Inclusion

# Characteristics of Higher Education Programs Enrolling Students with Intellectual Disability in the United States

--Manuscript Draft--

| | |
|---|---|
| **Manuscript Number:** | INCLUSION-M-20-00005R1 |
| **Article Type:** | Research Article |
| **Keywords:** | Intellectual Disability; postsecondary education; Inclusion; transition education; higher education |
| **Corresponding Author:** | Meg Grigal, Ph.D.<br>University of Massachusetts Boston<br>Boston, MA UNITED STATES |
| **First Author:** | Meg Grigal, Ph.D. |
| **Order of Authors:** | Meg Grigal, Ph.D. |
| | Clare Papay, Ph.D. |
| | Cate Weir, M.Ed. |
| | Debra Hart, M.S. |
| | Matthew L. McClellan |
| **Manuscript Region of Origin:** | UNITED STATES |
| **Abstract:** | Significant advancements resulting from various legislative and grant initiatives have resulted in increases in higher education programs enrolling students with intellectual disability (ID). Information about program practices in admissions, academic access, employment, campus housing, and extracurricular activities was gathered via a national survey and offered to the public via a searchable directory. The current study provides a descriptive analysis of these survey data, addressing demographic structure and costs, as well as domains of practice including academic access, career development and employment, campus engagement, and credential attainment in higher education programs for students with ID from a sample of 257 programs. Comparisons to findings from a 2009 survey are offered when applicable and implications for practice, research, and policy are discussed. |

## Abstract

Significant advancements resulting from various legislative and grant initiatives have resulted in increases in higher education programs enrolling students with intellectual disability (ID). Information about program practices in admissions, academic access, employment, campus housing, and extracurricular activities was gathered via a national survey and offered to the public via a searchable directory. The current study provides a descriptive analysis of these survey data, addressing demographic structure and costs, as well as domains of practice including academic access, career development and employment, campus engagement, and credential attainment in higher education programs for students with ID from a sample of 257 programs. Comparisons to findings from a 2009 survey are offered when applicable and implications for practice, research, and policy are discussed.

Access to higher education for people with intellectual disability (ID) in the United States has changed substantially in the last few decades (O'Brien, et al., 2019; Plotner & Marshall, 2015). Efforts to include people with ID in higher education date back to the early 1970s and were primarily directed at creating access to substantially separate or segregated experiences on college campuses (Neubert, et al., 2001). The emergence of transition services in the 1990s (Sitlington & Clark, 2006), coupled with advancements related to inclusion (Turnbull, 1995; Winzer & Mazurek, 2000) and self-determination (Wehmeyer, et al., 1998), culminated in grassroot movements to provide access to postsecondary education (PSE) to students with ID (ID; Lee & Will, 2010). Higher education experiences for students with ID throughout the early part of this century were rare, and when offered, were typically created by a dedicated professional or an intrepid parent, seeking to offer students alternatives to typical options for adults with ID (Hart, et al., 2005).

In the early 2000s, increased efforts aimed at identifying community and college-based transition programs for youth with ID between the ages of 18 and 21. For example, in 2004, Gaumer et al. (2004) conducted a survey and identified 101 community-based transition programs in 29 states serving students with ID ages 18 to 21. These programs were primarily funded by and operated by local school systems, and less than half included access to PSE. Hart, Mele-McCarthy et al., (2004) conducted a survey of 25 programs for students with learning, cognitive, and intellectual disabilities allowing them to earn high school credits as they simultaneously earned community college credits to secure a high school diploma. The programs identified in these surveys were developed on colleges and universities in isolation from one another and no state or federal guidance or standards of practice existed to support the development of quality programs (Lee & Will, 2010).

A variety of federal initiatives launched in 2008 began to change the landscape of higher education for students with ID. The Administration on Developmental Disabilities funded a Project of National Significance called the Consortium on Postsecondary Education for Individuals with Developmental Disabilities. This project was one of the first federally funded national resources for knowledge generation, training, and dissemination related to the participation of individuals with ID in PSE. From FY2009 to FY2014, the Consortium provided training and technical assistance throughout the country and worked directly with 19 states to support strategic planning for increased access (Consortium on Postsecondary Education for Individuals with Intellectual and Developmental Disabilities, 2013).

The National Institute on Disability and Rehabilitation Research funded the National Center for Postsecondary Education for People with Intellectual Disabilities from FY2009 – FY2012. This center was charged with analyzing two large-scale datasets (National Longitudinal Transition Study-2 and RSA 911) to identify the extent to which students with ID were benefiting from college attendance (Grigal, et al., 2011; Grigal, et al., 2014). The center also conducted the first survey of existing higher education programs serving students with ID in the United States. The survey was conducted in 2009 (Grigal, et al., 2012) and resulted in identification of 149 higher education programs supporting students with ID in 39 states.

The findings of the 2009 survey revealed more programs located at four-year universities than two-year colleges (51% vs. 40%), and over a quarter of programs were exclusively serving students still enrolled in high school (referred to as dual enrollment programs, concurrent enrollment programs or college-based transition programs). The majority of respondents indicated the primary focus of their program was independent living/life skills and only 18% reported academic course access was the program's primary goal.

Access to credit and noncredit college classes attended by students without disabilities was offered by a slight majority of responding IHEs, however three quarters of respondents also affirmed students with ID participated in group instruction or activities only with other students with ID. Half of the respondents reported students with ID did not access academic or disability-related advising through the college, instead receiving specialized services offered by program staff. Four-fifths of programs prepared students for employment, through activities including both paid and unpaid work, although the extent to which these employment preparation activities were provided to students varied widely across programs. Slightly over a third of programs provided access to residential services, either on or off campus. The researchers summarized the findings of the study as reflecting a high degree of variability in terms of the campus access offered to students with ID at the time, but noting the study was conducted at "a moment in time for a field that is rapidly changing" (p. 232).

The final, and potentially most impactful development in 2008 was the passage of the Higher Education Opportunity Act (HEOA). The HEOA (2008) included unprecedented provisions aimed at expanding access to and availability of higher education options for students with ID. The HEOA (2008) created a new federal student aid or Title IV access designation, called Comprehensive Transition and Postsecondary (CTP) programs. Colleges and universities were able to apply to the Office of Federal Student Aid to attain the designation of an approved CTP. If successfully approved, these IHEs could then offer certain forms of federal student aid (FSA) to eligible students with ID attending their program. Since 2010, over 100 IHE programs for students with ID have been approved as CTPs.

The HEOA also created a model demonstration program called the Transition Postsecondary Education Programs for Students with Intellectual Disabilities (TPSID). TPSID

grants were awarded by the U.S. Department of Education (USDOE) Office of Postsecondary Education (OPE), and grantees were charged with establishing or expanding model postsecondary programs focused on academic enrichment, socialization, independent living skills, and integrated work experiences leading to gainful employment. Finally, the HEOA created a national coordinating center (NCC) charged with providing technical assistance to and conducting evaluation of the TPSID model demonstration projects.

The TPSID model demonstration program has funded two cohorts of grantees (2010-2015 and 2015-2020) and has created or expanded inclusive transition and postsecondary programs for students with ID at 100 IHEs in 31 states (Think College National Coordinating Center, 2019). The National Coordinating Center was also funded for 2010-2015 and 2015-2020 and has developed and disseminated materials and resources based upon its technical assistance, research, and evaluation work.

The HEOA of 2008 offered the first federal guidance regarding the components needed in higher education programs for students with ID. However, this guidance only applied to those programs seeking federal funds via the TPSID program or approval as a CTP program for the purposes of offering federal student aid to students with ID. In 2013, McEathron, Beuhring, Maynard, and Mavis developed a taxonomy to further delineate the characteristics of PSE programs for individuals with IDD and highlight common components in PSE programs. During the ensuing years, as program development and implementation grew, access to inclusive courses, career development and employment experiences, and attainment of credentials have emerged as salient aspects of effective programs (Grigal, et al., 2018; Papay et al,. 2018). The prevalence of these practices can impact student’s experiences during and after their college program as described next.

Inclusive courses are academic courses taught by college faculty as part of the typical course offerings of the college and are attended by matriculating college students. Students with ID may access inclusive courses either for credit or audit. To audit a course means students are not earning regular college credit for the course. This allows for modifications to the course requirements not permitted when taking the course for credit but also means the course may or may not be counted towards the completion of a credential. Accessing typical college courses has been found to offer students with ID access to a greater array of course content and exposure to college peers without or with other disabilities (Papay et al., 2018). The counterpart to inclusive courses, are specialized courses. These are courses designed for and attended only by students with ID.

College experiences also provide students with ID opportunities to explore potential careers through internships and training experiences as well as to attain employment either on or off campus. Some studies have observed many IHE programs focus more on career exploration and employment preparation than on helping students attain paid employment while enrolled (Petcu, et al., 2015; Scheef, et al., 2018). This could impact student longer term outcomes as obtaining employment while in the program has been found to predict whether or not students have a paid job at exit (Grigal et al., 2018).

Credentials are the culminating documentation students earn upon completion of a program at an IHE. Some higher education programs provide students with ID with access to existing IHE credentials; others developed new credentials. The nature of these credentials varies in terms of their format and structure, and the extent to which they were approved by the host IHE (Shanley et al., 2014). Earning a credential approved by the IHE may also have a longer-

term impact on student outcomes as it has also been found to be a predictor of students having a paid job at program exit (Grigal et al., 2018).

The 2009 national survey of existing PSE programs conducted by Grigal et al. (2012) provided a snapshot of the landscape of service prior to the implementation of the HEOA and its subsequent investments into policy and program development efforts. As the authors acknowledged, "As it turns out, this survey was completed at an important time, right before the field it was describing embarked on significant changes" (p. 232). Ten years have passed since those data were collected and we now have the opportunity to reassess current provisions of higher education for students with ID and reflect on what has and has not changed. Using data captured by a national survey conducted in 2019, the current study provides an updated descriptive summary of existing PSE options for students with ID in the United States, sharing demographic information and outlining the extent to which practices in academic access, career development and employment, campus engagement, and credential attainment are being implemented in those programs. The study addressed the following research questions:

- What are the primary characteristics of programs at institutions of higher education (IHE) enrolling students with ID?
- What is the level of academic and campus access offered to enrolled students with ID?
- How are colleges and universities serving students with ID addressing career development and employment?
- What credentials are being offered to students with ID and what are the attributes of these credentials?

The 2009 survey included several questions no longer asked as part of the current survey, and some response options have changed. Given that, comparisons are made in the discussion

section between the present study and results derived from the survey conducted in 2009 are made on several variables.

## Method

Data for this study were derived from a survey used to update a directory of college and university programs enrolling students with ID maintained by the Institute for Community Inclusion at the University of Massachusetts Boston. As mentioned previously, this directory was initially developed using the findings from the survey conducted by Grigal and colleagues in 2009 and has been updated periodically over the past decade. All data were self-reported by higher education program personnel and not externally validated.

The survey consisted of 50 questions in eight areas: demographics, attendance requirements, acceptance process, retention and completion rates, costs, academics, employment, and housing and extracurricular activities. The primary purpose of the survey was to identify existing available programs and provide this information to the general public; therefore, required questions were limited to name of the IHE, the program name, address, and contact information. All other survey questions were optional; thus, response rates to individual questions varied. For the present analysis, we omitted responses to questions having less than a 50% response rate.

The survey was conducted between January and August of 2019. A fillable online survey was sent via email to the contact person for each existing program listing in the directory. In instances where existing information was available, the survey was prepopulated with this information. Follow-up reminder emails were sent to non-respondents. When emails were reported as non-deliverable, website contacts were reviewed to update the contact person and calls were made to each non-respondent. As of August 1st, 2019, 200 respondents had either

completed the survey or had confirmed existing program data were current and did not need updating. Sixty-six programs did not respond therefore we cannot confirm if any changes were needed on existing program information in the directory or if the preexisting information was reviewed and deemed accurate. In addition to updating information about existing programs, eight additional programs were also added to the directory throughout this period as information about them became available.

To ensure a consistent sample for analysis in the present study, we selected only those programs which: 1) were operated by, located at, or provided access to an accredited IHE that served a range of students (i.e., not only students with disabilities), 2) served students with ID, and; 3) had enrolled students for at least one year. From an initial sample of 274 programs in the directory, we removed seven listings for IHEs that served only students with disabilities and one listing for a program located at a nonaccredited IHE. We removed an additional nine programs that had not yet enrolled students, for a total of 17 programs removed from the sample. The final sample consisted of 257 programs. Data were analyzed using Microsoft Excel.

## Results

### Characteristics of Programs at IHEs for Students with ID

Programs were located in all but one state (West Virginia). The majority of programs ($n$ = 229) were operated by an IHE. The remaining 28 programs were either college-based transition programs operated by a school district in partnership with an IHE ($n$ = 17), an external support service providing access to but not affiliated with an IHE ($n$ = 3), or a program operated by an adult service agency ($n$ = 8). Two hundred thirteen (213) or 82.9% of these programs were located at a public IHE, 44 programs or 17.1% were at a private IHE. Just over half (56.8% or 146) operated at a 4-year college or university, and 102 or 39.7% programs were at a two-year

community college. Only five programs were located at or associated with a technical or trade school, and five operated on multiple campuses including 2- and 4-year IHEs.

A little over a third of programs (*n* = 91, 35.4%) were approved as a CTP, allowing them to offer federal financial aid to eligible students with ID. An additional 14 programs (*n* = 5.4%) reported they had applied to become a CTP and were awaiting approval from the federal student aid office. Almost a third of the programs (*n* = 80, 31.1%) indicated they had received funding from the TPSID model demonstration program either in 2010-2015, 2015-2020, or both; with 177 (68.9%) of respondents indicating their programs had never received TPSID funding.

**Planned Program Length**. The most common length for programs was two years (*n* = 91, 35.4%), followed by programs whose length was variable from student to student (*n* = 74, 28.8%). A few programs were one year (n = 13, 5.1%) or three years (n = 20, 7.8%) in length. Only 33 programs (12.8%) indicated they were four years or more and 88% of these were at four-year colleges and universities. Twenty-six programs (10.1%) did not respond to the question about planned program length.

**Students Served.** Programs were required to confirm they served students with ID but could also indicate if their program served students with other disability labels. A majority of programs (*n* = 216, 84.0%) supported students with autism. More than a third of programs (*n* = 102) also indicated they served students with other disabilities, such as cerebral palsy or traumatic brain injury or specified a type of ID such as Down syndrome. The majority of programs reported they served only adult students who were no longer attending high school (*n* = 155, 60.3%). Fewer programs reported serving only students enrolled in high school (*n* = 49, 19.1%) or serving both adults and high school students (*n* = 53, 20.6%).

**Number of Students Enrolled.** A total of 6,090 students were reported to be enrolled at 222 programs. Thirty-five programs did not report the number of enrolled students. The average program size was 27 students, the median size was 16 students, and the mode was 15 students.

**Admissions Criteria.** Basic admission requirements were reported by 246 programs. The survey provided five response options for potential admission requirements and allowed respondents to enter other requirements. A required age range was the most frequently reported admission requirement (181 programs, 70.4%). Of these programs, 179 (98.9%) had a minimum age requirement and 136 (75.1%) had a maximum age at which students are admitted. For minimum age, the mean, median, and mode were 18 and the range was 16 to 21. For maximum age, the mean and median were 25, the mode was 21, and the range was 21 to 99. The frequencies of the other four admission requirements were: a diploma other than a regular high school diploma (e.g., IEP diploma, certificate of attendance) is accepted ($n$ = 134, 52.1%), the student must be a resident of the state where the program is located ($n$ = 63, 24.5%), the student must be enrolled in a particular school system/local educational agency ($n$ = 48, 18.7%), and the student must have a regular high school diploma ($n$ = 3, 1.2%). Seventy-six programs ($n$ = 29.6%) entered other requirements such as documentation of ID, minimum reading or other academic level, eligibility for Vocational Rehabilitation (VR)/Medicaid/Individuals with Disabilities Education Act (IDEA), a required level of independence, employment experience, ability to abide by a code of conduct, and interest/motivation for enrolling in higher education.

**Program Costs.** Annual program costs (tuition, room and board, or other charges) were provided by 141 programs. At 18 programs students were charged $0 (including tuition and other charges). At programs where students were charged more than $0, the mean tuition was $11,200 per year (median $6,592, range $46 - $56,000), the mean room and board was $9,036 per year

(median $9,628, range $708 - $16,750), and the mean program fee was $4,281 per year (median = $3,000, range $20 - $16,940). Some programs listed other costs, for example books and supplies, transportation, support service fees, or student activity fees. At programs with other costs greater than $0, the mean other costs were $2,140 per year (median $959.50, range $15 - $12,200). Total cost for programs charging students more than $0 had a mean of $14,689 per year (median = $8,607, range $15 - $70,000).

**Student Funding.** Student method of funding was provided by 250 programs. The most frequently reported source of funding was private pay (*n* = 187 programs, 72.8%) followed by scholarships (*n* = 140, 54.5%) and VR funds (*n* = 133, 51.6%). Other sources of funding included federal financial aid (*n* = 91, 35.4%), local school district funds (*n* = 89, 34.6%), adult intellectual/developmental disability state/agency funds (*n* = 82, 31.9%), grant funding (*n* = 77, 30.0%), Medicaid waiver or day habilitation funds (*n* = 53, 20.6%), tuition waivers (*n* = 45, 17.5%), and other sources (*n* = 27, 10.5%). Seven programs (2.7%) did not answer this question. Eighty-six programs (33.5%) listed at least one scholarship available to students with ID.

## Academic and Campus Access Offered to Enrolled Students with ID

**Academic Access.** Access to typical college courses was reported by 222 of the 257 programs; 67.7% of the programs (*n* = 174), indicated students with ID were able to take courses for audit, 51.0% of programs (*n* = 131) indicated students with ID were able to take courses for credit, and 39.3% of programs (*n* = 101) indicated students were able to take continuing education courses. Students did not take any typical college courses at 24 programs (9.3%). Eleven programs did not respond to this survey question (see Table 1).

At 162 programs (63.0%), students were reported to take specialized courses only for students with ID. Of the remaining programs, 67 (26.1%) reported students did not take

specialized classes and 28 (10.9%) did not answer the question. The survey asked for examples of special classes. The most prevalent example of separate class provided was a class to teach particular skills, for example independent living or life skills, social skills, employment or career skills, or self-advocacy skills.

**Campus Access**. Eighty-six programs (33.4%) offered housing to students with ID, 150 programs (58.4%) did not offer housing, and 21 (8.2%) did not respond to this question. Of the programs offering housing, 64 (74.4%) offered inclusive on-campus housing, 23 (26.7%) offered inclusive off-campus housing, 6 (7.0%) offered specialized on-campus housing, and 10 (11.6%) offered specialized off-campus housing (see Table 1). Eleven programs offered another type of housing with most describing unique structures or systems developed to create access to housing such as options available to students but not affiliated with the IHE or program.

At 193 programs (75.1%) students were reported to join registered student organizations. The remaining programs reported students did not join student organizations (n = 32, 12.5%) or did not answer this question (n = 32, 12.5%). The survey asked programs to describe social/extracurricular activities and organizations in which students participated. Several programs responded students could participate in any social club or organization on campus. Many programs listed theater or sporting events attended by students and social activities in which students participated. Twenty-two programs specifically listed Best Buddies, a national volunteer program supporting one-to-one friendships for people with intellectual and developmental disabilities (www.bestbuddies.org) as an activity.

## Career Development and Employment

Two hundred twenty-one programs (86.0%) reported students participated in at least one type of career development activity. Students were reported to be participating in a range of

career development activities including internships (*n* = 200 programs, 77.8%), volunteer work (*n* = 181, 70.4%), community service (*n* = 149, 58.0%), and work study (*n* = 57, 22.2%). Five programs (1.9%) responded students did not participate in any of the career development activities listed, and 31 programs (12.1%) did not respond to the career development question.

Respondents were asked to provide the percentage of students in the most recently completed academic year who were engaged in paid, competitive employment while attending the program. The employment rate of students while enrolled was reported by 178 programs (69.3%) and ranged from 0 to 100% with a median of 40%. One third of respondents indicated 20% or fewer of the students enrolled were employed, 35% of respondents indicated 21-60% of their enrolled students were employed, and 30% of respondents indicated over 60% of enrolled students were employed. Respondents were also asked to provide the percentage of students who completed the program in the previous year who had attained paid competitive employment within 90 days of exiting. Just over half of the respondents answered this question (*n* = 146, 56.8%). The employment rates of students within 90 days of exit ranged from 0 to 100% with a median of 65%. Twenty-three percent of the programs who responded indicated 20% or fewer of the students were employed within 90 days of exit, 25% of respondents indicated 21-60% of their enrolled students were employed within 90 days or exit, and 52% of programs indicated over 60% of enrolled students were employed within 90 days of exit.

**Credentials**

Over two thirds of the respondents (*n* = 175, 68.1%) reported offering some type of credential, and of those, 63 offered a credential approved by the IHE. Fifty programs reported they did not offer a credential and 32 programs did not respond to the credential question. Nineteen programs offered a credential open to all students at the IHE compared with 95

programs which offered a credential only for students in the program. Twenty-seven programs offered a continuing education credential. Twenty-five programs responded they had a credential but did not provide additional detail.

## Discussion

The substantial investment in the past decade to expand or enhance PSE options for students with ID has resulted in a growing number of IHEs enrolling these students. Data from programs funded by the TPSID model demonstration program provide information about student engagement in critical domains and the associated outcomes; however, these data do not reflect the full universe of existing IHE program offerings in the United States. The present study offers a fuller national picture of currently identified PSE programs enrolling students with ID. In the following discussion, where possible, we make comparisons with the national survey findings from a decade ago (Grigal et al., 2012). A summary of these comparisons is shown in Table 2.

### Characteristics of PSE Programs

A substantial increase in availability of options for students with ID to attend higher education across the U.S. is evident, growing from 149 programs in 2009 to 274 programs as of August 1st, 2019 - an increase of 84%. Two hundred fifty-seven programs were included in the sample for the present descriptive analysis, which included programs located in all but one state. The 2009 survey found 11 states with no programs (Grigal, et al., 2012). See Figure 1 for the number of programs in each state.

Two hundred twenty-two programs reported the number of students attending their program in 2019 totaling 6,090 students. These findings offer the first national estimate of the number of students with ID enrolled in higher education in the US. Thirty-five programs did not report the number of enrolled students. Currently students with ID attending colleges and

universities are either not present or not easily discernable in other existing national higher education datasets (Grigal, et al., 2019). Given 35 programs failed to provide the number of students served, 6,090 is most likely an underestimate. Using a conservative estimate of 10 students per program attending the 35 programs not reporting the number of students enrolled, there could be an additional 350 additional students or more enrolled in PSE programs in 2019, bringing the more accurate estimate closer to 7000 students. Comparisons with student enrollment from 2009 is not possible, as student enrollment was not sought in that study.

Although there has been a considerable increase in the number of higher education institutions enrolling students with ID, the distribution of programs across two- and four-year IHEs has not changed substantially. In 2009, slightly more than half of the programs (51%) were in four-year colleges or universities and 40% were in two-year community colleges (Grigal et al., 2012) compared with 56.8% and 39.7% in 2019 respectively. Of note is the slightly higher proportion of two-year colleges present in this sample when compared with the programs funded by TPSID grants, where only 31% of the programs in 2018-19 were at two-year colleges (Grigal et al., 2019). This is likely due to the selection criteria used in the TPSID application process which afforded preference to programs able to offer housing. Given most two-year colleges are not able to offer housing, this likely resulted in a greater number of four-year colleges and universities receiving TPSID grants than four year or community colleges (Grigal et al., 2016).

Only 1.9% of programs surveyed in 2019 were located in career/technical education (CTE) colleges (referred to in the survey as technical or vocational/trade school) compared with 10% of programs located at CTE colleges in 2009 (Grigal et al., 2012), indicating a substantial decrease in such programs. The limited number of options for students with ID at CTE colleges highlights the need to conduct outreach, disseminate knowledge, and provide technical assistance

to the CTE community to ensure this higher education option is a choice for more students with ID who are interested in careers requiring specialized training (Lombardi, et al., 2018).

The type of IHE (i.e., two- or four-year) did not necessarily reflect the length of the program. For example, though almost all four-year programs were at four-year universities, there were twice as many two-year programs than four-year programs at four-year universities. Almost 30% of programs indicated program length varied depending upon the needs of the student, indicating the person-centered approach required in the TPSID programs may be used widely by IHE programs. The issue of optimal program length remains to be examined, particularly in light of findings by Grigal, et al., (2018) who found students with ID attending federally funded TPSID programs had an increased likelihood of obtaining paid employment as the number of years they attended a program increased. These authors contended the impact of program length on employment might be due to a lack of effort in earlier years to help students obtain paid employment (Grigal et al., 2018).

About 60% of programs served *only* students who had graduated or exited high school while almost 20% of programs served *only* students who were still enrolled in high school. Our findings reflect a decrease in the overall proportion of programs serving transition-aged high school students since 2009 (26%, Grigal, et al., 2012). A similar decrease in the percentage of students attending college-based transition programs has been found in data on TPSID model demonstration programs (Grigal et al., 2019). Findings from both data sources suggest although there has not been a decrease in the number of college-based transition programs, there has been a larger emphasis on developing programs for students who exited high school.

**Prevalence of TPSID Programs.** The present survey found 80 programs, about a third of existing programs in the US, had received TPSID funding, suggesting the TPSID model

demonstration program has led to a portion of the growth in available higher education options. However, the majority of programs (68.9%) have not received any TPSID funding, indicating substantial program development outside of this source of funding. Grigal, Hart, and Papay (2019) suggest the TPSID model demonstration program has spurred interest in inclusive higher education as evidenced by statewide initiatives, including expanded state policies or funding. In a recent policy summary, Jernudd, et al., (2019) identify 27 pieces of proposed legislation and 11 pieces of passed legislation addressing higher education for students with ID.

**Costs and Funding**

In the 2016-2017 academic year, the average cost of attending college in the U.S. including tuition, fees, room, and board was $17,237 at public institutions, $44,551 at private nonprofit institutions, and $25,431 at private for-profit institutions and these costs have been rising annually over the past 15 years (National Center on Education Statistics, 2019). For families of students with ID, understanding what to anticipate in terms of the costs of college and the potential funding resources is vital. This is especially true for those families who may have been discouraged from expecting their child with an ID to go to college and thus may not have created a college savings account for their child (Kelley & Westling, 2019).

Our findings captured the costs of the PSE programs enrolling students with ID and included information on tuition and fees, room and board, as well as program-specific fees and other charges. Slightly over half of programs provided information on their costs, and these costs reflected great disparity, with a median cost of $8,607 and a range from $15 to $70,000. The majority (72.8%) of programs reported students with ID were paying for college tuition and fees with family funds, reflecting an increase in use of family funds from the national survey conducted in 2009 (61%, Grigal et. al., 2012). Scholarships were the second most frequently

identified payment mechanism (54.5% of programs) with a third of programs listing at least one available scholarship, a large increase over the 30% of programs listing scholarships as a funding option in 2009 (Grigal et al., 2012).

Preparation for employment is a focus in many PSE programs for students with ID (Petcu, et al., 2015; Scheef, et al., 2018) making these programs a seemingly good fit for the intended focus of vocational rehabilitation (VR) services. Our findings support this with VR being the third most cited method of payment for college (51.6%); an increase from the 30% of programs listing VR as a funding option in 2009 (Grigal et al., 2012). However, state and local support for use of VR funds for students with ID to access PSE has been inconsistent (Lee, et al., 2018) making it difficult for some students to receive these services in higher education (Grigal et al., 2016). To address this inconsistency, the Office of Special Education and Rehabilitative Services (OSERS), recently issued guidance seeking to clarify the sanctioned use of VR funds to support students with ID attending college (USDOE, 2019).

Given the process to award federal student aid (FSA) to students with ID attending approved CTPs had not yet been implemented at the time of the 2009 study, direct comparisons cannot be made in the use of this funding source. Our findings reflect just over a third of programs (35.4%) reported students used FSA funds to cover costs of attendance. While our data did not provide levels of individual student usage, a recent report from the NCC indicated FSA was awarded by 98 colleges and universities to 459 students with ID in 2019 (Grigal, et al., 2019). A total of $2,064,362 was awarded in Pell grants, $73,627 in Supplemental Education Opportunity Grants, and $48,528 in federal Work-Study (Grigal et al., 2019). As the availability of FSA offerings grow, usage data will be helpful in determining its impact on student

enrollment and outcomes. Given the high percentage of students using personal funds to cover enrollment costs, there remains a need to expand access to FSA for students with ID.

Finally, use of Medicaid waiver funds to support student tuition almost doubled from 11% in 2009 (Grigal et al., 2012) to 20.6% in 2019, but is still not a widely used option. Medicaid waiver fund availability and eligibility criteria varies immensely from state to state which may contribute to the underutilization of these funds (Parisi & Landau, 2019). While there is room for improvement to ensure equitable access to all available funding sources, our findings indicate students with ID are using a variety of sources to fund their college education, not unlike their college peers without ID (National Center for Education Statistics, 2019).

## Academic and Campus Access

**College Course Access.** Several factors impact the type and number of college courses students with ID are allowed to access including faculty concerns, university policies, and available supports (Gibbons, et al., 2015; Griffin, et al., 2016; Plotner & Marshall, 2014). One study found while faculty were generally positive about the idea of PSE for students with ID, they may worry about the impact participation may have on other students in their classroom (Gibbons et al., 2015). University policies regarding prerequisites and grading may also be barriers to college course access (Plotner & Marshall, 2014). The availability of well-trained peer mentors and other academic supports may have an effect on course participation (Griffin et al., 2016) as may the use of a universal design for learning approach in college classrooms (Love, et al., 2017). Papay, et al., (2018) examined predictors of access to typical college classes by analyzing data on 672 first-year students with ID who enrolled in 3,233 inclusive college courses at TPSID programs. Significant positive predictors included the age of the student, whether the student attended a program offering access to regular student advising or provided an official

transcript, and whether the student had a paid job. A negative predictor was whether the student took any specialized courses (Papay et al., 2018).

In the current study, respondents indicated the enrollment options of college courses students had taken in their program. Slightly over half of programs reported students had the option to take courses for credit, whereas a greater number of programs reported students could audit classes. The option of enrolling in a course for credit may be more related to the policies and practices of the program than to the abilities of the student. For those programs who indicate students only audit college courses, this enrollment option may be a policy of the program, a requirement of the IHE, or a reflection of pre-conceived ideas about the capabilities of students with ID (Papay et al., 2018). There are benefits to the student to be able to take college courses for credit. Courses taken for credit can be counted towards a typical certificate or degree offered by the IHE, whereas those courses taken for audit are likely only to be counted towards a program-specific credential (Grigal et al., 2016). Courses taken for credit can also be transferred to another IHE. Further, in a class taken for credit, the student's experience in the class will be more like other students and interactions with college faculty will perhaps be more authentic than if they are enrolled for audit. On the other hand, the option to audit college courses allows for a more individualized approach to the course content and assignments, which may help to make the course more accessible and meaningful to students with ID.

In addition to typical college courses, 63% of respondents indicated students at their program took one or more specialized courses – those created specifically for the program and attended only by students with ID. In the present study, only 26.1% of programs indicated there were no separate classes (10.9% did not respond to the question). It is discouraging to note the majority of programs relied, at least in part, on separate instruction, given studies attest to the

positive impact access to inclusive college courses can have on students in these programs. For example, a study by Qian, et al., (2018) of students who attended TPSID programs located at two community colleges found students who enrolled in only inclusive classes were almost five times more likely to have jobs paying minimum wage or above, compared with students who enrolled in some specialized courses. Similarly, a study Grigal, et a., (2018) examining data on students who attended TPSID programs between 2010 and 2015 found students who took higher numbers of specialized courses were significantly less likely to obtain paid jobs while in the program than students who took fewer specialized courses.

In light of this research, it is heartening to see there has been a gradual decrease in the number of programs offering specialized instruction: 75% of programs required specialized courses as part of their program in 2009 (Grigal et al., 2012) as compared to 63% in the most recent study. However, there is more work to be done to ensure students with ID have access to inclusive college courses and program developers understand the implications of continuing to rely on separate, specialized courses (Papay, et al., 2018).

**Campus Access.** In 2019, eighty-six programs or slightly over 33% of college programs offered housing to students with ID, indicating housing options are not available for the majority of students with ID attending college. Furthermore, a quarter of these programs offered specialized (i.e., not inclusive) on- or off-campus housing, suggesting living in campus housing with peers without disabilities is available to an even smaller number of students. In the past decade, while the number of housing options have increased, from 58 college programs offering on or near campus housing in 2009 to 86 in 2019, the proportion of programs offering housing has not increased, and has in fact decreased slightly, since 2009 (Grigal, et al., 2012). Together,

these findings indicate access to inclusive campus housing is an area in which little growth has been seen over the past decade.

Documented barriers to establishing access to campus housing include limited space and issues of liability surrounding the perceived vulnerability of students with ID (Kelley, 2017; Plotner & Marshall, 2014). Yet studies have shown college students with ID who live on campus adjust as well as peers without ID (Hendrickson, et al., 2013), and reports from programs offering inclusive campus housing indicate barriers can be overcome through collaborative partnerships across campus (Kelley, 2017).

**Career Development and Employment**

A large majority of programs indicated students participated in at least one type of career development activity, such as internships, volunteer work, or community service, while enrolled. Similar to findings from federally funded TPSID programs (Grigal et al., 2019), career development experiences in programs across the nation appeared to focus more on employment preparation activities than on paid employment. These findings echo those of Petcu, et al., (2015) who conducted a national survey of higher education programs serving students with ID finding the majority of students were receiving numerous employment preparation supports but little access to paid work experiences.

In the current study, the percentage of students in paid work varied considerably, with some programs indicating a very low percentage of students in paid employment and others indicating the majority of their students were in paid employment. Without access to individual student-level data, it is not possible to ascertain the true rate of student employment. More than 40% of respondents did not respond to the question regarding percentage of students in the most recently completed academic year who had paid, competitive, integrated work while enrolled. In

contrast, the non-response rate to the question regarding career development experiences was only 12%. We cannot know if respondents failed to answer the former question because they didn't have access to those data or if they had access to the data and choose not to share it.

Of course, the primary purpose of this dataset was not to capture and assess student outcomes but to offer parents and students information about key program features to assist them in identifying college options. Some students and families may place a strong value on employment outcomes and others may not. There is an increased emphasis in the U.S. on documenting the outcomes of college and university graduates (McFarland, et al., 2019). In 2019, the college scorecard tool ( https://collegescorecard.ed.gov/) was updated to offer prospective students relevant data on potential debt and earnings based on fields of study at specific colleges and universities. This trend may result in a stronger commitment to gathering employment and outcome data in the future for PSE programs enrolling students with ID.

**Credentials**

Credential attainment is a core indicator of higher education program performance. In the 2009 survey, information about credentials for students with ID were not sought nor reported. The emergence and emphasis on credential development and attainment in PSE programs for students with ID is a sign of growth and demonstrates an increased alignment with traditional higher education accountability structures. Most higher education programs for students with ID result in the attainment of a certificate rather than a degree (Grigal et al., 2019). The programs responding to our survey offered credentials which varied in the type: some provided only to students in the program whereas others were available to all students at the IHE including students with ID. In some programs, credentials were approved or issued by the IHE, but at

others the credentials were issued by the program and not by the IHE. Just under a third of programs either awarded no credential or did not respond to the question about credentials.

The issuing entity of credentials may have an impact on student outcomes; as highlighted in a study by Grigal et al., (2018) who found earning a credential awarded by the IHE significantly increased the odds of having a paid job within 90 days of exit. PSE programs for students with ID must balance meeting the needs of students by offering a person-centered approach and a flexible course of study with the need to offer a rigorous course of study resulting in a high-quality credential. This is an area of continuing development, and our findings indicate credentials approved by an IHE are currently not available at a majority of PSE programs enrolling students with ID.

## Limitations

The present study has several limitations which must be acknowledged. Being included in this directory was optional for every college program, and while there was an offer made to every new program to be added, it was up to each program to determine whether or not they were to respond to the survey. Therefore, existing programs may be missing. Data were self-reported and programs were not asked to submit supporting documentation to verify their responses. Almost all questions on the online survey were optional, therefore missing data existed for many of the questions We attempted to address this by eliminating variables where the response rate fell below 50%. However, missing data may present a potential for bias in our findings. In particular, there was a high degree of missing data for questions related to the employment rates of students as well as related to program costs. It is also possible items on the survey may have been interpreted differently by programs. Finally, the lack of individual student

data prevented clearer information about the employment experiences and college courses accessed by students enrolled in these programs.

**Implications for Practice**

Implications from our study cross various realms of practice including K-12 special education and transition, personnel preparation, and higher education. It is a challenging transition to go from a special education experience in a high school to learning with peers without disabilities on a college campus. One way to ease this transition for students with ID is through the provision of college-based transition services; supporting students with ID to receive their transition services on a college campus. Our findings suggest the development of this type of transition services is slowing down. While earlier efforts aimed at developing these kinds of experiences demonstrated positive outcomes in terms of LEA and IHE collaboration, increased in student employment and self-determination (Dwyre & Deschamps, 2013; Grigal, Dwyre, et al., 2012), the data from this study illustrate these services remain somewhat limited and efforts to further develop them have diminished. Practitioners seeking to better support students to access college experiences while still in high school can work with existing programs to build collaboration. They can also investigate existing resources about aspects of college-based transition practices to better facilitate these experiences on campuses (Hanson, 2019; Paiewonsky, et al., 2018) and explore collaborative efforts with local IHEs.

Our findings confirm significant growth has occurred in the availability of college and university options for students with ID. Consequently, more than 6000 students with ID are now enrolled in higher education, and it is likely these numbers will continue to grow. This suggests educators are becoming more aware of PSE options for students with ID and may be better preparing students and their families to seek out and engage in the college search process. Yet

there is still progress to be made. In 2016-2017 there were 35,338 students with ID served under IDEA who exited school (USDOE, 2019). How many of these students were offered information about higher education options? Preservice and in-service training for secondary special education and transition professionals should include information on higher education options, including strategies to better prepare students with ID to succeed in college.

There are several areas where programs at IHEs for students with ID have improved over the past decade, including growing access to funding from VR and Medicaid and a growing number of programs with CTP approval offering students with ID access federal financial aid. This is the result of hard work by program staff as well as students and families. But there are several areas in need of continued improvement. The survey revealed a continued overreliance on specialized coursework, few programs offering meaningful credentials recognized and issued by the IHE, and limited housing options available, in particular inclusive on-campus housing. In terms of funding, our findings suggest there is underutilization of Medicaid funds to support access to PSE, and there are many programs yet to seek CTP approval. These are areas worthy of focused and sustained attention by program staff as well as those who are developing new higher education programs to ensure continued growth in access to high quality PSE programs.

Finally, the lack of responses in some critical information areas like program cost and employment reflect a knowledge gap about some programs. It is possible programs share this vital information via other means (in program materials or on their website) with families and students. However, the lack of a centralized source for this critical information makes it more difficult for families to make informed choices in selecting the college best suited to their child. Federal resources such as the College Scorecard and the College Navigator ensure such information is available to college students without ID. Without a similar resources educators

supporting students and families must instead help them to investigate existing college information and facilitate deeper connections via phone calls or potentially college visits to ensure students have the full picture of the colleges of their choice. Often these types of disclosures for IHEs are tied to program eligibility for FSA or to obtain or retain accreditation. These kinds of disclosures are not yet required for IHE programs enrolling students with ID, however with the recent creation of model accreditation standards, these programs may find public disclosure of this kind of information will be necessary in the future.

**Implications for Research**

Several directions for future research emerge from our findings. Knowing what is available nationwide is an important first step, but there is a need for further research examining the practices and outcomes of programs who did and did not receive TPSID funding. Of particular importance is the need for studies connecting program practices with the outcomes achieved by graduates. For example, given the wide range in program costs and variability in program length, researchers could examine whether or not the cost, inclusivity or length of a program is associated with employment or other outcomes. However, these proposed studies would require a complete dataset with full responses from all programs and expanded data collection on student outcomes. It is especially challenging to request this information from programs on a voluntary basis without any mandate or funding to entice responses.

These data also highlight needed further exploration of the current nature and provision of college-based transition services to students with ID and the decreased trend to offer this option. The current structure of OSEP data reports do not identify if and when students 18 years of age or over are receiving services in college-based transition programs. The recently published longitudinal data on transitioning youth (NLTS-2012) also fails to identify these educational

placements, making it difficult to verify the prevalence of these services using other national data sources. Updated guidance on use of local education agency funds to support students with disabilities to access college-based transition programs was recently issued by OSERS (USDOE, 2019); however, it is too early to discern if this guidance will have an impact on the development or implementation of college-based transition programs or services. Future research is needed to further clarify when and where students with ID are receiving college-based transition services and the subsequent outcomes achieved by those students.

The very small number of programs located in CTE colleges, demonstrates a need for better understanding why these types of IHEs are lagging behind in program development. Future studies could be conducted to examine the structure of existing programs at CTEs and to discern how replication efforts could be implemented. Studies could also be conducted with CTEs to ascertain if they have concerns or restrictions particular to their respective courses of study negatively impacting development efforts.

**Implications for Policy**

The variability of higher education options for students with ID could be construed as a strength, with an array of options meeting diverse needs and goals of these students. However, this variability also presents a challenge in communicating the similarities and differences among these programs. These differences may be clearer in more traditional PSE options. For example, it might be clear to families and students a workforce certificate program at a career and technical college would entail different kinds of coursework than would attaining a degree at a four-year liberal arts university. Distinctions between IHE programs enrolling student with ID can be complex involving less traditional areas of instruction such as employment, independent living and campus membership. McEathron et al.'s, 2013 taxonomy of PSE program domains,

components, and elements offers an approach to differentiate these similarities and difference and also illustrates the complex structures of these programs.

Future efforts could seek to align program descriptions with existing frameworks such as the taxonomy (McEathron et al., 2013) and align planning activities with newly developed accreditation standards. The HEOA (2008) required the TPSID NCC to convene a workgroup and develop model accreditation standards. These standards were developed and shared with Congress in 2016 and subsequently the NCC has conducted a field test of those standards (National Coordinating Center Accreditation Workgroup, 2016) and finalized standards are anticipated in 2021. We believe the accreditation standards and an associated accreditation process will bring a degree of uniformity to the field and assist families and students in their search for quality postsecondary education services resulting in improved student outcomes.

## Conclusion

The landscape of higher education for students with ID in the U.S. has evolved considerably since the first national survey of programs was conducted in 2009. Various federal initiatives have led to increased program development and implementation, evaluation and research, and policy development. Higher education options for students with ID are now available in almost every state. In addition to increased availability of programs, the nature and quality of the programs have also evolved with enhanced focus on academic inclusion, paid employment and credential attainment. Like those from 2009, this current national dataset offers a picture of services in a moment in time; reflecting a decade of substantial investment and change. These data serve a dual purpose. From a research perspective, they provide a metric for gauging changes related to students served, funding utilized, and services offered. From a practice standpoint, they also provide critical information about existing higher education options

for educators, families, and students. As the next decade of work begins to further develop higher education options for students with ID, there will likely be advancements in credential options and accreditation requirements, aligning with more traditional higher education accountability methods. Another potential advancement could be the inclusion of these program in more generic college search directories such as the College Navigator or the College Scorecard. As these programs become more common and are viewed as another aspect of higher education becoming more responsive to the needs of diverse learners, it is possible the colleges and universities may seek to add some of these program specific data to their public profiles in other directories. Until this occurs, these data will continue to offer scholars and students, families and educators the means to locate and learn about existing higher education options for students with ID in the United States.

References

Dwyre, A., & Deschamps, A. (2013). Changing the way we do business: a job development case study. Improving staff skills and paid job outcomes for students with disabilities. Think College. Boston, MA: University of Massachusetts Boston, Institute for Community Inclusion.

Consortium on Postsecondary Education for Individuals with Intellectual and Developmental Disabilities, (2013). Final Project Report (CFDA 93.625. Think College. Boston, MA: University of Massachusetts Boston, Institute for Community Inclusion.

Gaumer, A. S., Morningstar, M. E., & Clark, G. M. (2004). Status of community-based transition programs: A national database. *Career Development for Exceptional Individuals, 27*, 131-149. 10.1177/088572880402700202

Gibbons, M. M., Cihak, D. F., Mynatt, B., & Wilhoit, B. E. (2015). Faculty and student attitudes toward postsecondary education for students with intellectual disabilities and autism. *Journal of Postsecondary Education And Disability*, *28*, 149 -162.

Griffin, M. M., Wendel, K. F., Day, T. L., & McMillan, E. D. (2016). Developing Peer Supports for College Students with Intellectual and Developmental Disabilities. *Journal of Postsecondary Education and Disability*, *29*, 263-269.

Grigal, M., Dwyre, A., Emmett, J., & Emmett, R. (2012). A Program Evaluation Tool for Dual Enrollment Transition Programs. Teaching Exceptional Children, 44, 36-45.

Grigal, M., Hart, D., & Migliore, A., (2011). Comparing the Transition Planning, Postsecondary Education, and Employment Outcomes of Students with Intellectual and Other Disabilities, *Career Development for Exceptional Individuals*, 34, 4-17.

Grigal, M., Hart, D., Papay, C., Smith, F., Domin, D. & Lazo, R. (2019). Year Four Annual Report of the TPSID Model Demonstration Projects (2018–2019). Boston, MA: University of Massachusetts Boston, Institute for Community Inclusion.

Grigal, M., Hart, D., Smith, F. A., Domin, D., & Weir, C. (2016). Think College National Coordinating Center: Annual report on the Transition and Postsecondary Programs for Student with Intellectual Disabilities. Boston, MA: University of Massachusetts Boston, Institute for Community Inclusion.

Grigal, M., Hart, D. & Weir, C. (2012). A survey of postsecondary education programs for students with intellectual disabilities in the United States. *Journal of Policy and Practice in Intellectual Disabilities, 9,* 223–233. doi:10.1111/jppi.12012

Grigal, M., Migliore, A., & Hart, D. (2014). A state comparison of vocational rehabilitation support of youth with intellectual disabilities' participation in postsecondary education. *Journal of Vocational Rehabilitation,* 40, 185-194.

Grigal, M., Papay, C., Smith, F., Hart, D., & Verback, R. (2018). Experiences that Predict Employment for Students with ID in Federally Funded Higher Education Programs. *Career Development and Transition for Exceptional Individuals, 42,*17-28.

Hanson, T. (2019). Clarifying the Roles and Responsibilities of College-Based Transition Services. How To Think College, Issue No. 8. Boston, MA: University of Massachusetts Boston, Institute for Community Inclusion.

Hart, D., Mele-McCarthy, J., Pasternack, R. H., Zimbrich, K., & Parker, D. R. (2004). Community college: A pathway to success for youth with learning, cognitive and intellectual disabilities in secondary settings. *Education and Training in Developmental Disabilities, 39,* 54-66.

Hart, D. , Zimbrich, K. , & Parker, D.R. ( 2005). Dual enrollment as a postsecondary education option for students with intellectual disabilities. In E. E. Getzel & P. Wehman (Eds.), Going to college (pp. 253-267). Baltimore: Brookes

Higher Education Opportunity Act of 2008, P.L. 110–315, 122 Stat. 378, 20 U.S.C. §§1001 et seq. (2008).

Hendrickson, J. M., Vander Busard, A., Rodgers, D., & Scheidecker, B. (2013). College students with intellectual disabilities: How are they faring? Journal of College & University Student Housing, 39/40, 186-199.

Jernudd, I., Nagaraj, S., Mueller, S., Rozell, D. (2019). State Policy Actions Supporting Higher Education for Students with Intellectual and Developmental Disabilities. Think College Insight Brief Issue No. 42. Boston, MA: University of Massachusetts Boston, Institute for Community Inclusion.

Kelley, K. (2017). Developing Inclusive Residential Living on College Campuses. How To Think College, Issue No. 2. Boston, MA: University of Massachusetts Boston, Institute for Community Inclusion.

Kelley, K.R. and Westling, D.L. (2019). Teaching, Including, and Supporting College Students with Intellectual Disabilities. New York: Routledge.

Lee, S., Rozell, D., & Will, M. (2018). Addressing the Policy Tangle: Students with ID and the Path to Postsecondary Education, Employment and Community Living. Washington, DC: Inclusive Higher Education Committee.

Lee, S. S., & Will, M. (2010). The role of legislation, advocacy, and systems change in promoting postsecondary opportunities for students with intellectual disabilities. In M.

Grigal & D. Hart (Eds.). Think College! Postsecondary Education Options for Students with Intellectual Disabilities. Baltimore, MD: Brookes.

Lombardi, A. R., Dougherty, S. M., & Monahan, J. (2018). Students with Intellectual Disabilities and Career and Technical Education Opportunities: A Systematic Literature Review. *Journal of Disability Policy Studies*, *29*, 82-96.

Love, M. L., Baker, J. N., & Devine, S. (2017). Universal design for learning: Supporting college inclusion for students with intellectual disabilities. *Career Development and Transition for Exceptional Individuals,* 2165143417722518.

McEathron, M. A., Beuhring, T., Maynard, A., & Mavis, A. (2013). Understanding the Diversity: A Taxonomy for Postsecondary Education Programs and Services for Students with Intellectual and Developmental Disabilities, *Journal of Postsecondary Education and Disability*, 26, 303-320

McFarland, J., Hussar, B., Zhang, J., Wang, X., Wang, K., Hein, … & Barmer, A. (2019). The Condition of Education 2019 (NCES 2019-144). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

National Center for Education Statistics (2019a). Student Financing of Undergraduate Education in 2015–16: Income, Tuition, and Total Price. Washington, DC: U.S. Department of Education. Retrieved from https://nces.ed.gov/pubs2019/2019473.pdf

National Center for Education Statistics (2019b). *Digest of Education Statistics*, 2017 (NCES 2018-070), Table 330.10.

National Coordinating Center Accreditation Workgroup (2016). Report on Model Accreditation Standards for Higher Education Programs for Students with ID: A Path to Education,

Employment, and Community Living. Boston, MA: University of Massachusetts Boston, Institute for Community Inclusion.

Neubert, D. A., Moon, M. S., & Grigal, M., & Redd. (2001). Post-secondary educational practices for individuals with mental retardation and other significant disabilities: A review of the literature. *Journal of Vocational Rehabilitation, 16*, 155-168.

O'Brien, P., Bonati, M. L., Gadow, F., & Slee, R. (Eds.). (2019). People with ID experiencing university life: Theoretical underpinnings, evidence and lived experience. Rotterdam, Netherlands: Sense Publishers.

Office of Special Education and Rehabilitation Services (2019). Increasing Postsecondary Opportunities and Success for Students and Youth with Disabilities: Questions and Answers. Washington, DC: Author.

Paiewonsky, M., Hughes, L., & Landau, J. (2018). Engaging Parents in Conversations About College-Based Transition Services. Think College Insight Brief, Issue No. 37. Boston, MA: University of Massachusetts Boston, Institute for Community Inclusion.

Papay, C., Grigal, M., Hart, D., Kwan, N., & Smith, F. A. (2018). Predictors of Inclusive Course Enrollments in Higher Education by Students with Intellectual and Developmental Disabilities. *Intellectual & Developmental Disabilities, 56*, 458–470.

Parisi, P. & Landau, J. (2019). Use of Medicaid Waivers to Support Students with Intellectual Disability in College . Think College Insight Brief, Issue No. 40. Boston, MA: University of Massachusetts Boston, Institute for Community Inclusion.

Petcu, S. D., Chezan, L. C., & Van Horn, M. L. (2015). Employment support services for students with intellectual and developmental disabilities attending postsecondary education programs. *Journal of Postsecondary Education and Disability*, *28,* 359–374.

Plotner, A. J., & Marshall, K. J. (2014). Navigating university policies to support postsecondary education programs for students with intellectual disabilities. *Journal of Disability Policy Studies*, 1044207313514609.

Plotner, A. J., & Marshall, K. (2015). Postsecondary education programs for students with an ID: Facilitators and barriers to implementation. *Intellectual and Developmental Disabilities, 53*, 58–69.

Qian, X., Johnson, D. R., Smith, F. A., & Papay, C. K. (2018). Predictors associated with paid employment status of community and technical college students with intellectual disability. *American Journal on Intellectual and Developmental Disabilities*, *123*, 329–343.

Sitlington, P. L., & Clark, G. M. (2006) Transition Education and Services for Students with Disabilities. New York: Pearson.

Scheef, A. R., Barrio, B. L., Poppen, M. I., McMahon, D., & Miller, D. (2018). Exploring barriers for facilitating work experiences opportunities for students with intellectual disabilities enrolled in postsecondary education programs. *Journal of Postsecondary Education and Disability, 31*, 209–223.

Shanley, J., Weir, C., Grigal. M. (2014). Credential Development in Inclusive Higher Education Programs. Serving Students with Intellectual Disabilities. Think College Insight Brief, Issue No. 25. Boston, MA: University of Massachusetts Boston, Institute for Community Inclusion

Turnbull, A. P. (1995). Exceptional lives: Special education in today's schools. Merrill/Prentice Hall, Old Tappan, NJ.

U.S. Department of Education (2019), Office of Special Education Programs, Individuals with Disabilities Education Act (IDEA) Section 618 Data Products: State Level Data Files. Retrieved January 8, 2019.

Wehmeyer, M. L., Agran, M., Hughes, C. (1998). Teaching self-determination to youth with disabilities: Basic skills for successful transition. Baltimore: Paul H. Brookes.

Winzer, M.A., & Mazurek, K. (2000). Special Education in the 21st Century: Issues of Inclusion and Reform. Washington, DC: Gallaudet University Press.

Table 1

*Academic and Campus Access Offered to Enrolled Students with ID*

| Academic or campus access variable | | *n* | % |
|---|---|---|---|
| Type of typical courses taken | Typical college courses for credit | 131 | 51.0% |
| | Typical college courses for audit | 174 | 67.7% |
| | Typical continuing education courses | 101 | 39.3% |
| | Students do not take typical college courses | 24 | 9.3% |
| | No response | 11 | 4.3% |
| Students take special courses only for students in the program | Yes | 162 | 63.0% |
| | No | 67 | 26.1% |
| | No response | 28 | 10.9% |
| Program offers housing | Yes | 86 | 33.4% |
| | No | 150 | 58.4% |
| | No response | 21 | 8.2% |
| Type of housing | Inclusive on-campus | 64 | 74.4%[a] |
| | Inclusive off-campus | 23 | 26.7% |
| | Specialized on-campus | 6 | 7.0% |
| | Specialized off-campus | 10 | 11.6% |
| | Other | 11 | 12.8% |

N = 257 programs. Note. [a] Of *n* = 86 programs that offered housing

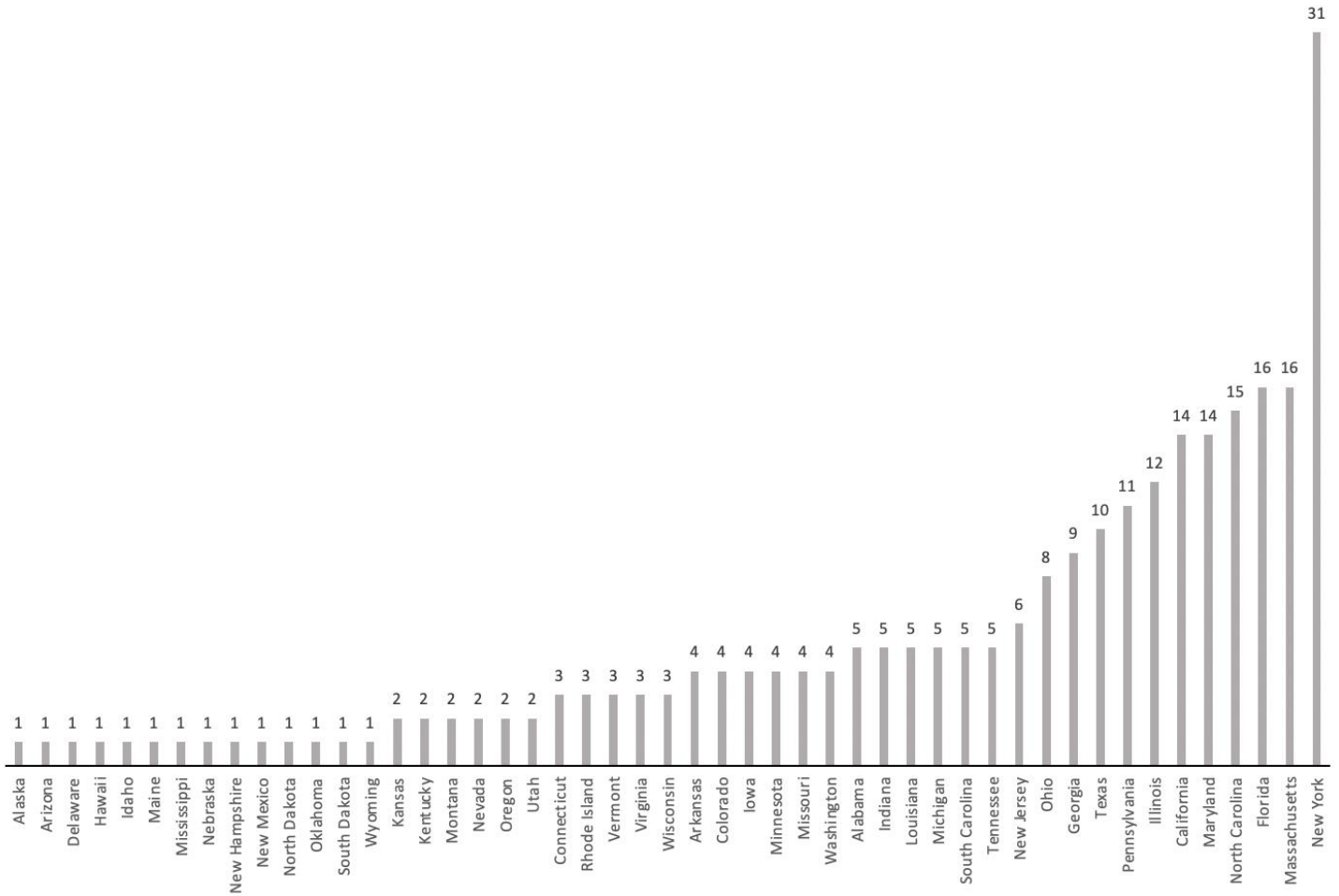
Table 2

*Comparison of 2009 and 2019 Findings*

| Variable | 2009 | 2019 |
|---|---|---|
| Number of programs | 149 | 274 |
| Number of states with programs | 39 | 49 |
| % of programs at four-year IHEs | 51% | 57% |
| % of programs serving only students enrolled in high school | 26% | 20% |
| % of programs reporting students used family funds to pay for tuition | 61% | 73% |
| % of programs reporting students used VR funds to pay for tuition | 30% | 52% |
| % of programs requiring specialized courses | 75% | 63% |
| % of programs offering housing on or near campus | 39% | 33% |

Figure 1

*Number of Programs by State*



Abstract

Significant advancements resulting from various legislative and grant initiatives have resulted in increases in higher education programs enrolling students with intellectual disability (ID). Information about program practices in admissions, academic access, employment, campus housing, and extracurricular activities was gathered via a national survey and offered to the public via a searchable directory. The current study provides a descriptive analysis of these survey data, addressing demographic structure and costs, as well as domains of practice including academic access, career development and employment, campus engagement, and credential attainment in higher education programs for students with ID from a sample of 257 programs. Comparisons to findings from a 2009 survey are offered when applicable and implications for practice, research, and policy are discussed.

Access to higher education for people with intellectual disability (ID) in the United States has changed substantially in the last few decades (O'Brien, et al., 2019; Plotner & Marshall, 2015). Efforts to include people with ID in higher education date back to the early 1970s and were primarily directed at creating access to substantially separate or segregated experiences on college campuses (Neubert, et al., 2001). The emergence of transition services in the 1990s (Sitlington & Clark, 2006), coupled with advancements related to inclusion (Turnbull, 1995; Winzer & Mazurek, 2000) and self-determination (Wehmeyer, et al., 1998), culminated in grassroot movements to provide access to postsecondary education (PSE) to students with ID (ID; Lee & Will, 2010). Higher education experiences for students with ID throughout the early part of this century were rare, and when offered, were typically created by a dedicated professional or an intrepid parent, seeking to offer students alternatives to typical options for adults with ID (Hart, et al., 2005).

In the early 2000s, increased efforts aimed at identifying community and college-based transition programs for youth with ID between the ages of 18 and 21. For example, in 2004, Gaumer et al. (2004) conducted a survey and identified 101 community-based transition programs in 29 states serving students with ID ages 18 to 21. These programs were primarily funded by and operated by local school systems, and less than half included access to PSE. Hart, Mele-McCarthy et al., (2004) conducted a survey of 25 programs for students with learning, cognitive, and intellectual disabilities allowing them to earn high school credits as they simultaneously earned community college credits to secure a high school diploma. The programs identified in these surveys were developed on colleges and universities in isolation from one another and no state or federal guidance or standards of practice existed to support the development of quality programs (Lee & Will, 2010).

A variety of federal initiatives launched in 2008 began to change the landscape of higher education for students with ID. The Administration on Developmental Disabilities funded a Project of National Significance called the Consortium on Postsecondary Education for Individuals with Developmental Disabilities. This project was one of the first federally funded national resources for knowledge generation, training, and dissemination related to the participation of individuals with ID in PSE. From FY2009 to FY2014, the Consortium provided training and technical assistance throughout the country and worked directly with 19 states to support strategic planning for increased access (Consortium on Postsecondary Education for Individuals with Intellectual and Developmental Disabilities, 2013).

The National Institute on Disability and Rehabilitation Research funded the National Center for Postsecondary Education for People with Intellectual Disabilities from FY2009 – FY2012. This center was charged with analyzing two large-scale datasets (National Longitudinal Transition Study-2 and RSA 911) to identify the extent to which students with ID were benefiting from college attendance (Grigal, et al., 2011; Grigal, et al., 2014). The center also conducted the first survey of existing higher education programs serving students with ID in the United States. The survey was conducted in 2009 (Grigal, et al., 2012) and resulted in identification of 149 higher education programs supporting students with ID in 39 states.

The findings of the 2009 survey revealed more programs located at four-year universities than two-year colleges (51% vs. 40%), and over a quarter of programs were exclusively serving students still enrolled in high school (referred to as dual enrollment programs, concurrent enrollment programs or college-based transition programs). The majority of respondents indicated the primary focus of their program was independent living/life skills and only 18% reported academic course access was the program's primary goal.

Access to credit and noncredit college classes attended by students without disabilities was offered by a slight majority of responding IHEs, however three quarters of respondents also affirmed students with ID participated in group instruction or activities only with other students with ID. Half of the respondents reported students with ID did not access academic or disability-related advising through the college, instead receiving specialized services offered by program staff. Four-fifths of programs prepared students for employment, through activities including both paid and unpaid work, although the extent to which these employment preparation activities were provided to students varied widely across programs. Slightly over a third of programs provided access to residential services, either on or off campus. The researchers summarized the findings of the study as reflecting a high degree of variability in terms of the campus access offered to students with ID at the time, but noting the study was conducted at "a moment in time for a field that is rapidly changing" (p. 232).

The final, and potentially most impactful development in 2008 was the passage of the Higher Education Opportunity Act (HEOA). The HEOA (2008) included unprecedented provisions aimed at expanding access to and availability of higher education options for students with ID. The HEOA (2008) created a new federal student aid or Title IV access designation, called Comprehensive Transition and Postsecondary (CTP) programs. Colleges and universities were able to apply to the Office of Federal Student Aid to attain the designation of an approved CTP. If successfully approved, these IHEs could then offer certain forms of federal student aid (FSA) to eligible students with ID attending their program. Since 2010, over 100 IHE programs for students with ID have been approved as CTPs.

The HEOA also created a model demonstration program called the Transition Postsecondary Education Programs for Students with Intellectual Disabilities (TPSID). TPSID

grants were awarded by the U.S. Department of Education (USDOE) Office of Postsecondary Education (OPE), and grantees were charged with establishing or expanding model postsecondary programs focused on academic enrichment, socialization, independent living skills, and integrated work experiences leading to gainful employment. Finally, the HEOA created a national coordinating center (NCC) charged with providing technical assistance to and conducting evaluation of the TPSID model demonstration projects.

The TPSID model demonstration program has funded two cohorts of grantees (2010-2015 and 2015-2020) and has created or expanded inclusive transition and postsecondary programs for students with ID at 100 IHEs in 31 states (Think College National Coordinating Center, 2019). The National Coordinating Center was also funded for 2010-2015 and 2015-2020 and has developed and disseminated materials and resources based upon its technical assistance, research, and evaluation work (www.thinkcollege.net)

The HEOA offered the first federal guidance regarding the components needed in higher education programs for students with ID. As development and implementation of programs grew, access to inclusive courses, career development and employment experiences, and attainment of credentials have emerged as salient aspects of effective programs (Grigal, et al., 2018; Papay et al,. 2018). The prevalence of these practices can impact student's experiences during and after their college program as described next.

Inclusive courses are academic courses taught by college faculty as part of the typical course offerings of the college and are attended by matriculating college students. Students with ID may access inclusive courses either for credit or audit. To audit a course means students are not earning regular college credit for the course. This allows for modifications to the course requirements not permitted when taking the course for credit but also means the course may or

may not be counted towards the completion of a credential. Accessing typical college courses has been found to offer students with ID access to a greater array of course content and exposure to college peers without or with other disabilities (Papay et al., 2018). The counterpart to inclusive courses, are specialized courses. These are courses designed for and attended only by students with ID.

College experiences also provide students with ID opportunities to explore potential careers through internships and training experiences as well as to attain employment either on or off campus. Some studies have observed many IHE programs focus more on career exploration and employment preparation than on helping students attain paid employment while enrolled (Petcu, et al., 2015; Scheef, et al., 2018). This could impact student longer term outcomes as obtaining employment while in the program has been found to predict whether or not students have a paid job at exit (Grigal et al., 2018).

Credentials are the culminating documentation students earn upon completion of a program at an IHE. Some higher education programs provide students with ID with access to existing IHE credentials; others developed new credentials. The nature of these credentials varies in terms of their format and structure, and the extent to which they were approved by the host IHE (Shanley et al., 2014). Earning a credential approved by the IHE may also have a longer-term impact on student outcomes as it has also been found to be a predictor of students having a paid job at program exit (Grigal et al., 2018).

The 2009 national survey of existing PSE programs conducted by Grigal et al. (2012) provided a snapshot of the landscape of service prior to the implementation of the HEAO and its subsequent investments into policy and program development efforts. As the authors acknowledged, “As it turns out, this survey was completed at an important time, right before the

field it was describing embarked on significant changes" (p 232). Ten years have passed since those data were collected and we now have the opportunity to reassess current provisions of higher education for students with ID and reflect on what has and has not changed. Using data captured by a national survey conducted in 2019, the current study provides an updated descriptive summary of existing PSE options for students with ID in the United States, sharing demographic information and outlining the extent to which practices in academic access, career development and employment, campus engagement, and credential attainment are being implemented in those programs. The study addressed the following research questions:

- What are the primary characteristics of programs at institutions of higher education (IHE) enrolling students with ID?
- What is the level of academic and campus access offered to enrolled students with ID?
- How are colleges and universities serving students with ID addressing career development and employment?
- What credentials are being offered to students with ID and what are the attributes of these credentials?

The 2009 survey included several questions no longer asked as part of the current survey, and some response options have changed. Given that, the study attempts to draw comparisons where possible between the results derived from the survey conducted in 2009 and the results derived from the present survey.

## Method

Data for this study were derived from a survey used to update a directory of college and university programs enrolling students with ID maintained by the Institute for Community Inclusion at the University of Massachusetts Boston. As mentioned previously, this directory was

initially developed using the findings from the survey conducted by Grigal and colleagues in 2009 and has been updated periodically over the past decade. All data were self-reported by higher education program personnel and not externally validated.

The survey consisted of 50 questions in eight areas: demographics, attendance requirements, acceptance process, retention and completion rates, costs, academics, employment, and housing and extracurricular activities. The primary purpose of the survey was to identify existing available programs and provide this information to the general public; therefore, required questions were limited to name of the IHE, the program name, address, and contact information. All other survey questions were optional; thus, response rates to individual questions varied. For the present analysis, we omitted responses to questions having less than a 50% response rate.

The survey was conducted between January and August of 2019. A fillable online survey was sent via email to the contact person for each existing program listing in the directory. Follow-up reminder emails were sent to non-respondents. When emails were reported as non-deliverable, website contacts were reviewed to update the contact person and calls were made to each non-respondent. As of August 1st, 2019, respondents either had completed the survey or confirmed existing program data were current and did not need updating. In addition to updating information about existing programs, additional programs were also added to the directory throughout this period as information about them became available.

To ensure a consistent sample for analysis in the present study, we selected only those programs which: 1) were operated by, located at, or provided access to an accredited IHE that served a range of students (i.e., not only students with disabilities), 2) served students with ID, and; 3) had enrolled students for at least one year. From an initial sample of 274 programs in the

directory, we removed seven listings for IHEs which served only students with disabilities and one listing for a program located at a nonaccredited IHE. We removed an additional nine programs that had not yet enrolled students, for a total of 17 programs removed from the sample. The final sample consisted of 257 programs. Data were analyzed using Microsoft Excel.

## Results

### Characteristics of Programs at IHEs for Students with ID

Programs were located in all but one state (West Virginia). The majority of programs (*n* = 229) were operated by an IHE. The remaining 28 programs were either college-based transition programs operated by a school district in partnership with an IHE (*n* = 17), an external support service providing access to but not affiliated with an IHE (*n* = 3), or a program operated by an adult service agency (*n* = 8). Two hundred thirteen (213) or 82.9% of these programs were located at a public IHE, 44 programs or 17.1% were at a private IHE. Just over half (56.8% or 146) operated at a 4-year college or university, and 102 or 39.7% programs were at a two-year community college. Only five programs were located at or associated with a technical or trade school, and five operated on multiple campuses including 2- and 4-year IHEs.

A little over a third of programs (*n* = 91, 35.4%) were approved as a CTP, allowing them to offer federal financial aid to eligible students with ID. An additional 14 programs (*n* = 5.4%) reported they had applied to become a CTP and were awaiting approval from the federal student aid office. Almost a third of the programs (*n* = 80, 31.1%) indicated they had received funding from the TPSID model demonstration program either in 2010-2015, 2015-2020, or both; with 177 (68.9%) of respondents indicating their programs had never received TPSID funding.

**Planned Program Length**. The most common length for programs was two years (*n* = 91, 35.4%), followed by programs whose length was variable from student to student (*n* = 74,

28.8%). A few programs were one year (n = 13, 5.1%) or three years (n = 20, 7.8%) in length. Only 33 programs (12.8%) indicated they were four years or more and 88% of these were at four-year colleges and universities. Twenty-six programs (10.1%) did not respond to the question about planned program length.

**Students Served.** Programs were required to confirm they served students with ID but could also indicated if their program served students with other disability labels. A majority of programs (*n* = 216, 84.0%) supported students with autism. More than a third of programs (*n* = 102) also indicated they served students with other disabilities, such as cerebral palsy or traumatic brain injury or specified a type of ID such as Down syndrome. The majority of programs reported they served only adult students who were no longer attending high school (*n* = 155, 60.3%). Fewer programs reported serving only students enrolled in high school (*n* = 49, 19.1%) or serving both adults and high school students (*n* = 53, 20.6%).

**Number of Students Enrolled.** A total of 6,090 students were reported to be enrolled at 222 programs. Thirty-five programs did not report the number of enrolled students. The average program size was 27 students, the median size was 16 students, and the mode was 15 students.

**Admissions Criteria.** Basic admission requirements were reported by 246 programs. The survey provided five response options for potential admission requirements and allowed respondents to enter other requirements. A required age range was the most frequently reported admission requirement (181 programs, 70.4%). Of these programs, 179 (98.9%) had a minimum age requirement and 136 (75.1%) had a maximum age at which students are admitted. For minimum age, the mean, median, and mode were 18 and the range was 16 to 21. For maximum age, the mean and median were 25, the mode was 21, and the range was 21 to 99. The frequencies of the other four admission requirements were: a diploma other than a regular high

school diploma (e.g., IEP diploma, certificate of attendance) is accepted (*n* = 134, 52.1%), the student must be a resident of the state where the program is located (*n* = 63, 24.5%), the student must be enrolled in a particular school system/local educational agency (*n* = 48, 18.7%), and the student must have a regular high school diploma (*n* = 3, 1.2%). Seventy-six programs (*n* = 29.6%) entered other requirements such as documentation of ID, minimum reading or other academic level, eligibility for Vocational Rehabilitation (VR)/Medicaid/Individuals with Disabilities Education Act (IDEA), a required level of independence, employment experience, ability to abide by a code of conduct, and interest/motivation for enrolling in higher education.

**Program Costs.** Annual program costs (tuition, room and board, or other charges) were provided by 141 programs. At 18 programs students were charged $0 (including tuition and other charges). At programs where students were charged more than $0, the mean tuition was $11,200 per year (median $6,592, range $46 - $56,000), the mean room and board was $9,036 per year (median $9,628, range $708 - $16,750), and the mean program fee was $4,281 per year (median = $3,000, range $20 - $16,940). Some programs listed other costs, for example books and supplies, transportation, support service fees, or student activity fees. At programs with other costs greater than $0, the mean other costs were $2,140 per year (median $959.50, range $15 - $12,200). Total cost for programs charging students more than $0 had a mean of $14,689 per year (median = $8,607, range $15 - $70,000).

**Student Funding.** Student method of funding was provided by 250 programs. The most frequently reported source of funding was private pay (*n* = 187 programs, 72.8%) followed by scholarships (*n* = 140, 54.5%) and VR funds (*n* = 133, 51.6%). Other sources of funding included federal financial aid (*n* = 91, 35.4%), local school district funds (*n* = 89, 34.6%), adult intellectual/developmental disability state/agency funds (*n* = 82, 31.9%), grant funding (*n* = 77,

30.0%), Medicaid waiver or day habilitation funds (*n* = 53, 20.6%), tuition waivers (*n* = 45, 17.5%), and other sources (*n* = 27, 10.5%). Seven programs (2.7%) did not answer this question. Eighty-six programs (33.5%) listed at least one scholarship available to students with ID.

**Academic and Campus Access Offered to Enrolled Students with ID**

**Academic Access.** Access to typical college courses was reported by 222 of the 257 programs; 67.7% of the programs (*n* = 174), indicated students with ID were able to take courses for audit, 51.0% of programs (*n* = 131) indicated students with ID were able to take courses for credit, and 39.3% of programs (*n* = 101) indicated students were able to take continuing education courses. Students did not take any typical college courses at 24 programs (9.3%). Eleven programs did not respond to this survey question (see Table 1).

At 162 programs (63.0%), students were reported to take specialized courses only for students with ID. Of the remaining programs, 67 (26.1%) reported students did not take specialized classes and 28 (10.9%) did not answer the question. The survey asked for examples of special classes. The most prevalent example of separate class provided was a class to teach particular skills, for example independent living or life skills, social skills, employment or career skills, or self-advocacy skills.

**Campus Access**. Eighty-six programs (33.4%) offered housing to students with ID, 150 programs (58.4%) did not offer housing, and 21 (8.2%) did not respond to this question. Of the programs offering housing, 64 (74.4%) offered inclusive on-campus housing, 23 (26.7%) offered inclusive off-campus housing, 6 (7.0%) offered specialized on-campus housing, and 10 (11.6%) offered specialized off-campus housing (see Table 1). Eleven programs offered another type of housing with most describing unique structures or systems developed to create access to housing such as options available to students but not affiliated with the IHE or program.

At 193 programs (75.1%) students were reported to join registered student organizations. The remaining programs reported students did not join student organizations (n = 32, 12.5%) or did not answer this question (n = 32, 12.5%). The survey asked programs to describe social/extracurricular activities and organizations in which students participated. Several programs responded students could participate in any social club or organization on campus. Many programs listed theater or sporting events attended by students and social activities in which students participated. Twenty-two programs specifically listed Best Buddies, a national volunteer program supporting one-to-one friendships for people with intellectual and developmental disabilities (www.bestbuddies.org) as an activity.

**Career Development and Employment**

Two hundred twenty-one programs (86.0%) reported students participated in at least one type of career development activity. Students were reported to be participating in a range of career development activities including internships (*n* = 200 programs, 77.8%), volunteer work (*n* = 181, 70.4%), community service (*n* = 149, 58.0%), and work study (*n* = 57, 22.2%). Five programs (1.9%) responded students did not participate in any of the career development activities listed, and 31 programs (12.1%) did not respond to the career development question.

Respondents were asked to provide the percentage of students in the most recently completed academic year who were engaged in paid, competitive employment while attending the program. The employment rate of students while enrolled was reported by 178 programs (69.3%) and ranged from 0 to 100% with a median of 40%. One third of respondents indicated 20% or fewer of the students enrolled were employed, 35% of respondents indicated 21-60% of their enrolled students were employed, and 30% of respondents indicated over 60% of enrolled students were employed. Respondents were also asked to provide the percentage of students who

completed the program in the previous year who had attained paid competitive employment within 90 days of exiting. Just over half of the respondents answered this question ($n$ = 146, 56.8%). The employment rates of students within 90 days of exit ranged from 0 to 100% with a median of 65%. Twenty-three percent of the programs who responded indicated 20% or fewer of the students were employed within 90 days of exit, 25% of respondents indicated 21-60% of their enrolled students were employed within 90 days or exit, and 52% of programs indicated over 60% of enrolled students were employed within 90 days of exit.

### Credentials

Over two thirds of the respondents ($n$ = 175, 68.1%) reported offering some type of credential, and of those, 63 offered a credential approved by the IHE. Fifty programs reported they did not offer a credential and 32 programs did not respond to the credential question. Nineteen programs offered a credential open to all students at the IHE compared with 95 programs which offered a credential only for students in the program. Twenty-seven programs offered a continuing education credential. Twenty-five programs responded they had a credential but did not provide additional detail.

## Discussion

The substantial investment in the past decade to expand or enhance PSE options for students with ID has resulted in a growing number of IHEs enrolling these students. Data from programs funded by the TPSID model demonstration program provide information about student engagement in critical domains and the associated outcomes; however, these data do not reflect the full universe of existing IHE program offerings in the United States. The present study offers a fuller national picture of currently identified PSE programs enrolling students with ID. In the

following discussion, where possible, we make comparisons with the national survey findings from a decade ago (Grigal et al., 2012).

**Characteristics of PSE Programs**

A substantial increase in availability of options for students with ID to attend higher education across the U.S. is evident, growing from 149 programs in 2009 to 274 programs as of August 1st, 2019 - an increase of 84%. Two hundred fifty-seven programs were included in the sample for the present descriptive analysis, which included programs located in all but one state. The 2009 survey found 11 states with no programs (Grigal, et al., 2012).

Two hundred twenty-two programs reported the number of students attending their program in 2019 totaling 6,090 students. These findings offer the first national estimate of the number of students with ID enrolled in higher education in the US. Thirty-five programs did not report the number of enrolled students. Currently students with ID attending colleges and universities are either not present or not easily discernable in other existing national higher education datasets (Grigal, et al., 2019). Given 35 programs failed to provide the number of students served, 6,090 is most likely an underestimate. Using a conservative estimate of 10 students per program attending the 35 programs not reporting the number of students enrolled, there could be an additional 350 additional students or more enrolled in PSE programs in 2019, bringing the more accurate estimate closer to 7000 students. Comparisons with student enrollment from 2009 is not possible, as student enrollment was not sought in that study.

Although there has been a considerable increase in the number of higher education institutions enrolling students with ID, the distribution of programs across two- and four-year IHEs has not changed substantially. In 2009, slightly more than half of the programs (51%) were in four-year colleges or universities and 40% were in two-year community colleges (Grigal et al.,

2012) compared with 56.8% and 39.7% in 2019 respectively. Of note is the slightly higher proportion of two-year colleges present in this sample when compared with the programs funded by TPSID grants, where only 31% of the programs in 2018-19 were at two-year colleges (Grigal et al., 2019). This is likely due to the selection criteria used in the TPSID application process which afforded preference to programs able to offer housing. Given most two-year colleges are not able to offer housing, this likely resulted in a greater number of four-year colleges and universities receiving TPSID grants than four year or community colleges (Grigal et al., 2016).

Only 1.9% of programs surveyed in 2019 were located in career/technical education (CTE) colleges (referred to in the survey as technical or vocational/trade school) compared with 10% of programs located at CTE colleges in 2009 (Grigal et al., 2012), indicating a substantial decrease in such programs. The limited number of options for students with ID at CTE colleges highlights the need to conduct outreach, disseminate knowledge, and provide technical assistance to the CTE community to ensure this higher education option is a choice for more students with ID who are interested in careers requiring specialized training (Lombardi, et al., 2018).

The type of IHE (i.e., two- or four-year) did not necessarily reflect the length of the program. For example, though almost all four-year programs were at four-year universities, there were twice as many two-year programs than four-year programs at four-year universities. Almost 30% of programs indicated program length varied depending upon the needs of the student, indicating the person-centered approach required in the TPSID programs may be used widely by IHE programs. The issue of optimal program length remains to be examined, particularly in light of findings by Grigal, et al., (2018) who found students with ID attending federally funded TPSID programs had an increased likelihood of obtaining paid employment as the number of years they attended a program increased. These authors contended the impact of program length

on employment might be due to a lack of effort in earlier years to help students obtain paid employment (Grigal et al., 2018).

About 60% of programs served *only* students who had graduated or exited high school while almost 20% of programs served *only* students who were still enrolled in high school. Our findings reflect a decrease in the overall proportion of programs serving transition-aged high school students since 2009 (26%, Grigal, et al., 2012). A similar decrease in the percentage of students attending college-based transition programs has been found in data on TPSID model demonstration programs (Grigal et al., 2019). Findings from both data sources suggest although there has not been a decrease in the number of college-based transition programs, there has been a larger emphasis on developing programs for students who exited high school.

**Prevalence of TPSID Programs.** The present survey found 80 programs, about a third of existing programs in the US, had received TPSID funding, suggesting the TPSID model demonstration program has led to a portion of the growth in available higher education options. However, the majority of programs (68.9%) have not received any TPSID funding, indicating substantial program development outside of this source of funding. Grigal, Hart, and Papay (2019) suggest the TPSID model demonstration program has spurred interest in inclusive higher education as evidenced by statewide initiatives, including expanded state policies or funding. In a recent policy summary, Jernudd, et al., (2019) identify 27 pieces of proposed legislation and 11 pieces of passed legislation addressing higher education for students with ID.

## Costs and Funding

In the 2016-2017 academic year, the average cost of attending college in the U.S. including tuition, fees, room, and board was $17,237 at public institutions, $44,551 at private nonprofit institutions, and $25,431 at private for-profit institutions and these costs have been

rising annually over the past 15 years (National Center on Education Statistics, 2019). For families of students with ID, understanding what to anticipate in terms of the costs of college and the potential funding resources is vital. This is especially true for those families who may have been discouraged from expecting their child with an ID to go to college and thus may not have created a college savings account for their child (Kelley & Westling, 2019).

Our findings captured the costs of the PSE programs enrolling students with ID and included information on tuition and fees, room and board, as well as program-specific fees and other charges. Slightly over half of programs provided information on their costs, and these costs reflected great disparity, with a median cost of $8,607 and a range from $15 to $70,000. The majority (72.8%) of programs reported students with ID were paying for college tuition and fees with family funds, reflecting an increase in use of family funds from the national survey conducted in 2009 (61%, Grigal et. al., 2012). Scholarships were the second most frequently identified payment mechanism (54.5% of programs) with a third of programs listing at least one available scholarship, a large increase over the 30% of programs listing scholarships as a funding option in 2009 (Grigal et al., 2012).

Preparation for employment is a focus in many PSE programs for students with ID (Petcu, et al., 2015; Scheef, et al., 2018) making these programs a seemingly good fit for the intended focus of vocational rehabilitation (VR) services. Our findings support this with VR being the third most cited method of payment for college (51.6%); an increase from the 30% of programs listing VR as a funding option in 2009 (Grigal et al., 2012). However, state and local support for use of VR funds for students with ID to access PSE has been inconsistent (Lee, et al., 2018) making it difficult for some students to receive these services in higher education (Grigal et al., 2016). To address this inconsistency, the Office of Special Education and Rehabilitative

Services (OSERS), recently issued guidance seeking to clarify the sanctioned use of VR funds to support students with ID attending college (USDOE, 2019).

Given the process to award federal student aid (FSA) to students with ID attending approved CTPs had not yet been implemented at the time of the 2009 study, direct comparisons cannot be made in the use of this funding source. Our findings reflect just over a third of programs (35.4%) reported students used FSA funds to cover costs of attendance. While our data did not provide levels of individual student usage, a recent report from the NCC indicated FSA was awarded by 98 colleges and universities to 459 students with ID in 2019 (Grigal, et al., 2019). A total of $2,064,362 was awarded in Pell grants, $73,627 in Supplemental Education Opportunity Grants, and $48,528 in federal Work-Study (Grigal et al., 2019). As the availability of FSA offerings grow, usage data will be helpful in determining its impact on student enrollment and outcomes. Given the high percentage of students using personal funds to cover enrollment costs, there remains a need to expand access to FSA for students with ID.

Finally, use of Medicaid waiver funds to support student tuition almost doubled from 11% in 2009 (Grigal et al., 2012) to 20.6% in 2019, but is still not a widely used option. Medicaid waiver fund availability and eligibility criteria varies immensely from state to state which may contribute to the underutilization of these funds (Parisi & Landau, 2019). While there is room for improvement to ensure equitable access to all available funding sources, our findings indicate students with ID are using a variety of sources to fund their college education, not unlike their college peers without ID (National Center for Education Statistics, 2019).

## Academic and Campus Access

**College Course Access.** Several factors impact the type and number of college courses students with ID are allowed to access including faculty concerns, university policies, and

available supports (Gibbons, et al., 2015; Griffin, et al., 2016; Plotner & Marshall, 2014). One study found while faculty were generally positive about the idea of PSE for students with ID, they may worry about the impact participation may have on other students in their classroom (Gibbons et al., 2015). University policies regarding prerequisites and grading may also be barriers to college course access (Plotner & Marshall, 2014). The availability of well-trained peer mentors and other academic supports may have an effect on course participation (Griffin et al., 2016) as may the use of a universal design for learning approach in college classrooms (Love, et al., 2017). Papay, et al., (2018) examined predictors of access to typical college classes by analyzing data on 672 first-year students with ID who enrolled in 3,233 inclusive college courses at TPSID programs. Significant positive predictors included the age of the student, whether the student attended a program offering access to regular student advising or provided an official transcript, and whether the student had a paid job. A negative predictor was whether the student took any specialized courses (Papay et al., 2018).

In the current study, respondents indicated the enrollment options of college courses students had taken in their program. Slightly over half of programs reported students had the option to take courses for credit, whereas a greater number of programs reported students could audit classes. The option of enrolling in a course for credit may be more related to the policies and practices of the program than to the abilities of the student. For those programs who indicate students only audit college courses, this enrollment option may be a policy of the program, a requirement of the IHE, or a reflection of pre-conceived ideas about the capabilities of students with ID (Papay et al., 2018). There are benefits to the student to be able to take college courses for credit. Courses taken for credit can be counted towards a typical certificate or degree offered by the IHE, whereas those courses taken for audit are likely only to be counted towards a

program-specific credential (Grigal et al., 2016). Courses taken for credit can also be transferred to another IHE. Further, in a class taken for credit, the student's experience in the class will be more like other students and interactions with college faculty will perhaps be more authentic than if they are enrolled for audit. On the other hand, the option to audit college courses allows for a more individualized approach to the course content and assignments, which may help to make the course more accessible and meaningful to students with ID.

In addition to typical college courses, 63% of respondents indicated students at their program took one or more specialized courses – those created specifically for the program and attended only by students with ID. In the present study, only 26.1% of programs indicated there were no separate classes (10.9% did not respond to the question). It is discouraging to note the majority of programs relied, at least in part, on separate instruction, given studies attest to the positive impact access to inclusive college courses can have on students in these programs. For example, a study by Qian, et al., (2018) of students who attended TPSID programs located at two community colleges found students who enrolled in only inclusive classes were almost five times more likely to have jobs paying minimum wage or above, compared with students who enrolled in some specialized courses. Similarly, a study Grigal, et a., (2018) examining data on students who attended TPSID programs between 2010 and 2015 found students who took higher numbers of specialized courses were significantly less likely to obtain paid jobs while in the program than students who took fewer specialized courses.

In light of this research, it is heartening to see there has been a gradual decrease in the number of programs offering specialized instruction: 75% of programs required specialized courses as part of their program in 2009 (Grigal et al., 2012) as compared to 63% in the most recent study. However, there is more work to be done to ensure students with ID have access to

inclusive college courses and program developers understand the implications of continuing to rely on separate, specialized courses (Papay, et al., 2018).

**Campus Access.** In 2019, eighty-six programs or slightly over 33% of college programs offered housing to students with ID, indicating housing options are not available for the majority of students with ID attending college. Furthermore, a quarter of these programs offered specialized (i.e., not inclusive) on- or off-campus housing, suggesting living in campus housing with peers without disabilities is available to an even smaller number of students. In the past decade, while the number of housing options have increased, from 58 college programs offering on or near campus housing in 2009 to 86 in 2019, the proportion of programs offering housing has not increased, and has in fact decreased slightly, since 2009 (Grigal, et al., 2012). Together, these findings indicate access to inclusive campus housing is an area in which little growth has been seen over the past decade.

Documented barriers to establishing access to campus housing include limited space and issues of liability surrounding the perceived vulnerability of students with ID (Kelley, 2017; Plotner & Marshall, 2014). Yet studies have shown college students with ID who live on campus adjust as well as peers without ID (Hendrickson, et al., 2013), and reports from programs offering inclusive campus housing indicate barriers can be overcome through collaborative partnerships across campus (Kelley, 2017).

## Career Development and Employment

A large majority of programs indicated students participated in at least one type of career development activity, such as internships, volunteer work, or community service, while enrolled. Similar to findings from federally funded TPSID programs (Grigal et al., 2019), career development experiences in programs across the nation appeared to focus more on employment

preparation activities than on paid employment. These findings echo those of Petcu, et al., (2015) who conducted a national survey of higher education programs serving students with ID finding the majority of students were receiving numerous employment preparation supports but little access to paid work experiences.

In the current study, the percentage of students in paid work varied considerably, with some programs indicating a very low percentage of students in paid employment and others indicating the majority of their students were in paid employment. Without access to individual student-level data, it is not possible to ascertain the true rate of student employment. More than 40% of respondents did not respond to the question regarding percentage of students in the most recently completed academic year who had paid, competitive, integrated work while enrolled. In contrast, the non-response rate to the question regarding career development experiences was only 12%. We cannot know if respondents failed to answer the former question because they didn't have access to those data or if they had access to the data and choose not to share it.

Of course, the primary purpose of this dataset was not to capture and assess student outcomes but to offer parents and students information about key program features to assist them in identifying college options. Some students and families may place a strong value on employment outcomes and others may not. There is an increased emphasis in the U.S. on documenting the outcomes of college and university graduates (McFarland, et al., 2019). In 2019, the college scorecard tool ( https://collegescorecard.ed.gov/) was updated to offer prospective students relevant data on potential debt and earnings based on fields of study at specific colleges and universities. This trend may result in a stronger commitment to gathering employment and outcome data in the future for PSE programs enrolling students with ID.

**Credentials**

Credential attainment is a core indicator of higher education program performance. In the 2009 survey, information about credentials for students with ID were not sought nor reported. The emergence and emphasis on credential development and attainment in PSE programs for students with ID is a sign of growth and demonstrates an increased alignment with traditional higher education accountability structures. Most higher education programs for students with ID result in the attainment of a certificate rather than a degree (Grigal et al., 2019). The programs responding to our survey offered credentials which varied in the type: some provided only to students in the program whereas others were available to all students at the IHE including students with ID. In some programs, credentials were approved or issued by the IHE, but at others the credentials were issued by the program and not by the IHE. Just under a third of programs either awarded no credential or did not respond to the question about credentials.

The issuing entity of credentials may have an impact on student outcomes; as highlighted in a study by Grigal et al., (2018) who found earning a credential awarded by the IHE significantly increased the odds of having a paid job within 90 days of exit. PSE programs for students with ID must balance meeting the needs of students by offering a person-centered approach and a flexible course of study with the need to offer a rigorous course of study resulting in a high-quality credential. This is an area of continuing development, and our findings indicate credentials approved by an IHE are currently not available at a majority of PSE programs enrolling students with ID.

## Limitations

The present study has several limitations which must be acknowledged. Being included in this directory was optional for every college program, and while there was an offer made to every new program to be added, it was up to each program to determine whether or not they

were to respond to the survey. Therefore, existing programs may be missing. Data were self-reported and programs were not asked to submit supporting documentation to verify their responses. Almost all questions on the online survey were optional, therefore missing data existed for many of the questions. This may present a potential for bias in responses. In particular, there was a high degree of missing data for questions related to the employment rates of students as well as related to program costs. It is also possible items on the survey may have been interpreted differently by programs. Finally, the lack of individual student data prevented clearer information about the employment experiences and college courses accessed by students enrolled in these programs.

**Implications for Practice**

Implications from our study cross various realms of practice including K-12 special education and transition, personnel preparation, and higher education. It is a challenging transition to go from a special education experience in a high school to learning with peers without disabilities on a college campus. One way to ease this transition for students with ID is through the provision of college-based transition services; supporting students with ID to receive their transition services on a college campus. Our findings suggest the development of this type of transition services is slowing down. While earlier efforts aimed at developing these kinds of experiences demonstrated positive outcomes in terms of LEA and IHE collaboration, increased in student employment and self-determination (Dwyre & Deschamps, 2013; Grigal, Dwyre, et al., 2012), the data from this study illustrate these services remain somewhat limited and efforts to further develop them have diminished. Practitioners seeking to better support students to access college experiences while still in high school can work with existing programs to build collaboration. They can also investigate existing resources about aspects of college-based

transition practices to better facilitate these experiences on campuses (Hanson, 2019; Paiewonsky, et al., 2018) and explore collaborative efforts with local IHEs.

Our findings confirm significant growth has occurred in the availability of college and university options for students with ID. Consequently, more than 6000 students with ID are now enrolled in higher education, and it is likely these numbers will continue to grow. This suggests educators are becoming more aware of PSE options for students with ID and may be better preparing students and their families to seek out and engage in the college search process. Yet there is still progress to be made. In 2016-2017 there were 35,338 students with ID served under IDEA who exited school (USDOE, 2019). How many of these students were offered information about higher education options? Preservice and in-service training for secondary special education and transition professionals should include information on higher education options, including strategies to better prepare students with ID to succeed in college.

There are several areas where programs at IHEs for students with ID have improved over the past decade, including growing access to funding from VR and Medicaid and a growing number of programs with CTP approval offering students with ID access federal financial aid. This is the result of hard work by program staff as well as students and families. But there are several areas in need of continued improvement. The survey revealed a continued overreliance on specialized coursework, few programs offering meaningful credentials recognized and issued by the IHE, and limited housing options available, in particular inclusive on-campus housing. In terms of funding, our findings suggest there is underutilization of Medicaid funds to support access to PSE, and there are many programs yet to seek CTP approval. These are areas worthy of focused and sustained attention by program staff as well as those who are developing new higher education programs to ensure continued growth in access to high quality PSE programs.

Finally, the lack of responses in some critical information areas like program cost and employment reflect a knowledge gap about some programs. It is possible programs share this vital information via other means (in program materials or on their website) with families and students. However, the lack of a centralized source for this critical information makes it more difficult for families to make informed choices in selecting the college best suited to their child. Federal resources such as the College Scorecard and the College Navigator ensure such information is available to college students without ID. Without a similar resources educators supporting students and families must instead help them to investigate existing college information and facilitate deeper connections via phone calls or potentially college visits to ensure students have the full picture of the colleges of their choice. Often these types of disclosures for IHEs are tied to program eligibility for FSA or to obtain or retain accreditation. These kinds of disclosures are not yet required for IHE programs enrolling students with ID, however with the recent creation of model accreditation standards, these programs may find public disclosure of this kind of information will be necessary in the future.

**Implications for Research**

Several directions for future research emerge from our findings. Knowing what is available nationwide is an important first step, but there is a need for further research examining the practices and outcomes of programs who did and did not receive TPSID funding. Of particular importance is the need for studies connecting program practices with the outcomes achieved by graduates. For example, given the wide range in program costs and variability in program length, researchers could examine whether or not the cost, inclusivity or length of a program is associated with employment or other outcomes. However, these proposed studies would require a complete dataset with full responses from all programs and expanded data

collection on student outcomes. It is especially challenging to request this information from programs on a voluntary basis without any mandate or funding to entice responses.

These data also highlight needed further exploration of the current nature and provision of college-based transition services to students with ID and the decreased trend to offer this option. The current structure of OSEP data reports do not identify if and when students 18 years of age or over are receiving services in college-based transition programs. The recently published longitudinal data on transitioning youth (NLTS-2012) also fails to identify these educational placements, making it difficult to verify the prevalence of these services using other national data sources. Updated guidance on use of local education agency funds to support students with disabilities to access college-based transition programs was recently issued by OSERS (USDOE, 2019); however, it is too early to discern if this guidance will have an impact on the development or implementation of college-based transition programs or services. Future research is needed to further clarify when and where students with ID are receiving college-based transition services and the subsequent outcomes achieved by those students.

The very small number of programs located in CTE colleges, demonstrates a need for better understanding why these types of IHEs are lagging behind in program development. Future studies could be conducted to examine the structure of existing programs at CTEs and to discern how replication efforts could be implemented. Studies could also be conducted with CTEs to ascertain if they have concerns or restrictions particular to their respective courses of study negatively impacting development efforts.

**Implications for Policy**

The variability of higher education options for students with ID could be construed as a

strength, with an array of options meeting diverse needs and goals of these students. However, this variability also presents a challenge in communicating the similarities and differences among these programs. These differences may seem clearer in more traditional PSE options. For example, it might be clear to families and students a workforce certificate program at a career and technical college would entail different kinds of coursework than would attaining a degree at a four-year liberal arts university. This kind of clear distinction between types of IHE programs is less possible for the programs enrolling students with ID where the employment, independent living, and campus membership components of the program may be as, if not more, important to some students and families as the academic components.

Future research offering clearer delineations in program characteristics could provide a much-needed framework for families and students to use in making their college choices. The HEOA (2008) required the TPSID NCC to convene a workgroup and develop model accreditation standards. These standards were developed and shared with Congress in 2016 and subsequently the NCC has conducted a field test of those standards (National Coordinating Center Accreditation Workgroup, 2016). The next steps in this process will hopefully be identified by the OPE. We believe the accreditation process will bring a degree of uniformity to the field and perhaps allow for clearer distinctions between programs.

## Conclusion

The landscape of higher education for students with ID in the U.S. has evolved considerably since the first national survey of programs was conducted in 2009. Various federal initiatives have led to increased program development and implementation, evaluation and research, and policy development. Higher education options for students with ID are now available in almost every state. In addition to increased availability of programs, the nature and

quality of the programs have also evolved with enhanced focus on academic inclusion, paid employment and credential attainment. Like those from 2009, this current national dataset offers a picture of services in a moment in time; reflecting a decade of substantial investment and change. These data serve a dual purpose. From a research perspective, they provide a metric for gauging changes related to students served, funding utilized, and services offered. From a practice standpoint, they also provide critical information about existing higher education options for educators, families, and students. As the next decade of work begins to further develop higher education options for students with ID, there will likely be advancements in credential options and accreditation requirements, aligning with more traditional higher education accountability methods. Another potential advancement could be the inclusion of these program in more generic college search directories such as the College Navigator or the College Scorecard. As these programs become more common and are viewed as another aspect of higher education becoming more responsive to the needs of diverse learners, it is possible the colleges and universities may seek to add some of these program specific data to their public profiles in other directories. Until this occurs, these data will continue to offer scholars and students, families and educators the means to locate and learn about existing higher education options for students with ID in the United States.

References

Dwyre, A., & Deschamps, A. (2013). Changing the way we do business: a job development case study. Improving staff skills and paid job outcomes for students with disabilities. Think College. Boston, MA: University of Massachusetts Boston, Institute for Community Inclusion.

Consortium on Postsecondary Education for Individuals with Intellectual and Developmental Disabilities, (2013). Final Project Report (CFDA 93.625. Think College. Boston, MA: University of Massachusetts Boston, Institute for Community Inclusion.

Gaumer, A. S., Morningstar, M. E., & Clark, G. M. (2004). Status of community-based transition programs: A national database. *Career Development for Exceptional Individuals, 27*, 131-149. 10.1177/088572880402700202

Gibbons, M. M., Cihak, D. F., Mynatt, B., & Wilhoit, B. E. (2015). Faculty and student attitudes toward postsecondary education for students with intellectual disabilities and autism. *Journal of Postsecondary Education And Disability*, *28*, 149 -162.

Griffin, M. M., Wendel, K. F., Day, T. L., & McMillan, E. D. (2016). Developing Peer Supports for College Students with Intellectual and Developmental Disabilities. *Journal of Postsecondary Education and Disability*, *29*, 263-269.

Grigal, M., Dwyre, A., Emmett, J., & Emmett, R. (2012). A Program Evaluation Tool for Dual Enrollment Transition Programs. Teaching Exceptional Children, 44, 36-45.

Grigal, M., Hart, D., & Migliore, A., (2011). Comparing the Transition Planning, Postsecondary Education, and Employment Outcomes of Students with Intellectual and Other Disabilities, *Career Development for Exceptional Individuals*, 34, 4-17.

Grigal, M., Hart, D., Papay, C., Smith, F., Domin, D. & Lazo, R. (2019). Year Four Annual Report of the TPSID Model Demonstration Projects (2018–2019). Boston, MA: University of Massachusetts Boston, Institute for Community Inclusion.

Grigal, M., Hart, D., Smith, F. A., Domin, D., & Weir, C. (2016). Think College National Coordinating Center: Annual report on the Transition and Postsecondary Programs for Student with Intellectual Disabilities. Boston, MA: University of Massachusetts Boston, Institute for Community Inclusion.

Grigal, M., Hart, D. & Weir, C. (2012). A survey of postsecondary education programs for students with intellectual disabilities in the United States. *Journal of Policy and Practice in Intellectual Disabilities, 9,* 223–233. doi:10.1111/jppi.12012

Grigal, M., Migliore, A., & Hart, D. (2014). A state comparison of vocational rehabilitation support of youth with intellectual disabilities' participation in postsecondary education. *Journal of Vocational Rehabilitation,* 40, 185-194.

Grigal, M., Papay, C., Smith, F., Hart, D., & Verback, R. (2018). Experiences that Predict Employment for Students with ID in Federally Funded Higher Education Programs. *Career Development and Transition for Exceptional Individuals, 42,*17-28.

Hanson, T. (2019). Clarifying the Roles and Responsibilities of College-Based Transition Services. How To Think College, Issue No. 8. Boston, MA: University of Massachusetts Boston, Institute for Community Inclusion.

Hart, D., Mele-McCarthy, J., Pasternack, R. H., Zimbrich, K., & Parker, D. R. (2004). Community college: A pathway to success for youth with learning, cognitive and intellectual disabilities in secondary settings. *Education and Training in Developmental Disabilities, 39,* 54-66.

Hart, D. , Zimbrich, K. , & Parker, D.R. ( 2005). Dual enrollment as a postsecondary education option for students with intellectual disabilities. In E. E. Getzel & P. Wehman (Eds.), Going to college (pp. 253-267). Baltimore: Brookes

Higher Education Opportunity Act of 2008, P.L. 110–315, 122 Stat. 378, 20 U.S.C. §§1001 et seq. (2008).

Hendrickson, J. M., Vander Busard, A., Rodgers, D., & Scheidecker, B. (2013). College students with intellectual disabilities: How are they faring? Journal of College & University Student Housing, 39/40, 186-199.

Jernudd, I., Nagaraj, S., Mueller, S., Rozell, D. (2019). State Policy Actions Supporting Higher Education for Students with Intellectual and Developmental Disabilities. Think College Insight Brief Issue No. 42. Boston, MA: University of Massachusetts Boston, Institute for Community Inclusion.

Kelley, K. (2017). Developing Inclusive Residential Living on College Campuses. How To Think College, Issue No. 2. Boston, MA: University of Massachusetts Boston, Institute for Community Inclusion.

Kelley, K.R. and Westling, D.L. (2019). Teaching, Including, and Supporting College Students with Intellectual Disabilities. New York: Routledge.

Lee, S., Rozell, D., & Will, M. (2018). Addressing the Policy Tangle: Students with ID and the Path to Postsecondary Education, Employment and Community Living. Washington, DC: Inclusive Higher Education Committee.

Lee, S. S., & Will, M. (2010). The role of legislation, advocacy, and systems change in promoting postsecondary opportunities for students with intellectual disabilities. In M.

Grigal & D. Hart (Eds.). Think College! Postsecondary Education Options for Students with Intellectual Disabilities. Baltimore, MD: Brookes.

Lombardi, A. R., Dougherty, S. M., & Monahan, J. (2018). Students with Intellectual Disabilities and Career and Technical Education Opportunities: A Systematic Literature Review. *Journal of Disability Policy Studies*, *29*, 82-96.

Love, M. L., Baker, J. N., & Devine, S. (2017). Universal design for learning: Supporting college inclusion for students with intellectual disabilities. *Career Development and Transition for Exceptional Individuals,* 2165143417722518.

McFarland, J., Hussar, B., Zhang, J., Wang, X., Wang, K., Hein, … & Barmer, A. (2019). The Condition of Education 2019 (NCES 2019-144). U.S. Department of Education. Washington, DC: National Center for Education Statistics.

National Center for Education Statistics (2019a). Student Financing of Undergraduate Education in 2015–16: Income, Tuition, and Total Price. Washington, DC: U.S. Department of Education. Retrieved from https://nces.ed.gov/pubs2019/2019473.pdf

National Center for Education Statistics (2019b). *Digest of Education Statistics*, 2017 (NCES 2018-070), Table 330.10.

National Coordinating Center Accreditation Workgroup (2016). Report on Model Accreditation Standards for Higher Education Programs for Students with ID: A Path to Education, Employment, and Community Living. Boston, MA: University of Massachusetts Boston, Institute for Community Inclusion.

Neubert, D. A., Moon, M. S., & Grigal, M., & Redd. (2001). Post-secondary educational practices for individuals with mental retardation and other significant disabilities: A review of the literature. *Journal of Vocational Rehabilitation, 16*, 155-168.

O'Brien, P., Bonati, M. L., Gadow, F., & Slee, R. (Eds.). (2019). People with ID experiencing university life: Theoretical underpinnings, evidence and lived experience. Rotterdam, Netherlands: Sense Publishers.

Office of Special Education and Rehabilitation Services (2019). Increasing Postsecondary Opportunities and Success for Students and Youth with Disabilities: Questions and Answers. Washington, DC: Author.

Paiewonsky, M., Hughes, L., & Landau, J. (2018). Engaging Parents in Conversations About College-Based Transition Services. Think College Insight Brief, Issue No. 37. Boston, MA: University of Massachusetts Boston, Institute for Community Inclusion.

Papay, C., Grigal, M., Hart, D., Kwan, N., & Smith, F. A. (2018). Predictors of Inclusive Course Enrollments in Higher Education by Students with Intellectual and Developmental Disabilities. *Intellectual & Developmental Disabilities, 56*, 458–470.

Parisi, P. & Landau, J. (2019). Use of Medicaid Waivers to Support Students with Intellectual Disability in College . Think College Insight Brief, Issue No. 40. Boston, MA: University of Massachusetts Boston, Institute for Community Inclusion.

Petcu, S. D., Chezan, L. C., & Van Horn, M. L. (2015). Employment support services for students with intellectual and developmental disabilities attending postsecondary education programs. *Journal of Postsecondary Education and Disability*, *28*, 359–374.

Plotner, A. J., & Marshall, K. J. (2014). Navigating university policies to support postsecondary education programs for students with intellectual disabilities. *Journal of Disability Policy Studies*, 1044207313514609.

Plotner, A. J., & Marshall, K. (2015). Postsecondary education programs for students with an

ID: Facilitators and barriers to implementation. *Intellectual and Developmental Disabilities, 53*, 58–69.

Qian, X., Johnson, D. R., Smith, F. A., & Papay, C. K. (2018). Predictors associated with paid employment status of community and technical college students with intellectual disability. *American Journal on Intellectual and Developmental Disabilities*, *123*, 329–343.

Sitlington, P. L., & Clark, G. M. (2006) Transition Education and Services for Students with Disabilities. New York: Pearson.

Scheef, A. R., Barrio, B. L., Poppen, M. I., McMahon, D., & Miller, D. (2018). Exploring barriers for facilitating work experiences opportunities for students with intellectual disabilities enrolled in postsecondary education programs. *Journal of Postsecondary Education and Disability, 31*, 209–223.

Shanley, J., Weir, C., Grigal. M. (2014). Credential Development in Inclusive Higher Education Programs. Serving Students with Intellectual Disabilities. Think College Insight Brief, Issue No. 25. Boston, MA: University of Massachusetts Boston, Institute for Community Inclusion

Turnbull, A. P. (1995). Exceptional lives: Special education in today's schools. Merrill/Prentice Hall, Old Tappan, NJ.

U.S. Department of Education (2019), Office of Special Education Programs, Individuals with Disabilities Education Act (IDEA) Section 618 Data Products: State Level Data Files. Retrieved January 8, 2019.

Wehmeyer, M. L., Agran, M., Hughes, C. (1998). Teaching self-determination to youth with disabilities: Basic skills for successful transition. Baltimore: Paul H. Brookes.

Winzer, M.A., & Mazurek, K. (2000). Special Education in the 21st Century: Issues of Inclusion and Reform. Washington, DC: Gallaudet University Press.

Table 1
*Academic and Campus Access Offered to Enrolled Students with ID*

| Academic or campus access variable | | *n* | % |
|---|---|---|---|
| Type of typical courses taken | Typical college courses for credit | 131 | 51.0% |
| | Typical college courses for audit | 174 | 67.7% |
| | Typical continuing education courses | 101 | 39.3% |
| | Students do not take typical college courses | 24 | 9.3% |
| | No response | 11 | 4.3% |
| Students take special courses only for students in the program | Yes | 162 | 63.0% |
| | No | 67 | 26.1% |
| | No response | 28 | 10.9% |
| Program offers housing | Yes | 86 | 33.4% |
| | No | 150 | 58.4% |
| | No response | 21 | 8.2% |
| Type of housing | Inclusive on-campus | 64 | 74.4%[a] |
| | Inclusive off-campus | 23 | 26.7% |
| | Specialized on-campus | 6 | 7.0% |
| | Specialized off-campus | 10 | 11.6% |
| | Other | 11 | 12.8% |

N = 257 programs. Note. [a] Of *n* = 86 programs that offered housing