Do you report on distance education programs to any external entities other than NCES (state agencies, foundation initiatives, etc.)? If so, how are they categorized/defined?
- If you do report on distance education using various internal/external definitions, which definitions do you prefer and why?

*Conclusion*

- In summary, do you feel that IPEDS accurately reflects today's higher education distance education landscape? At your institution/in your state? Are there any other changes you would make?

*Thank you for taking the time to share your insights and knowledge; your responses will help inform this important work.*

## EXHIBIT A2. IPEDS DE REFERENCE SHEET

Reference Sheet – IPEDS Distance Education Definitions
*Prepared by Coffey Consulting on behalf of NCES/NPEC, April 2017*

**Overview – IPEDS Survey Components with Distance Education questions:**

- Institutional Characteristics survey asks institutional reporters to indicate whether or not institutions offer Distance Education (DE) **courses** (yes/no), whether **all** the institution's **programs** are **exclusively** online (yes/no), and at what level the institution offers DE **courses or programs** (undergraduate/graduate/none).
- Fall Enrollment survey collects data on enrollment in Distance Education **courses** (**exclusively and some**), and location of students enrolled **exclusively** in DE courses, by undergraduate/graduate level and degree/non-degree seeking status. *NOTE: only Fall Enrollment collects information about Distance Education; 12-Month Enrollment survey does not.*
- Completions survey asks institutional reporters to indicate whether or not (yes/no) **programs** are offered **exclusively** via Distance Education by CIP code.

**IPEDS Distance Education definition:**

Distance education: Education that uses one or more technologies to deliver instruction to students who are separated from the instructor and to support regular and substantive interaction between the students and the instructor synchronously or asynchronously. Technologies used for instruction may include the following: Internet; one-way and two-way transmissions through open broadcasts, closed circuit, cable, microwave, broadband lines, fiber optics, satellite or wireless communication devices; audio conferencing; and video cassette, DVDs, and CD-ROMs, if the cassette, DVDs, and CD-ROMs are used in a course in conjunction with the technologies listed above.

**Survey component questions and definitions:**

**Institutional Characteristics survey:**

Part C - Student Services - Distance Education Opportunities

**7. Does your institution offer distance education courses?**

- ○ No
- ○ Yes

**8. Are all the programs at your institution offered exclusively via distance education programs?**

- ○ No
- ○ Yes

**9. Please indicate at what level(s) your institution offers distance education opportunities (courses and/or programs).**

- ☐ Undergraduate
- ☐ Graduate
- ☐ The institution does not offer distance education opportunities

*Definitions:*

- Distance education course: A course in which the instructional content is delivered **exclusively** via distance education. Requirements for coming to campus for orientation, testing, or academic support services do not exclude a course from being classified as distance education.
- Distance education program: A program for which **all** the required coursework for program completion is able to be completed via distance education courses.

**Enrollment survey:**

Part A - Fall Enrollment by Distance Education Status

**Academic reporters report enrollment as of the institution's official fall reporting date or as of October 15, 2016.**

**Program reporters report students enrolled at any time between August 1 and October 31, 2016.**

| | Undergraduate Students | | Graduate Students |
|---|---|---|---|
| | Degree/Certificate Seeking | Non-Degree/Certificate Seeking | |
| **Enrolled** *exclusively* **in distance education courses** | | | |
| **Enrolled** in *some* **but not all distance education courses** | | | |
| *Not enrolled* **in any distance education courses** | | | |
| | | | |
| **Total** (from prior part A screens) | | | |

**You may use the space below to provide context for the data you've reported above.**
**These context notes may be posted on the College Navigator website, and should be written to be understood by students and parents.**

Part A - Fall Enrollment by Distance Education Status

| Of those students *exclusively* enrolled in distance education courses, report the number that are: | Undergraduate Students | | Graduate Students |
|---|---|---|---|
| | Degree/Certificate Seeking | Non-Degree/Certificate Seeking | |
| Located in | | | |
| Located in the U.S. but not in | | | |
| Located in the U.S. but state/jurisdiction unknown | | | |
| Located outside the U.S. | | | |
| Location unknown/unreported | | | |
| Total students exclusively enrolled in distance education (from section above) | | | |

*Definitions:*

- Enrolled exclusively in distance education courses offered at your institution: Students who are enrolled only in courses that are considered distance education courses at your institution.
- Enrolled in some but not all distance education courses offered at your institution: Students who are enrolled in **at least one course** that is considered a distance education course, but are not enrolled exclusively in distance education courses. *Note: Requirements for coming to campus for orientation, testing, or academic support services do not exclude a course from being classified as exclusively distance education. Similarly, if a student is taking instructional portions of his/her program entirely online, but are then required to complete a practicum, residency, or internship, the student can still be considered enrolled in entirely distance education courses.*

**Completions survey:**

**Is this program offered as a distance education program?**
(Note: If more than one program is reported under this CIP code, check 'YES' if ANY of the programs are offered as distance education program.)

- ○ No
- ○ Yes

*Definitions:*

Distance Education - If the program at this award level is able to be completed **exclusively** via distance education (DE), you should respond "Yes" to the DE question at the bottom of the CIP Data screen; otherwise, you should respond "No." Also, if more than one program is reported under a CIP code by award level, you should respond "YES" to the DE question if **ANY** of the programs are offered as a DE program. Additionally, you should respond "Yes" to the DE question, if it is an **option** for students to complete exclusively through DE by CIP code and Award level, but no students did. And lastly, if a program has a traditional offering and a distance education option, completions should be reported regardless of whether or not the program was completed through DE.

**IPEDS DE FAQs (all survey components):**[10]

Fall Enrollment Survey:

*If a student is taking the instructional portions of his/her program entirely online, but are then required to complete a practicum, residency, or internship, is the student considered enrolled in exclusively distance education courses?*

Yes, if the instructional portions are entirely online, the student is considered to be enrolled in exclusive distance education course.

*What should I do if I do not know the location of students enrolled exclusively in distance education courses?*

If you have no information about the location of students enrolled exclusively in distance education, do not report them in any of the location fields. The system will calculate the number of "Location Unknown" exclusively distance education enrollments.

*How do I determine location for those students enrolled exclusively in distance education?*

Location for those students enrolled exclusively in distance education should be their physical location or current address, as of the institution's Fall reporting date. If this is not available, use the address on file for the student. For students enlisted in the military on active duty, use the permanent address instead of the student's physical location.

Fall Enrollment and Institutional Characteristics surveys:

*Are U.S. jurisdictions or territories (like Guam, the U.S. Virgin Island, etc.) considered in the U.S. for distance education location reporting?*

Yes, Students located in a U.S. jurisdiction while they are enrolled in distance education courses should be reported as located in the U.S.

*We offer courses that combine distance education and traditional teaching methods ("hybrid" courses). How should students enrolled in these courses be counted in the distance education portion of Fall Enrollment?*

Hybrid courses are not considered by IPEDS as distance education. Students enrolled in "hybrid" courses should be reported as "not enrolled in any distance education courses."

[10] Source: Current IPEDS survey components and instructions

# APPENDIX B. DETAILED TABLES

**Table B1. Number and Percentage Distribution of Students by Degree-Granting Status, Sector, and DE Enrollment, 2015[1 2]**

| Sector | All Students (Undergraduate and Graduate) | | | | | | |
|---|---|---|---|---|---|---|---|
| | Total Number of Students Enrolled | Number of Students Enrolled Exclusively in DE Courses | Percent of Students Enrolled Exclusively in DE Courses | Number of Students Enrolled in Some but not all DE Courses | Percent of Students Enrolled in Some but not all DE Courses | Number of Students not Enrolled in any DE Courses | Percent of Students not Enrolled in any DE Courses |
| **All Institutions** | | | | | | | |
| **TOTAL** | **20,628,734** | **2,905,248** | **14.1%** | **3,109,137** | **15.1%** | **14,614,349** | **70.8%** |
| Public, 4-year | 8,430,584 | 741,355 | 8.8% | 1,515,439 | 18.0% | 6,173,790 | 73.2% |
| Public, 2-year and less | 6,335,971 | 717,661 | 11.3% | 1,109,644 | 17.5% | 4,508,666 | 71.2% |
| Private not-for-profit, 4-year | 4,173,042 | 691,511 | 16.6% | 363,066 | 8.7% | 3,118,465 | 74.7% |
| Private for-profit, 4-year | 1,141,337 | 743,535 | 65.1% | 100,995 | 8.8% | 296,807 | 26.0% |
| Private for-profit, 2-year and less | 547,800 | 11,186 | 2.0% | 19,993 | 3.6% | 516,621 | 94.3% |
| **Degree Granting Institutions Only** | | | | | | | |
| **TOTAL** | **20,219,074** | **2,902,908** | **14.4%** | **3,105,238** | **15.4%** | **14,210,928** | **70.3%** |
| Public, 4-year | 8,430,584 | 741,355 | 8.8% | 1,515,439 | 18.0% | 6,173,790 | 73.2% |
| Public, 2-yearand less | 6,225,055 | 716,696 | 11.5% | 1,109,161 | 17.8% | 4,399,198 | 70.7% |
| Private not-for-profit, 4-year | 4,172,633 | 691,511 | 16.6% | 363,066 | 8.7% | 3,118,056 | 74.7% |
| Private for-profit, 4-year | 1,141,337 | 743,535 | 65.1% | 100,995 | 8.8% | 296,807 | 26.0% |
| Private for-profit, 2-yearand less | 249,465 | 9,811 | 3.9% | 16,577 | 6.6% | 223,077 | 89.4% |
| **Non-Degree Granting Institutions Only** | | | | | | | |
| **TOTAL** | **409,660** | **2,340** | **0.6%** | **3,899** | **1.0%** | **403,421** | **98.5%** |
| Public, 4-year | 0 | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| Public, 2-year and less | 110,916 | 965 | 0.9% | 483 | 0.4% | 109,468 | 98.7% |
| Private not-for-profit, 4-year | 409 | 0 | 0.0% | 0 | 0.0% | 409 | 100.0% |
| Private for-profit, 4-year | 0 | 0 | 0.0% | 0 | 0.0% | 0 | 0.0% |
| Private for-profit, 2-year and less | 298,335 | 1,375 | 0.5% | 3,416 | 1.1% | 293,544 | 98.4% |

[1] Includes all institutions: Title IV and non-Title IV, degree-granting and non-degree granting, located within the United States and in outlying areas, and administrative units and non-administrative units.

[2] *Source: NCES, IPEDS Fall Enrollment survey component, Fall 2015 [provisional data]*

**Table B2. Number of Students by Sector, Level, and DE Enrollment, 2015[1] [2]**

| Sector | Total, Number of Undergraduate and Graduate Students Enrolled | Undergraduate | | | | Graduate | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Total, Number of Undergraduate Students Enrolled | Number of Students Enrolled Exclusively in DE Courses | Number of Students Enrolled in Some but not all DE Courses | Number of Students not Enrolled in any DE Courses | Total, Number of Graduate Students Enrolled | Number of Students Enrolled Exclusively in DE Courses | Number of Students Enrolled in Some but not all DE Courses | Number of Students not Enrolled in any DE Courses |
| **TOTAL** | **20,628,734** | **17,642,720** | **2,127,715** | **2,861,591** | **12,653,414** | **2,986,014** | **777,533** | **247,546** | **1,960,935** |
| Public, 4-year | 8,430,584 | **6,997,192** | 474,429 | 1,379,336 | 5,143,427 | **1,433,392** | 266,926 | 136,103 | 1,030,363 |
| Public, 2-year and less | 6,335,971 | **6,335,971** | 717,661 | 1,109,644 | 4,508,666 | **0** | 0 | 0 | 0 |
| Private not-for-profit, 4-year | 4,173,042 | **2,898,978** | 408,040 | 264,055 | 2,226,883 | **1,274,064** | 283,471 | 99,011 | 891,582 |
| Private for-profit, 4-year | 1,141,337 | **862,779** | 516,399 | 88,563 | 257,817 | **278,558** | 227,136 | 12,432 | 38,990 |
| Private for-profit, 2-year and less | 547,800 | **547,800** | 11,186 | 19,993 | 516,621 | **0** | 0 | 0 | 0 |

[1] Includes all institutions: Title IV and non-Title IV, degree-granting and non-degree granting, located within the United States and in outlying areas, and administrative units and non-administrative units.

[2] *Source: NCES, IPEDS Fall Enrollment survey component, Fall 2015 [provisional data]*

**Table B3. Number of Students Enrolled in Degree-Granting Institutions[1] by Selected Student Characteristics, Level of DE Enrollment, and Sector, 2015[2]**

| Selected Characteristics | Primarily DE Institutions (≥90% enrolled online) | | | | Other/Non-DE Institutions (<90% enrolled online) | | | |
|---|---|---|---|---|---|---|---|---|
| | Total, Number of Students Enrolled at Primarily DE Institutions | Number of Students Enrolled at Public, Primarily DE Institutions | Number of Students Enrolled at Private, Not-for-Profit, Primarily DE Institutions | Number of Students Enrolled at Private, For-Profit, Primarily DE Institutions | Total, Number of Students Enrolled at Other Institutions | Number of Students Enrolled at Public, Other Institutions | Number of Students Enrolled at Private, Not-For-Profit, Other Institutions | Number of Students Enrolled at Private, For-Profit, Other Institutions |
| **TOTAL** | **734,736** | **58,822** | **137,556** | **538,358** | **19,242,534** | **14,509,281** | **3,925,816** | **807,437** |
| Female | **468,885** | 31,783 | 84,037 | 353,065 | **10,786,982** | 8,018,912 | 2,258,954 | 509,116 |
| Male | **265,851** | 27,039 | 53,519 | 185,293 | **8,455,552** | 6,490,369 | 1,666,862 | 298,321 |
| Age under 18 | **342** | 126 | 57 | 159 | **1,055,284** | 952,180 | 98,045 | 5,059 |
| Age 18-19 | **7,619** | 1,874 | 1,131 | 4,614 | **4,334,755** | 3,429,437 | 838,000 | 67,318 |
| Age 20-21 | **18,774** | 2,438 | 2,446 | 13,890 | **4,058,993** | 3,113,907 | 856,784 | 88,302 |
| Age 22-24 | **57,591** | 7,059 | 7,997 | 42,535 | **3,266,732** | 2,506,945 | 636,719 | 123,068 |
| Age 25 and over total | **649,472** | 47,317 | 125,802 | 476,353 | **6,488,181** | 4,491,417 | 1,475,746 | 521,018 |
| Age Unknown | **938** | 8 | 123 | 807 | **38,589** | 15,395 | 20,522 | 2,672 |
| Full-time | **438,093** | 14,295 | 85,058 | 338,740 | **11,852,736** | 8,340,380 | 2,964,074 | 548,282 |
| Part-time | **296,643** | 44,527 | 52,498 | 199,618 | **7,389,798** | 6,168,901 | 961,742 | 259,155 |

[1] Includes Title IV, degree-granting institutions located within the United States (not including outlying areas). Does not include administrative units.

[2] *Source: NCES, IPEDS Fall Enrollment survey component, Fall 2015 [provisional data]*

**Table B4. Number of Students Enrolled in DE Coursework by Sector, Degree-Seeking Status, and DE Enrollment, 2015[1 2]**

| Sector | Degree-/Certificate Seeking Students | | | | Non-Degree/Certificate-Seeking Students | | | |
|---|---|---|---|---|---|---|---|---|
| | Total, Number of Degree-/Certificate Seeking Students | Number of Students Enrolled Exclusively in DE Courses | Number of Students Enrolled in Some but not all DE Courses | Number of Students not Enrolled in any DE Courses | Total, Number of Non-Degree/ Certificate-Seeking Students | Number of Students Enrolled Exclusively in DE Courses | Number of Students Enrolled in Some but not all DE Courses | Number of Students not Enrolled in any DE Courses |
| **TOTAL** | **15,571,651** | **1,882,618** | **2,742,071** | **10,946,962** | **1,772,846** | **243,722** | **116,104** | **1,413,020** |
| Public, 4-year | **6,542,254** | 416,251 | 1,352,133 | 4,773,870 | **454,938** | 58,178 | 27,203 | 369,557 |
| Public, 2-year and less | **5,176,061** | 571,996 | 1,026,515 | 3,577,550 | **1,159,910** | 145,665 | 83,129 | 931,116 |
| Private not-for-profit, 4-year | **2,761,724** | 379,443 | 258,721 | 2,123,560 | **137,254** | 28,597 | 5,334 | 103,323 |
| Private for-profit, 4-year | **844,351** | 505,232 | 88,170 | 250,949 | **18,428** | 11,167 | 393 | 6,868 |
| Private for-profit, 2-year and less | **247,261** | 9,696 | 16,532 | 221,033 | **2,316** | 115 | 45 | 2,156 |

[1] Includes all institutions: Title IV and non-Title IV, degree-granting and non-degree granting, located within the United States and in outlying areas, and administrative units and non-administrative units.

[2] *Source: NCES, IPEDS Fall Enrollment survey component, Fall 2015 [provisional data]*

**Table B5. Number of 100% (Exclusive) DE Programs at Degree-Granting Institutions[1] by Two-Digit CIP Code and Program Level, 2015 [2]**

| CIP Code | CIP Name | TOTAL, Number of DE Programs and Degrees Offered | Number of DE Sub-baccalaureate Certificate Programs Offered | Number of DE Post-baccalaureate Certificate Programs Offered | Number of DE Associate's Degrees Offered | Number of DE Bachelor's Degrees Offered | Number of DE Master's Degrees Offered | Number of DE Doctoral Degrees Offered |
|---|---|---|---|---|---|---|---|---|
| | **TOTAL** | **26,241** | **4,593** | **2,105** | **5,941** | **6,617** | **6,368** | **617** |
| 52 | Business, Management, Marketing, and Related Support Services | **6,801** | 1,581 | 397 | 1,591 | 1,840 | 1,338 | 54 |
| 51 | Health Professions and Related Programs | **4,463** | 898 | 391 | 981 | 1,044 | 919 | 230 |
| 13 | Education | **3,120** | 140 | 595 | 237 | 320 | 1,687 | 141 |
| 11 | Computer and Information Sciences and Support Services | **2,306** | 623 | 127 | 591 | 650 | 293 | 22 |
| 43 | Homeland Security, Law Enforcement, Firefighting and Related Protective Services | **1,600** | 324 | 54 | 484 | 510 | 223 | 5 |
| 24 | Liberal Arts and Sciences, General Studies and Humanities | **1,154** | 108 | 7 | 748 | 256 | 34 | 1 |
| 39 | Theology and Religious Vocations | **635** | 65 | 47 | 83 | 198 | 216 | 26 |
| 44 | Public Administration and Social Service Professions | **566** | 54 | 50 | 80 | 168 | 197 | 17 |
| 15 | Engineering Technologies and Engineering-Related Fields | **516** | 165 | 23 | 144 | 97 | 85 | 2 |
| 14 | Engineering | **491** | 13 | 63 | 23 | 31 | 332 | 29 |
| 42 | Psychology | **481** | 3 | 49 | 48 | 216 | 131 | 34 |
| 45 | Social Sciences | **470** | 20 | 30 | 108 | 226 | 81 | 5 |
| 30 | Multi/Interdisciplinary Studies | **458** | 34 | 58 | 80 | 182 | 97 | 7 |
| 19 | Family and Consumer Sciences/Human Sciences | **413** | 168 | 19 | 91 | 69 | 60 | 6 |
| 22 | Legal Professions and Studies | **409** | 81 | 21 | 155 | 87 | 55 | 10 |
| 50 | Visual and Performing Arts | **365** | 66 | 6 | 96 | 129 | 67 | 1 |
| 09 | Communication, Journalism, and Related Programs | **311** | 21 | 20 | 42 | 151 | 75 | 2 |
| 31 | Parks, Recreation, Leisure, and Fitness Studies | **214** | 15 | 17 | 33 | 49 | 96 | 4 |
| 23 | English Language and Literature/Letters | **199** | 17 | 14 | 34 | 73 | 59 | 2 |

| CIP Code | CIP Name | TOTAL, Number of DE Programs and Degrees Offered | Number of DE Sub-baccalaureate Certificate Programs Offered | Number of DE Post-baccalaureate Certificate Programs Offered | Number of DE Associate's Degrees Offered | Number of DE Bachelor's Degrees Offered | Number of DE Master's Degrees Offered | Number of DE Doctoral Degrees Offered |
|---|---|---|---|---|---|---|---|---|
| 03 | Natural Resources and Conservation | **141** | 14 | 18 | 23 | 40 | 46 | 0 |
| 01 | Agriculture, Agriculture Operations, and Related Sciences | **123** | 24 | 11 | 36 | 15 | 34 | 3 |
| 38 | Philosophy and Religious Studies | **120** | 6 | 9 | 12 | 61 | 30 | 2 |
| 25 | Library Science | **105** | 15 | 24 | 15 | 4 | 44 | 3 |
| 54 | History | **105** | 1 | 4 | 22 | 49 | 28 | 1 |
| 26 | Biological and Biomedical Sciences | **85** | 1 | 15 | 12 | 21 | 33 | 3 |
| 27 | Mathematics and Statistics | **78** | 1 | 13 | 14 | 22 | 28 | 0 |
| 16 | Foreign Languages, Literatures, and Linguistics | **72** | 11 | 1 | 20 | 23 | 15 | 2 |
| 12 | Personal and Culinary Services | **68** | 23 | 1 | 39 | 5 | 0 | 0 |
| 05 | Area, Ethnic, Cultural, Gender, and Group Studies | **57** | 11 | 8 | 7 | 22 | 8 | 1 |
| 40 | Physical Sciences | **56** | 1 | 6 | 16 | 13 | 18 | 2 |
| 49 | Transportation and Materials Moving | **54** | 11 | 3 | 8 | 15 | 15 | 2 |
| 47 | Mechanic and Repair Technologies/Technicians | **51** | 28 | 0 | 19 | 4 | 0 | 0 |
| 10 | Communications Technologies/Technicians and Support Services | **39** | 16 | 0 | 11 | 9 | 3 | 0 |
| 46 | Construction Trades | **33** | 16 | 0 | 16 | 0 | 1 | 0 |
| 04 | Architecture and Related Services | **31** | 3 | 2 | 6 | 5 | 15 | 0 |
| 29 | Military Technologies and Applied Sciences | **18** | 3 | 2 | 5 | 4 | 4 | 0 |
| 41 | Science Technologies/Technicians | **18** | 2 | 0 | 6 | 9 | 1 | 0 |
| 48 | Precision Production | **15** | 10 | 0 | 5 | 0 | 0 | 0 |

[1] Includes Title IV, degree-granting institutions located within the United States (not including outlying areas). Does not include administrative units.

[2] *Source: NCES, IPEDS Completions survey component, Fall 2015 [provisional data]*

**Table B6. Number of 100% (Exclusive) DE Programs at Degree-Granting Institutions by Two-Digit CIP Code and Sector [1] [2]**

| CIP Code | CIP Name | TOTAL, Number of DE Programs and Degrees Offered | Number of Programs and Degrees Offered at Public, 4-year Institutions | Number of Programs and Degrees Offered at Public, 2-year or Less Institutions | Number of Programs and Degrees Offered at Private not-for-profit, 4-year Institutions | Number of Programs and Degrees Offered at Private for-profit, 4-year Institutions | Number of Programs and Degrees Offered at Private for-profit, 2-year or less Institutions |
|---|---|---|---|---|---|---|---|
| | **TOTAL** | **21,620** | **5,375** | **4,738** | **5,990** | **5,031** | **486** |
| 52 | Business, Management, Marketing and Related Support Services | **6,797** | 1,161 | 1,812 | 1,849 | 1,848 | 127 |
| 51 | Health Professions and Related Programs | **4,442** | 1,219 | 699 | 1,022 | 1,221 | 281 |
| 13 | Education | **3,118** | 1,360 | 252 | 1,186 | 319 | 1 |
| 11 | Computer and Information Sciences and Support Services | **2,306** | 378 | 634 | 374 | 879 | 41 |
| 43 | Homeland Security, Law Enforcement, Firefighting and Related Protective Services | **1,600** | 292 | 435 | 354 | 496 | 23 |
| 24 | Liberal Arts and Sciences, General Studies and Humanities | **1,151** | 292 | 603 | 221 | 35 | 0 |
| 39 | Theology and Religious Vocations | **633** | 0 | 0 | 628 | 5 | 0 |
| 44 | Public Administration and Social Service Professions | **566** | 186 | 72 | 162 | 146 | 0 |
| 15 | Engineering Technologies and Engineering-Related Fields | **516** | 175 | 210 | 58 | 62 | 11 |
| 14 | Engineering | **491** | 312 | 21 | 136 | 20 | 2 |

[1] Includes Title IV, degree-granting institutions located within the United States (not including outlying areas). Does not include private, not-for-profit 2 year and less category. Does not include administrative units.

[2] *Source: NCES, IPEDS Completions survey component, Fall 2015 [provisional data]*

**Table B7. Number of Degree-Granting Institutions[1] Offering at Least One DE Program by Sector and Program Type, 2015[2]**

| Sector | Total Number of Institutions | Total Number of Institutions Offering at Least One DE Program | Number of Institutions Offering at Least One DE Certificate Program | Number of Institutions Offering at Least One DE Associate's Degree | Number of Institutions Offering at Least One DE Bachelor's Degree | Number of Institutions Offering at Least One DE Master's or Above Degree |
|---|---|---|---|---|---|---|
| **TOTAL** | **4,448** | **2,313** | **1,296** | **1,205** | **1,163** | **1,182** |
| Public, 4-year | 702 | 547 | 289 | 155 | 412 | 414 |
| Public, 2-year | 910 | 613 | 483 | 550 | 0 | 0 |
| Private not-for-profit, 4-year | 1,592 | 786 | 298 | 210 | 516 | 625 |
| Private for-profit, 4-year | 685 | 264 | 161 | 191 | 234 | 143 |
| Private for-profit, 2-year | 559 | 103 | 65 | 99 | 1 | 0 |

[1] Includes Title IV, degree-granting institutions located within the United States (not including outlying areas). Does not include administrative units.

[2] *Source: NCES, IPEDS Completions survey component, Fall 2015 [provisional data]*

**Table B8. Number of Degree-Granting Institutions[1] Offering at Least One DE Course or Program by Sector and Program Level, 2015[2]**

| Sector | Total Number of Institutions | Number of Institutions Offering Undergraduate or Graduate DE Programs or Courses | Number of Institutions Offering Undergraduate DE Courses or Programs | Number of Institutions Offering Graduate DE Courses or Programs |
|---|---|---|---|---|
| **TOTAL** | **4,448** | **3,314** | **3,086** | **1,664** |
| Public, 4-year | 702 | 679 | 665 | 541 |
| Public, 2-year | 910 | 885 | 885 | 0 |
| Private not-for-profit, 4-year | 1,592 | 1,111 | 913 | 898 |
| Private for-profit, 4-year | 685 | 445 | 429 | 225 |
| Private for-profit, 2-year | 559 | 194 | 194 | 0 |

[1] Includes Title IV, degree-granting institutions located within the United States (not including outlying areas). Does not include administrative units.

[2] *Source: NCES, IPEDS Institutional Characteristics survey component, Fall 2015 [provisional data]*

**Table B9. Number of Primarily-Online Institutions[1] by Sector[2 3]**

| Sector | Total Number of Institutions |
|---|---|
| **TOTAL** | **67** |
| Public, 4-year | 6 |
| Public, 2-year and less | 0 |
| Private not-for-profit, 4-year | 16 |
| Private for-profit, 4-year | 39 |
| Private for-profit, 2-yearand less | 6 |

[1] Primarily-online institutions are those in which at least 90 percent of students are enrolled exclusively in distance education coursework.
[2] Includes Title IV, degree-granting institutions located within the United States (not including outlying areas). Does not include administrative units.
[3] *Source: NCES, IPEDS Fall Enrollment survey component, Fall 2015 [provisional data]*