Designing and Implementing Postsecondary Education Opportunities for Students with Intellectual Disability: An Illustration of Quality, Access, and Inclusion

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Abstract

The college experience described in this paper created normative opportunities for exploration and development on a university campus for students with intellectual disabilities (ID). This project was one of 27 Transition and Postsecondary Programs for Students with Intellectual Disabilities (TPSID) model demonstrations to receive a five-year grant in 2010 from the Office of Postsecondary Education (U.S. Department of Education). The purpose of this article is to describe the process for meeting criteria for TPSID funding and subsequent university approval. Major topics addressed were the design features that supported the achievement of academic, career, and independent living goals. Through an experience that matched that of degree-seeking students and met requirements of a Comprehensive Transition Postsecondary (CTP) Program, project implementation resolved sustainability issues and university program approval was achieved. In other words, the history of project implementation and policy development was provided with an assessment of the degree and manner with which TPSID grant goals and university approval were met. One implication was the illustration of the integration of policy and research at all levels of the university to inform practice. This program description provides a structured framework for programs pursuing sustainability and institutional commitment.

Keywords: intellectual disabilities, college experience, sustainability, CTP

Plain Language Summary

- This paper tells the story of activities on a college campus for a group of students experiencing intellectual and developmental disabilities.
- The activities included:
    - A focus on the knowledge and skills to be a life-long learner.
    - During their four years as college students, they worked on academic, career, and independent living goals alongside their peers.
- We found that:

- everyone at the college spent many days talking about the best ways to provide college classes, work experiences, and dormitory living.
- These meetings included Dr. Beverly Warren, the president of the university, who congratulated each of the students at graduation.
- At the end of the four years, Career and Community Studies became an official program of Kent State University.
- The success of this project showed that college was a "place" for all students experiencing disabilities and was also a "benefit" to them.

Parents, advocates, and professionals have long recognized that postsecondary education experiences have the same benefits for all students (Francis et al., 2018). Yet, students with intellectual disability (ID) continue to have the lowest rate of postsecondary enrollment when compared to all other categories of disability (Newman et al., 2011). Also, outcome studies showed that often students with ID lacked access to courses of study and transition supports that correlate with postschool employment (e.g., Baer et al., 2011). Historically, typical transition services for these youth either do not produce desired outcomes or put a ceiling on the possibilities for some students with intellectual disabilities (Baer et al., 2011).

A growth of interest in postsecondary education stemmed in part from studies where attending college predicted employment for youth with ID. Also, earnings of those who participated in postsecondary education, with vocational rehabilitation support, were 51% greater than non-participants in postsecondary education (Smith et al., 2018). The data for students with ID exiting from postsecondary education showed that students grew and adapted to the college environment and confirmed the impact of postsecondary education in other areas like housing and social activities (Grigal et al., 2019).

A key to these trends in postsecondary education (PSE) was the *next environment strategy*, a collection of practices where assessment of future demands provided a blueprint for current planning and education (Flexer et al., 2013). This strategy applied to students transitioning from preschool to elementary, elementary to middle school, middle to high school, and high school to college, work, and adult living. Preparing students for the requirements of next environments was not only a continuous process of building competence for the next transition, but was also a foundation serving the students throughout their school years and beyond. For early childhood, the vision for students was to be included in elementary grades by learning the attitudes and behaviors to be viewed as a class member, and building fundamental literacy and academic knowledge. Visions for a future required similar analyses for transitions from elementary to middle school and so on through the transition to adult life where the expectation was inclusion and competence. For all transitions, this strategy involved collaboration among educators, students, and families to determine how strengths, preferences, interests, and needs matched up with environmental demands (Flexer et al., 2013).

A college experience for youth with ID emphasized the importance of promoting independent living, empowerment and productivity for individuals with ID (Flexer et al.,

2013). This vision of a future was a philosophy that aligned with most universities' institutional goals to promoting diversity (Busteed, 2015) by exposing baccalaureate degree students living on or off campus (will be referred to as degree-seeking students), faculty, and staff to this segment of the student body (Grigal et al., 2019). Inclusion in the context of meaningful interaction with faculty and degree-seeking students would be necessary to develop sensitivity to the aspirations and to support the needs of individuals with ID. A positive impact can also be realized for students preparing to become teachers, related service providers, and health care and human service professionals, as well as the general student body. The next environment strategy can improve the conceptual base, knowledge, and skills of university administrators, faculty, staff, and degree-seeking students to expand and support inclusion for students with ID in postsecondary education (Flexer et al., 2013).

The catalyst for advancements in PSE for students with ID was the passage of the Higher Education Opportunity Act (HEOA) of 2008 (PL 110-315), which reauthorized the Higher Education Act of 1965 (PL 89-329). The HEOA defined, for the first time, components of postsecondary education programs serving students with ID. The legislation also indicated that programs should emphasize inclusion and access, and result in competitive employment. The project described in this article was one of 27 Transition and Postsecondary Programs for Students with Intellectual Disabilities (TPSID) programs to receive a five-year grant in 2010 from the Office of Postsecondary Education. The college experience was created to provide rich opportunities for exploration and development across important transition competency domains. These experiences used a campus community to support students in establishing and achieving career, academic, and independent living goals. The next environment strategy view of student development was described as preparation in knowledge, skills and attitudes of life-long learning and self-determination, which are key underpinnings of future success for all college students (Flexer et al., 2013; Singh & Gilson, 2020). What was still lacking was literature on access and inclusion, in particular, strategies to engage administrators, faculty, and staff in college program development (Plotner & Marshall, 2015). This article focuses on the integration of policy and research to fill this void in the literature on four-year college programs for students with ID.

The purpose of this article is to describe the process and program components for meeting criteria for TPSID funding and university approval (i.e., a faculty and trustee vote). That is, goals, objectives, and strategies required to demonstrate sustainability (which reflect grant criteria) and university program approval. The two issues for this purpose included:

1. Addressing design features that promoted an inclusive four-year postsecondary experience which mirrored that of degree-seeking students;
2. Resolving research, policy, and practice issues towards achieving sustainability and university program approval.

Due to the lack of literature on inclusion and collaboration in PSE, this program development project focused on detailed environmental analyses and needed program adjustments developed with collaborators at all levels of the university. The goal was to

provide specific and practical strategies for access and inclusion. This paper concluded with lessons learned. The collaborative problem-solving and next environment strategies created a program that provided a fit for students with ID at a four-year university (Flexer et al., 2013).

Program Framework

Required Components of the TPSID Program

The setting for the development and testing of this model demonstration postsecondary education program was a large midwestern university. Students who participated in the program experienced intellectual and developmental disabilities that affected some facet of cognitive functioning and adaptive behavior which may have precluded success in a four-year college degree program. Therefore, the purpose of the grant proposal was the development of a sustainable four-year non-degree program that included college classes, a typical college experience, and a transition curriculum.

The *inclusion supports and services and institutional access* grant requirements reflected the two broad policies central to college program development. The program implementers designed a project to meet the eight criteria for a TPSID grant proposal established by the federal government in HEOA 110-315 (2008):

1. serve students with intellectual disabilities;
2. provide individual supports and services for the academic and social inclusion of students with intellectual disabilities in academic courses, extracurricular activities, and other aspects of the institution of higher education's regular postsecondary program;
3. with respect to the students with intellectual disabilities participating in the model program, provide a focus on:
    (a) academic enrichment;
    (b) socialization;
    (c) independent living skills, including self-advocacy skills; and
    (d) integrated work experiences and career skills that lead to gainful employment;
4. integrate person-centered planning in the development of the course of study for each student with an intellectual disability participating in the model program;
5. participate with the coordinating center established under section 777(b) in the evaluation of the model program;
6. partner with one or more local educational agencies to support students with intellectual disabilities participating in the model program who are still eligible for special education and related services under the Individuals with Disabilities Education Act, including the use of funds available under part B of such Act to support the participation of such students in the model program;
7. plan for the sustainability of the model program after the end of the grant period; and
8. create and offer a meaningful credential for students with intellectual disabilities upon the completion of the model program.

Project Design

Foundations of policy and research were major sources of methods and strategies in achieving inclusion and access through alignment of the TPSID project objectives with university systems and practices. Also, problem solving across academic, career, and independent living domains and the many involved offices and programs was a major contributor to sustainability. The design reflected a comprehensive return on investment achieved by integration of research and policy to inform practice (Tucker, 2017).

The assumption that transition to college is fundamental to reaching adult roles raises questions about the purpose of all education. Is the purpose of education to serve as (a) a means to achieve a quality of life or (b) a means to prepare for life? Restated, was the purpose of education in this duality about (a) doing the right thing (a philosophical question) or (b) doing things right (a pragmatic question)? In other words, doing the right thing pertains to the desired future outcome of transition while the latter depended on making educational progress. The design for access and inclusion in this program integrates transition as an outcome-oriented process (IDEA, 1997) and as a results-oriented process (IDEA, 2004).

The purpose is to demonstrate the respective roles of policy and research and their integration to inform practice. In this case, informed practice achieves a college experience that mirrors degree-seeking students and meets requirements for inclusive supports and services and institutional access (HEOA, 2008). Supporting quality lives as a policy deals with effectiveness of achieving life goals and preparing for careers or college deals with efficacy or meeting educational benchmarks. More specifically, a policy outcome of value-based practice is role *fulfillment and generalizability* and a research outcome of evidence-based practice is *normative performance and internal validity* (Flexer et al., 2013; Singer et al., 2017; Wolfensberger, 1983). By using a bottom-up and top-down approach, needed systems-wide adjustments were identified through a process of using social capital to prioritize college success of students with ID. Completing the integration process enhances quality, access, and support to equip students for an inclusive environment. The success for students with ID and their inclusion portrays the nature and mechanics of the integration of values and evidence at both leadership and service delivery levels.

From this project's inception, alignment and integration were the primary focus because "programs that create special policies and practices for students with ID for typical college interactions like admission, registration, and advising may perpetuate a feeling of separateness for both the staff and students involved in the TPSID" (Grigal et al., 2014, p. 59). To avoid separation and accomplish integration, the project needed access to existing college systems (e.g., academic advising, registration, tutoring, and disabilities services) as well as to typical courses and campus-wide student activities. To focus on alignment helped to "foster ownership for students' success among IHE staff and departments that [were] not directly involved in the TPSID program" (Grigal et al., 2014, p. 59) and harnessed the social and cultural factors to create experiences that mirrored typical four-year college students. A design based on the integration of policy and

research provided the guidance by which experiences and supports minimized policies and practices that perpetuated *separateness*.

TPSID Curriculum

The TPSID program described in this article is a four-year, non-degree program of study designed to meet the legislative requirements for grant funding and subsequent approval as a university program. Offered to students with ID is a curriculum delivered through both courses and experiences in a 120-credit hour program, covering careers, academic interests, literacies, and independent living and campus life. The program design takes advantage of the many exemplary course offerings, activities, and student supports available to all university students, including campus activities, socialization options, health and wellness programs, work study, service learning, student accessibility services, and student academic support and counseling services. The curriculum spanned career, academic, and independent living domains. Each course and activity contained curriculum standards and benchmarks to ensure adequate preparation of students for adult life in college and after. The four-year college experience was also designed to culminate in preparation for a career and adult lifestyles based on students' strengths, preferences, interests, and needs in a manner similar to degree-seeking students.

Curriculum standards and competencies were drawn from three sources. A major source for the career and independent living domains was *Life-Centered Education* (LCE). The LCE (CEC, 2013) provides a comprehensive transition curriculum across three areas and sets of competencies (occupational preparation and guidance, personal-social skills, and daily living skills). Daily living skills and personal social skills fit within the independent-living domain, while occupational guidance competencies fell into the career domain. A second cluster of competencies within independent living consisted of health standards and competencies (Joint Committee on National Health Education Standards, 2007). The functional academic standards were based on the Kentucky State Learner Objectives. (Kentucky Council on Postsecondary Education, 1999). Table 1 shows how domains and standards were organized by content and credit.

In the academic domain, the project strived to provide both a liberal studies and literacy approach based in students' strengths and interests, which broadened their knowledge of the world and abilities to learn and communicate through multiple mediums (Blumberg et al., 2008). In the career domain, student proficiency was measured in obtaining and retaining employment and in pursuing a career path in a field of interest. Independent living courses and experiences built a repertoire of living and personal-social skills, health and wellness, and citizenship knowledge and college-survival skills. The curriculum distributed 90 credits equally between the academic and career areas and devoted 30 credits to independent living. The curriculum provided extensive preparation for life-long learning, employment, and community living. The proposed objectives included:

1. To develop supports and a program of study for students with ID through secondary school, university, employer, and community partnerships.
2. To recruit 20 secondary students with ID through collaborative agreements and relationships with local education agencies.

3. To develop Year 1 competencies related to career exploration through person-centered planning and participation in exploratory activities.
4. To develop Year 2 and 3 competencies related to career preparation through academic coursework, occupational training, and work and community experiences.
5. To support Year 4 transition to employment and community participation through partnerships with adult services and families.
6. To develop materials for replication and disseminate these materials through publications, presentations, and technical assistance.

Implementation

First Year Planning (Objectives 1 and 2)

What follows are the collaborative planning activities conducted during the first year. In our approach to this project, a factor of great importance was a strategy of meeting the university administrators, faculty, and staff where they were. The collaborative approach was designed to enhance knowledge and attitudes about college for students with ID throughout the university, which, in turn, would drive structural changes in the university environment to create inclusive structures.

In the first year, project resources focused on the development of a four-year program of study and a *comprehensive system of supports*. These supports included learning opportunities in the areas of: (a) academics and lifelong learning, (b) careers and employment, and (c) independent living and community inclusion. Project staff and university collaborators (i.e., administrators, faculty, and staff) developed committees focused on each of these three areas and an additional committee focused on access to university services. The approach to domain planning needed to be designed to ensure the program of study would contain appropriately designed coursework and experiences, corresponding closely to those of degree-seeking students.

Those committees also designed professional development to ensure that students with ID, faculty, and other staff had resources and strategies to work together inclusively. (Professional development was a key activity of domain committees). An example of professional development dealt with procedures and issues for supporting students with ID on weekends. Membership created agendas for further activities, including a needs assessment for participating in curriculum development. The development of an access committee ensured sufficient administrative support for the project and promoted coordination across the domain committees. The one-year planning period concluded with recruitment of a cohort of 20 participants.

Project Implementation (Objectives 3–5)

The project was approved as a CTP in 2013 and made it possible to provide student financial aid to eligible students with ID (US Department of Education, 2013). During the final year of the project, the Educational Policy Council (the university level curriculum committee) provided approval/endorsement, making the TPSID project an officially

recognized university program (Kent State University Undergraduate Catalogue). At the end of the TPSID project, only 18 students completed the program; one had dropped out and one did not complete the requirements due to illness. (This student returned later to complete requirements and receive a certificate in 2016.) The final step to acquire approval from the Board of Trustees was achieved in 2015. In retrospect, most, if not all, of the *Model Accreditation Program Standards for Higher Education Programs for Students with Intellectual Disability (2020*) were met in the program approved at this university which included TPSID funding criteria and CTP requirements (HEOA 110-315, 2008; US Department of Education, 2013).

Instructional Approach

Peer Involvement

Degree-seeking peers were similar-aged college students who interacted with students with ID in various roles associated with learning, socializing, and independence. They were recruited from various classes, programs, student clubs, and organizations across campus. The university's degree-seeking students reflected a significant means of functional interaction in a socially reciprocal manner (Carter et al., 2018; Singh & Gilson, 2020). Some completed field-clinical requirements associated with their major (i.e., special education, teacher education, rehabilitation counseling, speech pathology, etc.) for which the TPSID project student might engage in and/or request assistance. The TPSID project also provided numerous opportunities for students to meet their experiential learning requirements. Other peers participated as support assistance in program implementation in either a paid or volunteer capacity as needed on an individual basis. Field experience students, experiential learning students, and paid or volunteer peers engaged in instruction and support activities across the academic, career, and independent living domains as requested by the students with ID.

Peer supports were critical to instruction and assistance for project students in a variety of environments—classroom, work sites, campus facilities and programs, and community environments. For either inclusion or performance support, university students served as either a coach (where help with instrumental goals was requested), a mentor (where the purpose was to provide assistance, guidance, or advice requested by the project student), or a situational support (where temporary assistance was provided). Types of peer supports are discussed below.

The Next Environment Strategy in Postsecondary Education

The *next environment strategy* is an ecological systems approach to planning education services related to quality-of-life outcomes (Flexer et al., 2013). Early versions of the *next environment strategy* were key to improving services, especially for those with developmental disabilities (Spooner & Brown, 2017). To have significant impact, enhancing function and competence in typical settings was necessary. With this approach, connectedness could provide social context for meeting outcomes for satisfying work, a home, access to community resources, and control over one's life (Flexer et al., 2013). In regard to PSE for students with ID, ecological analyses were conducted throughout the

university, ranging from classrooms, work sites, dormitories, and other campus locations, which served as a point of contact for student engagement.

For example, prior to a student joining an existing college course, TPSID project staff met the instructor of record to ensure that the faculty member was agreeable to moving forward with having a TPSID student in their class. The *next environment strategy* was a two-phase process beginning with an assessment of fit between the environment and the student done in conjunction with the instructor for the TPSID student. The goals of the fit assessment (Phase 1) were to determine how to collaboratively provide a quality, inclusive performance. Step 1 of the fit process required identification of next environment demands. For the college course in question, the TPSID project staff obtained the course syllabus, which outlined class participation, course objectives, and requirements. After review of the syllabus with the student, classroom observation was completed by the TPSID project staff and the student to provide context to written materials. Taking appropriate transition assessments into account, the student's strengths, preferences, interests, and needs were aligned with the class expectations as outlined in the syllabus and validated with the observation (Step 2). In Step 3, areas of needed accommodations and modifications were determined and reviewed with the student.

The goal of the second phase was the development of a next environment plan. The collaborative process began with a face-to-face meeting during the first week of class to ensure that the faculty understood the inclusion approach being considered. Next, there was a conversation on accommodations (e.g., extended test time), modifications in requirements, instructional and behavioral support needs. For example, the students with ID may have required individualization of syllabus objectives, alternative performance, and/or enhanced instruction (Step 1). The agreement outlined the student's goals and objectives to be accomplished and any supplemental modifications to course requirements. The signed faculty agreement served as the individualized syllabus for the student which outlined syllabus objectives and performance requirements that were adopted, augmented or altered based on unique learning characteristics (Step 2). The final step entailed ongoing collaboration and fading of supports.

Instruction in career and independent living classes had supplemental community-based experiences, where activities were designed to help students develop better awareness of their transition skills, needs, and disability identity. Also, activities were designed to ensure student performance in socially valid contexts. "Learning by doing" developed knowledge and skills related to how students will live and work after graduation (Flexer et al., 2013; Spooner & Brown, 2017). These experiences provided students with a repertoire of knowledge and skills that have been shown by research to move students toward employment and community participation (NTACT, 2020).

For these two domains, environments were identified that provided a fit for participation by a TPSID student. The project staff met with significant others of record to make sure they would be willing to work with the student. In this instance, the next environment approach also was a two-phase process beginning with an assessment of fit between the environment and the student in a collaborative process. As described in the college class selection process, the first activity was to outline performance and behavioral

requirements necessary for fit (e.g., meeting environmental demands). Following this, an observation of requirements was performed to provide a context for written material. In consultation with the TPSID student, a list of possible accommodations, modifications, and support needs was completed for each major requirement. This was reviewed with relevant environmental actors (e.g., supervisors in a work environment or peers in a social activity) to achieve successful collaboration.

Years 1 and 2 Program Coursework

In year one of the program curriculum, students explored academic, employment, and independent living opportunities on campus, with 13 credits each semester. All transition classes consisted of classroom and community-based components focused on independence. In two health and wellness classes, students explored what it means to be healthy—how to achieve and maintain wellness. In two independent living classes, titled Personal Development, students pursued topics of nutrition, leisure and fitness, and social activities. In these four classes, an inclusive feature included classroom and community support from degree-seeking students receiving field or course credit for related courses (e.g. therapeutic recreation, injury prevention, social relationships, healthy living, and others). These courses were taken concurrently by peers with the same schedule as the project students or met independently outside of class for relevant activities.

Another class where peer involvement occurred was in financial literacy. The literacy class for students with ID met concurrently with a methods class for special education majors. Students with ID received instruction in small groups in money spending, saving, and budgeting while the teacher education students were practicing pedagogical strategies learned in their methods lecture prior to meeting with project students.

Students also took a course devoted to disability awareness that provided information and experiences that engaged students with disability culture. A second class guided them in developing self-determination knowledge and skills in all the new situations experienced on the college campus. Full inclusive participation opportunities were provided in First Year Experience and physical education. First Year Experience (FYE) was a credit course for degree-seeking freshmen and provided a comprehensive orientation to the college experience. Two inclusive physical education classes provided an exploration of interests for activity, exercise, and recreation. Peer involvement with project students in these inclusive experiences occurred only when requested and absolutely necessary beyond the instruction provided.

In the first-year course sequence, students learned how to make choices and decisions based on interests and preferences, to monitor and regulate their own actions, and to be goal-oriented and self-directed. All the courses, literacies, and transition competencies guided students in developing self-determination skills so that they were more involved in achieving their goals across the academic, career, and independent living domains.

In the second year, faculty and peers fostered further understanding of choices, and guided the students in continuing the exploratory process across the academic, career,

and independent living domains with 15 credits each semester. In two career education classes and inclusive work experiences, students gained understanding of their strengths and interests, and the requirements and demands of being a worker in these settings. Students with ID progressed through career development components and identified and clarified their career paths. All classes and activities prepared them for more in-depth preparation in their career fields of interest.

Through two academic success courses, students gained an understanding of liberal study disciplines (Social Sciences, Basic Sciences, and Arts and Humanities) and how a learner becomes well versed in exploring, navigating, and mastering the basics of diverse topics. Two more health and wellness classes continued the curriculum on healthy living and relationships. Two financial literacy classes extended the application of mathematical principles in everyday life. Two undergraduate classes were included, a communication course in the fall and an inclusive undergraduate course of interest in the spring. For an undergraduate course experience, students selected a career field and other fields of interest and "sat in" classes with like-minded peers without disabilities. They practiced student success skills and extended content knowledge in topics of interest.

Years 3 and 4 Program Coursework

In the third and fourth years, courses focused on career development and employment, independent living, extension of lifelong learning competencies, and the development of in-depth understanding of topics related to their career fields and general interests in arts and humanities, and social and basic sciences. Year three (32 credits) provided more intensive preparation in the students' career fields through inclusive work experiences and related undergraduate courses. Through two courses in career networking and undergraduate electives, students searched options and opportunities in their career interests and developed depth of knowledge and richness of networking and connections. In practicum, students gained experience in a variety of campus-based and off-campus employment settings. Activities that were shared with degree-seeking students with the same career interests expanded the networks of project students. Students completed on- and off-campus work experiences and conducted research into career opportunities in their home communities as well. Individualized mentoring and coaching fostered success in elective undergraduate courses and work experience.

The focus of the "senior" year (32 credits) was internship, employment, and independent living. Students with ID made self-determined decisions about how to focus the final steps of their programs toward rewarding careers in their fields of interest in their communities of choice. Program experiences played an important role in developing the career exploration, community resources, work experiences, and internships that all lead to a successful adult transition.

The courses and experiences of the students captured a picture of growth representative of most college students. To mirror the degree-seeking students' college experience, students with ID were included in courses and campus activities with greater independence as they moved through the curriculum. They were increasingly guided and

supported to be class members in undergraduate classes, valued workers in work experiences, and full participants in campus life.

Program Outcomes

College Course Participation

Many university offices, departments, and faculty services were consulted to develop working collaborative relationships in the academic domain. Of note was the willingness of university administrators, faculty, and staff to brainstorm principles and strategies of program design. The Office of the Provost and Vice President for Academic Affairs was instrumental in fitting curriculum and course development into the university system. These staff worked with program staff to build the non-degree program, and then helped in the development of a course naming and numbering process that interfaced with university registration, catalogue and transcript systems.

At times, draft policies and procedures were needed and tested through an evolving problem-solving process. For inclusion in existing undergraduate classes, trial inclusion policies and procedures for participation in credit courses were tested with several students and professors. The collaborative process developed by university administrators (including provosts, vice presidents, and deans), faculty, and staff resulted in a contract outlining the students' responsibilities for syllabus requirements, and a process for accommodations and individualization. Furthermore, this process clarified the respective roles of the course instructors, project staff, peer supports, and the students with ID.

Access to a wide array of courses was accomplished by the participation agreement. Student course participation spanned five colleges of the university. Moreover, faculty were supportive of project students attending their courses in pursuit of their personal, academic, and career goals. There was no predetermined list for course selection. Trained educational coaches and mentors were available to support instruction both in and out of the classroom.

Early survey data demonstrated the relative success of project student undergraduate course participation. From the survey of the students with ID, 67% strongly agreed and 22% agreed they were satisfied with the variety of undergraduate courses available. Nine of ten coaches *strongly agreed* with the statement, "As a result of working with the project, I feel that students with intellectual disabilities should have a college experience." Of twenty-five professors of college courses taken by students with ID:

1. Ninety-six percent (96%) responded that they would accept the same TPSID student into another of their courses in the future, and
2. Eighty-eight percent (88%) said that they would be willing to accept a different student into another of their courses in the future.

Undergraduate course participation was achieved in five of the eight colleges of the university. Students' diverse choices illustrated interests across many disciplines.

Students took courses in the sciences (both physical and social), humanities, fine arts, dance, music, criminal justice, education, hospitality, sports, and recreation. Examples of course choices by project students were: introductory courses from the arts and sciences (e.g., psychology and biology), major business courses (e.g., principles of management), the arts (e.g., dance and ceramics), education (e.g., childhood development), and communication (e.g., intro to conflict management).

Career Development and Employment

All project students participated in career classes, work experiences and internships in which peers (coaches or mentors) may have been utilized. They explored careers in which they assessed their interests, past experiences, and current skills. Peers provided structure and support when requested for success in job performance, in thinking through a career path, and in meeting milestones needed to accomplish their career goals. Students with ID and peers shared information in locating employment opportunities of interest on or near campus and experiences in contacting employers and going through the application and interview process. Discussions took place about barriers and problem solving, while they also shared experiences in their work placements. Peer interactions mutually reinforced goals of employment in preferred career paths for all students.

Like Office of Disability Services, the Career Services Office was accommodating in providing assistance to project students as they explored and prepared for careers of their choosing. The Career Services Office offered a wide range of options to guide students in identifying and preparing for a field of study of choice, such as career and self-assessment tools, individual advising, job fairs, and internships to help participants network with potential employers. Additionally, students with ID were provided person-centered planning and access to trained job coaches and developers, work-based training, and internships.

An important aspect of planning pertained to how students' career interests were matched up with course content. Career interests were enhanced by coursework in relevant topics in a variety of fields. One student was very interested in meteorology, and courses selected were in earth sciences and weather-related topics (e.g., geography). Two students with interests in early education participated in relevant coursework in that teaching credential, like methods classes. Law enforcement, sports management, parks and recreation, and business interests were represented by several students' course selections. More focused selections were made by one student each in hospitality and human services. Three students' passions were reflected in humanities and art, including photography, voice, ceramics, and dance. Student interest in broadcasting and horsemanship were pursued through independent study. See Table 2 for coursework and career interests of project students.

Independent and Dormitory Living

A classroom and community-based instructional approach was utilized in the independent living domain. The independent living domain pertained to life outside of classes and work experiences. In years one and two, peers supported students with ID in the following ways:

- Exploring what it means to be healthy, how to achieve and maintain wellness, and what it means to have healthy relationships;
- Pursuing topics of nutrition, leisure and fitness, and social activities;
- Receiving guidance in developing self-determination knowledge and skills in all the new situations experienced on the college campus, including spending, saving and budgeting money;
- Learning the uses of and access to technology and resources to enhance performance across domains.

In years three and four, knowledge and skills were generalized across all aspects of campus life. At times, support in domains involved peer support on or off campus. The standards and competencies learned spanned many environments and varied complex behaviors.

Additionally, the Office of Residential Life was agreeable to collaborating with the TPSID project in providing a dormitory living experience. The challenge of dormitory living for students with ID was to analyze policies, procedures, and programs and then build relationships with university leaders at the administrative and direct-service levels. To develop workable access, it was important to build an interface between program needs of project students and the function and operation of the pertinent departments and units. After study of existing policies and procedures, one path to dormitory living was to use the existing university frameworks.

However, another collaborative path required the creation of additional policies which integrated similar vocabulary and a parallel structure. For example, program and residential services collaborated and created an assessment of a four-day dorm experience to certify student basic safety, independent living skills, and needed supports and services. Weekend residential mentors were added to foster and encourage students engaging in weekend university activities (e.g., sports, concerts, parties, eating out, and movies). These measures assured a mutual comfort for residence services, program faculty, degree-seeking students, and the students and families that living in the dorm could be successful.

After freshman year, students who wished to live on campus completed an assessment in order to determine dormitory living readiness. This summer program consisted of four days and four nights of classes and activities while students lived on campus and trained staff assessed each student's independent living abilities. Skills to be assessed included but were not limited to: time management, organization, personal care, personal-social skills, communication, money management, traveling and mobility safety, decision-making, housekeeping, personal safety, managing meals, community involvement, and handling emergency situations. In the first summer program, seven students with ID participated in the dorm experiences and assessment. The students were given the opportunity to independently perform these activities before necessary prompting and assistance was provided. Three of seven students qualified for dormitory living in their sophomore year, while the other four qualified a year later.

Lessons Learned

Role of Values

The TPSID program had numerous impacts upon campus programs and the entire campus community. The students with ID bore some responsibility for the revision of attitudes toward diversity in learning and enriched interactions that occurred daily with faculty, degree-seeking students, and the university community. Program principles embodied the collective ethic that placed all students and their success at the center of the university mission (Tucker, 2017). Through numerous interactions, students with ID and the general student body contributed to a possible future where interdependence provides the foundation to a civil society.

In the college literature, the value of a college degree in terms of financial return on investment (i.e., debt, college cost, and salary) has been a major emphasis surrounding the topic of mission (Tucker, 2017). However, as Tucker stated, return on investment (ROI) also pertains to "soul metrics" that capture the essence of the college experience, the hopes, goals, and dreams of students. She further explored this broader meaning of college as "the institution's effectiveness at achieving its mission in contributing to students' development over time and preparing alumni for personal and professional success after graduation" (p. 29). The importance of inclusive messaging of college as "a place" for students with ID and as benefiting them will continue into the future across individuals, institutions, and society.

Central to most institutions' core missions is "transformative impact" or developing students holistically as espoused in their goals and values (Busteed, 2015). Busteed advocated for comprehensive ROI that argued for measures of alumni success and achievement as outlined in the mission and core learning outcomes. This TPSID program demonstrated the impact of collaboration on "soul metrics" in the evolution of an inclusive message and program approval by this university (Kavulic, 2017).

Alignment with University Systems and Practices

For this federal model demonstration TPSID program, it was assumed that little was known about how transition and postsecondary programs would fit within colleges and universities. Plotner and Marshall (2015) noted that students with ID participating in a complete college experience constituted large-scale changes in higher education. While Bumble et al. (2018) used the community conversation to explore inclusive higher education in general, this project focused on how the collaborative components for the presence of students with ID could be defined within the context of the entire university environment. The diversity and complexity of university administration, and the impact on the delivery of coursework, programs, and services required a collaborative structure specific to the four-year university experience.

In exploring collaboration in different types of institutions, Bumble et al. (2018) found a different viewpoint for four-year universities than those of a four-year college, and two-year community college. Attitudes of faculty, staff, administration and peers of the former

were deemed most important as opposed to supports and services emphasized in the latter. In gaining university acceptance, all these alignment efforts exemplified the importance of the role of attitude, values and skills of stakeholders across colleges, departments, and programs (Kavulic, 2017). In this project, building collaborative structure from the "inside out" resulted in strong ongoing support throughout the university infrastructure during grant implementation (Papay & Griffin, 2013).

The Next Environment Strategy and Self-Determination

Very important lessons in program development, occurring almost daily, pertained to supporting self-awareness and self-determination for the students with ID in a variety of environments. Implicit in these lessons of significance were the interactions between a support actor and the student with ID. Often an important set of increasingly complex interactions served as building blocks for the development of self-determination. The hope was that the vignettes provided a depiction of the interaction of the TPSID student and in some cases, staff or peers. In each vignette, an introduction of the student with ID and the project actor provided the general situation in which they were interacting. For example, problem solving processes required self-determination skills to resolve successfully the outcomes of interactions. For the duration of the four years in college, student development required self-awareness and building a repertoire of self-determination skills. A concluding implication of the interaction completes the vignette—pointing out the dynamics of growth for the student.

Portrayed in interactions in the vignette of Charles illustrated his response to frustration and how his counselor interacted with him, and subsequent interactions with the police officer, as described by the counselor.

> "It was an accident!" cried Charles as he tried to explain how the glass door was broken. Charles, a 20-year old student with autism, had difficulty with impulse control and said he was mad at another student. He meant to kick the metal part of the door, but missed and broke the glass panel instead. Campus police were called and Charles admitted to the officer that he was the one who broke the door. The officer pulled me to the side and said that he wasn't going to submit a report because he realized that Charles was a student with an intellectual disability, and that he would let it slide. After a brief discussion, the police officer agreed that Charles needed to understand that there were consequences to his actions, and he needed to learn from those mistakes. A report was submitted and he paid the damages.
>
> A week after the incident, Charles stated that he needed to make a change, which is the first step to problem-solving. He came up with a list of several things he could do to begin to improve upon his interactions with classmates and friends. After going through the list of pros and cons of each choice, he decided that the first thing he would do was meet with his counselor on a regular basis in order to talk when he was feeling angry or when he was not in control of his emotions. Over the next three years, there were numerous opportunities for him to learn from his

> mistakes, and each time, Charles worked at taking responsibility for his actions with support from his counselor.

In this instance, coaching and counseling supported Charles with his efforts to use self-determination skills. This coaching provided a way to walk through systematic steps (he selected) to gain better control of his behavior when frustrated. Charles gained an appreciation of consequences of outbursts and how to use supports and strategies for a more adaptive response to his frustration.

As reported by his mentor, Monroe's self-awareness increased through understanding his disability and the skills needed to prepare for his career of choice. This involved identifying requirements to be in broadcasting and matching those to his abilities and skills. Interactions portrayed give and take between Monroe and his mentor, illustrating his growth.

> In the TPSID project, students explored and researched careers that were of interest to them to determine: (1) employment opportunities that exist where they plan to live; (2) a career that matches their strengths, preferences, interests, and needs; and (3) the necessary skills to be successful in that career. Monroe was adamant that he was going to be the next famous news broadcaster on Channel 8 news.
>
> Monroe had difficulty recognizing that broadcasting required advanced skills in reading, writing, and speaking—all areas in which Monroe struggled. An internship with the university's TV station began to shed some light on this, as Monroe auditioned for broadcasting positions and was never chosen. At first, he blamed everyone else. With consistent feedback, he slowly realized that he did not have the highly competitive skills to be in front of the camera, but he did have great skills for several jobs behind the camera. His increased self-awareness furthered access in the field of his greatest interest in a valued capacity in the environment of his choice.

Through his interactions with his mentor, Monroe gained an understanding of his abilities and the need to compare his speaking skills to the required proficiency for news broadcasting. Being actively involved in a valued role in broadcasting abetted a self-discovery process resulting in increased self-awareness of his abilities and opportunities.

This vignette for Cassie demonstrated an interaction portrayed by her mentor. Cassie found herself in a situation where she was faced with a task she was not familiar with and subsequently increased interaction demands on the mentor. In this instance, the direction and content of interactions were not so obvious for either the student with ID or the mentor.

> Cassie lived on campus in a dormitory for her sophomore and junior year; however, Cassie felt she was ready to move into an apartment of her own during her senior year. This meant that she had to travel independently between her apartment and campus. One day, Cassie had missed the return bus from campus to her apartment. When asked, Cassie stated that she could catch the next bus, but it would be an

> hour before it would come, and that would get her home too late. She would miss going out with her friends. The problem wasn't the fact she missed the bus, it was that she was going to miss a social event with friends.
>
> When questioned, she said that she could take the next bus, and try to catch up with friends later; or she could call a taxi. She decided to call a taxi. But this brought about a new problem—Cassie had never called a taxi before. Before I could say a word, Cassie smiled and said, "I know, you are going to ask what I am going to do to solve my problem." Cassie began to work through her new problem as she figured out how to find a taxi service and to get the number to call for a ride. When the taxi arrived, she said, "I guess I'm smarter than I thought."

Independence across all the domains of adulthood required vital and complex social skills and independent travel to access multiple locations and activities. For Cassie to meet her friend, she needed to work through the steps to problem-solve on her own (to seek and use the telephone), requiring the mentor to sit quietly while Cassie went through steps to problem-solve on her own. Illustrated in Cassie's case was a situation requiring the performance of a novel skill in order for her to solve the problem.

Recommendations

The overarching challenge in developing a college program for students with ID was communication and collaboration to garner support for establishment of the program. Plotner & Marshall (2015) pointed out that the novelty of college programs for students with ID called for explanation and justifications. Documented in Kavulic (2017) was the finding that university and program leaders needed to share a commitment to the importance of the program to the university mission as well as to developmental milestones and the post-school success of students with ID. Alignment is central to the collaboration process and is reflected in the following inclusion and access recommendations for continuing program development:

- Collaboration with leadership at the administrative and policy level to provide a strong inclusive message.
- Recruitment of management and program director level staff to build an inclusive infrastructure for full participation across campus activities and programs.
- Articulation of communication and marketing strategies for diverse audiences to convey positive images of academic, career, and independent living competence.
- Collaborative provision of experiences and opportunities that build and reinforce independence and self-determination through social reciprocity with degree-seeking students.
- Creation of systems to establish equal and reciprocal relationships between students with ID and their peers.
- Design of data management systems to demonstrate both population and individual benefits as defined by institutional mission and learning goals.

Over the five years of program development, the inclusive collaborative process raised expectations and specified shared learning and performance expectations across college environments (e.g., classrooms, work sites, and other settings) for students with ID. The hope is that this model demonstration program provided a helpful structured framework for future research and development.

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Table 1

Credit Hours by Domain

Domain	Content	Credit
Academic	• Liberal Studies/ Career Field -Social Science -Basic Science -Arts and Humanities -Diverse Majors	24
	• Literacy -Communication, Math, Science, Cultural -Academic Support and Success -Disability Awareness -Technology	21
	• Total Credits	45
Career	• Career Development -Career Exploration -Work Experience -Career Preparation -Work Practicum	21
	• Internship	24
	• Total Credits	45

Domain	Content	Credit
Independent Living	• Campus Life -Leisure, Nutrition, Fitness -Health and Wellness -Financial Literacy -Physical Education	22
	• Community Life	8
	• Total Credits	30

Table 2

Participant Undergraduate Courses and Career Interests

Participants	Undergraduate Courses	Career Interests
P1	• Natural Disasters and Society • Earth Dynamics • Geography of the United States and Canada • Earth Dynamics Lab • Fundamentals of Meteorology	Geology Geography Meteorology
P2	• Intro to Human Development Family Studies • Intro to Gerontology • Family and Professional Collaboration	Human Services Gerontology
P3	• Human Biology • Health Education for Early Childhood • Intro to Early Childhood Services	Early Childhood Education
P4	• Intro to Exercise Science • Sport in Society • Facility Management	Sports Management
P5	• Educational Technology • Computer Literacy • My Story on the Web • Intro to Creative Writing • Mobile Multimedia	Computers Media Writing

Participants	Undergraduate Courses	Career Interests
P6	• Intro to Sport Administration • My Story on the Web • Exploring Business	Sports Administration Business
P7	• Exploring Business • Intro to Conflict Management • Business and Professional Writing	Business
P8	• Intro to Fine Art Photography • Music as a World Phenomenon • Ceramics I • Science of Human Nutrition	Art Photography
P9	• Studio Tap I • Studio Hip Hop I • Voice I • Studio Jazz I • Studio Hip Hop II • Studio Swing Dance I	Dance
P10	• History of the United States: The Formative Period • Intro to Justice Studies • Strength and Conditioning	Law Enforcement
P11	• Child Development	Child Development

Participants	Undergraduate Courses	Career Interests
	• General Psychology • Understanding Young Children: Typical and Atypical Pathways • Education in a Democratic Society • Child Psychology • Intro to Human Development Family Studies	Early Childhood Education
P12	• Intro to Creative Writing • College Writing II • Ceramics I & II • Sculpture: Life Modeling • Advanced Ceramics	Writing Ceramics Puppetry
P13	• Intro to Entrepreneurship • Exploring Business • Science of Human Nutrition • Media, Power, and Culture	Small Business Health
P14	• Foundations of Recreation and Leisure • Community Development in Recreation • Issues in Law and Society • Intro to Justice Studies • Corrections	Parks and Recreation Law Enforcement
P15	• Voice I	Music

Participants	Undergraduate Courses	Career Interests
	• Music as a World Phenomenon • General Psychology • Intro to Sociology	Horsemanship (independent study)
P16	• Intro to Global Tourism • Intro to Mass Communication	Broadcasting (independent study)
P17	• Studio Hip Hop I • The Art of the Theater • Intro to Hospitality Management • Techniques for Food Production • Lodging Operations	Hospitality
P18	• Intro to Global Tourism • Exploring Business • Intro to Conflict Management • Intro to Sociology	General Studies

Figure 1

Ecological Analysis