

A Delphi Study to Confirm Essential Components and Activities of Inclusive College-Based Transition Services

Meg Grigal
Maria Paiewonsky
Tess Anselm

University of Massachusetts Boston

Abstract

College-based transition services are a model of transition services offered in college or university settings for students with intellectual and developmental disabilities (IDD) who receive transition services after age 18. This method of transition service has existed in some form for over three decades. However, little guidance is available on the composition or structure of college-based transition programs. We conducted a Delphi study with a group of national experts to identify and confirm the essential key components and activities of providing inclusive, college-based transition services. The study identified eight components, including 1) community-based transition services; 2) student self-determination and self-advocacy; 3) family engagement and partnerships; 4) advising, course of study, and enrollment; 5) student support for college success; 6) staff development; 7) integrated paid employment; and 8) evaluation. We provide implications for research and practice.

Keywords: transition, intellectual and developmental disabilities, college, inclusion, Delphi

Plain Language Summary

- Transition services help students with disabilities leave high school and be successful. Sometimes transition services happen in high school, other times they happen at colleges.
- This study asked experts to choose the most important activities that should be offered in college-based transition programs for students with intellectual and developmental disabilities.
- **What we did in this study:** We conducted a Delphi study with a group of national experts to identify and confirm the essential key components and activities of providing inclusive, college-based transition services.
- **Findings:** We identified eight key components and 41 activities as essential in the planning and implementation of inclusive, college-based transition programs - 1) community-based transition services; 2) student self-determination and self-advocacy; 3) family engagement and partnerships; 4) advising, course of study, and

enrollment; 5) student support for college success; 6) staff development; 7) integrated paid employment; and 8) evaluation.

- **Conclusion:** Researchers and practitioners can use these findings to develop and enhance college-based transition programs and build a much-needed model of practice for college-based transition services.
- These findings can help educators understand the differences between college-based transition services and the more traditional transition services.

Students with disabilities are required under the Individuals with Disabilities Education Act (IDEA) to receive transition services as a part of their individualized education program (IEP). The transition services requirements must be in effect when the child turns 16, or younger if determined appropriate by the IEP team, and must be updated annually thereafter. The IEP must include 1) appropriate, measurable, postsecondary goals based upon age-appropriate transition assessments related to training, education, employment, and independent living skills (where appropriate); and 2) the transition services (including courses of study) needed to assist the student with a disability in reaching those goals. As defined by the statute (IDEA [20 U.S.C. Sec. 1401(34)], transition services:

“means a coordinated set of activities for a student with a disability designed within a results-oriented process that is focused on improving the academic and functional achievement of the child with a disability to facilitate the child’s movement from school to post-school activities, including postsecondary education, vocational education, integrated employment (including supported employment), continuing and adult education, adult services, independent living, or community participation. The coordinated set of activities is based on each student’s needs, considering the student’s strengths, preferences, and interests, and includes instruction, related services, community experiences, the development of employment and other post-school adult living objectives, and, if appropriate, the acquisition of daily living skills and provision of a functional vocational evaluation.”

The transition experience for most students with disabilities ends at age 18 when students complete their high school program and receive their diploma or high school certificate. However, students with intellectual and developmental disabilities (IDD) in most states can continue to receive special education services, including transition services, past age 18 and up to age 21 or 22 depending on the state (Michigan extends these services until age 26). The purpose of this extended access to special education services is to allow additional time for students to build skills to support better post-school outcomes (Schillaci et al., 2021). Students with IDD who receive special education services beyond age 18 typically participate in transition experiences, such as life-skills or community-based vocational programs, often only with other students with disabilities (Chiang et al., 2017). Fewer students are supported to access postsecondary education environments or engage in paid employment in their communities (Lipscomb et al., 2017). In some cases, students with IDD receive transition services via college-based transition programs.

As the name indicates, college-based transition programs are those where the transition services for students with disabilities are implemented on a college or university campus (Grigal et al., 2017). These programs share similarities with both community-based instruction and traditional dual enrollment programs. Like community-based instruction, college-based transition services are provided outside of a traditional high school environment. Similar to traditional dual enrollment experiences, students are offered the option to access college coursework while they are enrolled in high school. However, traditional dual enrollment options are most frequently offered to high school students taking advanced placement or international baccalaureate courses who are simultaneously enrolled in high school and receiving college credits (Barnett & Stamm, 2010). Dual enrollment students may take courses at their high school or at a college, and often students must pass a test to receive college credits. A student's grade point average may guide their participation in these programs per state policies. College-based transition experiences differ from traditional dual enrollment experiences in that students are not required to have a specific grade point average, most often have an IDD, and do not need to be seeking a high school diploma. Though there are significant differences between programs, most students in college-based transition programs participate and enroll in some college courses (either auditing and taking courses for credit), engage in work-based learning and employment, and are involved in other campus social activities (Grigal & Bass, 2018; Roberts-Dahm et al., 2018).

The relevance of college-based transition services has grown over the past decade as legislation and policy changes have increased access to higher education for students with intellectual disabilities (ID). In response to passage of the Higher Education Opportunities Act (HEOA) in 2008, the Office of Postsecondary Education funded three cohorts of model demonstration projects called Transition Postsecondary Programs for Students with Intellectual Disabilities (TPSID), leading to the development or expansion of programs at 126 colleges and universities serving almost 5000 students with ID in 34 states (Think College National Coordinating Center, 2023). Approximately one-quarter of TPSID programs support high school students with ID at a college or university. This percentage is slightly higher for colleges and universities which do not have TPSID funding, with 31% offering college-based transition services to transition-aged youth with IDD (Think College, 2023).

A variety of models and guidance exist regarding implementation of traditional or conventional transition services (Office of Special Education and Rehabilitative Services, 2017; Kohler et al., 2016) and professional standards have also been developed to guide practice (Division on Career Development and Transition 2013). However, these models and standards do not address the unique provision of services offered in college-based transition programs. Early published literature offered program descriptions (Goldstein, 1993; Neubert et al., 2002; Page & Chadsey-Rusch, 1995), position papers (Patton et al., 1996; Smith & Puccini, 1995), and strategies for planning, implementing, and evaluating programs (Grigal et al., 2005 & 2012; Zafft et al., 2002). However, key components of college-based transition services have yet to be established in the literature.

As college-based transition programs and services continue to become more prevalent, programs need guidance to identify and implement effective activities and to guide evaluation of both program and student outcomes (Schillaci et al., 2021). Most

college-based transition programs are grounded in the principles and structures outlined in transition legislation and regulations, such as prioritizing access to the least restrictive environment for students and focusing on students' strengths, preferences, and interests (Igdalsky et al., 2020; White et al., 2017). However, because this model of transition services delivery requires the straddling of two systems—secondary and higher education—college-based transition services can be complex to plan, implement, and oversee (Grigal et al., 2020; Paiewonsky et al., 2020).

College-based transition services must address IEP transition goals. Yet instead of meeting these goals in a singular educational environment such as high school, college-based transition services are implemented in the more varied educational contexts comprising a college or university campus, such as classrooms, recreation centers, libraries, dorms, and other campus locations. Moreover, these educational services are not delivered by a single or even by many teachers in a single school, but from an array of professionals including school district staff (transition specialists, program coordinators, job coaches, education coaches), higher education staff (disability support personnel, advising personnel, faculty and staff, career services, student affairs), and, in some cases, by community disability service providers and state agencies (Folk et al., 2012; Hines et al., 2016; Thelin et al., 2019). Additionally, students participating in college-based transition programs may need additional support to access advising, attend courses, and to participate in career exploration and employment. Students may also require assistance accessing transportation and navigating on campus. Supports may take the form of an educational coach for coursework, peer mentors for campus activities, and employment specialist for job related supports. And each of these support professionals or volunteers may or may not work directly with one another.

Existing guidance and standards for conventional transition services are insufficient as they fail to acknowledge or address the complex array of instructional contexts or diverse support personnel involved in college-based transition services. Other federal guidance is available for comprehensive transition programs, those college and university programs seeking to be approved to offer federal student aid (FSA) to students with intellectual disability. Programs offering FSA must meet a specific set of requirements related to federal regulations. However, this guidance is also insufficient as it was not intended to address services offered to students who continue to receive special education under IDEA, as these students are not eligible for financial aid.

To explore the development of more targeted and specific guidance for college-based transition services, first we need to identify the aspects of these services which are considered essential. Given the direct involvement of both the K-12 education and higher education systems, the diverse array of education and support professionals, and the various educational environments, a variety of perspectives is needed to identify essential components and activities of such services. To achieve this, we implemented a Delphi study to address our research question: What do experts in the transition and inclusive postsecondary and related fields determine to be essential aspects of inclusive college-based transition services? We sought guidance from existing resources as well as input from individuals with experience or expertise in the fields of transition, higher education, college and career readiness, disability supports, interagency collaboration, parent

engagement, and integrated employment to implement a Delphi study identifying essential or key components and activities of college-based transition services.

Method

To identify what experts believe are the key component areas and activities of high-quality, inclusive, college-based transition services, we selected to use a Delphi method. The Delphi method is a consensus-building technique that falls under the general grouping of action research approaches (Vernon, 2009). It is uniquely applicable in areas where there is little prior research or where advantage could be realized in the collective subjective judgment of experts (Hejblum et al., 2008). Additionally, the Delphi process allows facilitators to assemble groups of experts without concern for geography. As such, experts can complete rounds of surveys electronically through email or survey software (Avella, 2016). To prepare for this process, we first assembled an initial draft list of potential college-based transition component areas and associated activities for our experts to review. To create this draft list, we first identified existing standards and guidance from a variety of fields that could influence or relate to college-based transition services, including secondary and higher education, college and career readiness, dual enrollment, and career development standards found in literature. Next, we describe these existing standards and guidance and our rationale for selecting them.

Identifying Existing Standards, Guidance, and Activities

To reflect current knowledge related to ID and higher education, we used the only two existing resources that specifically address higher education access for students with intellectual disability: 1) the PERC Postsecondary Program Evaluation Tool: A Self-Assessment for College and Community-Based Services (Grigal et al., 2012) and 2) the Standards, Quality Indicators, and Benchmarks for Inclusive Higher Education (Grigal et al., 2012). While somewhat dated, the PERC tool is the only published resource specifically addressing a college-based transition model. It has not been updated since it initially was developed to provide a concise evaluation instrument for dual enrollment programs supporting students with IDD in college settings. Users are asked to calculate scores over 10 areas of practice and use this assessment to create site improvement plans. The Standards for Inclusive Higher Education tool is the only existing set of standards guiding the development and evaluation of inclusive higher education for students with ID. These standards are used widely to guide practice and have been incorporated into multiple state postsecondary funding initiatives. This framework is composed of four standards deemed cornerstones of practice—1) academic access, 2) career development, 3) campus membership, and 4) self-determination—that are each seen as essential elements of quality inclusive higher education practice. An additional four standards—1) integration with college systems and activities, 2) coordination and collaboration, 3) sustainability, and 4) ongoing evaluation—represent interdependent elements of programmatic infrastructure necessary for the four cornerstones of practice to occur, be sustained over time, and result in desired outcomes. IHEs and college-based transition programs partnerships have used these standards nationally to create, expand, or enhance high-quality, inclusive, postsecondary education to support positive outcomes for individuals with ID (Lynch & Getzel, 2013).

To reflect current guidance from the field of college and career readiness (CCR), we incorporated Conley's (2012) four major components of college readiness into our initial draft of activities related to academic access and career development. These CCR components include: 1) key cognitive strategies, 2) academic knowledge and skills, 3) academic behaviors, and 4) contextual skills and awareness. Each of these components considers the academic preparation, study skills, problem-solving, and college navigation skills that students, including students with ID, experience in preparation for postsecondary education (Kearns et al., 2010).

To reflect knowledge from the field of dual and concurrent enrollment, researchers identified several practices from the National Alliance of Dual Enrollment Partnerships (2012), including course access and registration protocols typical for all college students, using concurrent paid work experiences to augment students' career awareness and the expectation that course instructors meet the IHE's professional requirements. From the field of career and technical education as represented by the Perkins Collaborative Resource Network (2015), we included components emphasizing the expectation that dually enrolled students begin with introductory courses at the secondary level teaching broad foundational knowledge and skills across careers and then progress to more occupationally specific courses at the postsecondary level.

The Association of People Supporting Employment First (APSE) offered a framework that included supported employment competencies, specifically activities focused on individualized work plans, building partnerships with businesses, and interagency collaboration for integrated employment opportunities (APSE, 2010). Finally, the American School Counselor Association provided practices related to expectations of guidance staff. Specifically, guidance staff should provide students with early planning, goal setting, and meaningful course and extra-curricular activities drawn from their career assessment results (ASCA, 2016). We combined these activities into a draft list of 13 potential key component areas and 105 potential associated activities to be reviewed by experts during the three rounds of the Delphi process.

Survey Development

The 13 key component areas included 1) interagency transition team, 2) community-based transition services, 3) students' self-determination and self-advocacy, 4) preparation for college, 5) advising and course of study, 6) student enrollment in college, 7) student support for student success, 8) social and academic integration, 9) staff development, 10) policies for assuring satisfactory academic progress, 11) family partnerships, 12) integrated paid employment, and 13) evaluation. We programmed the draft components and activities into an online survey software platform called SurveyGizmo and included a Likert rating scale for panelists to rate the extent to which they agreed a component, or a practice, was essential. The 5-point scale range included "Not very important" (1), "Somewhat important" (2), "Important" (3), "Very important" (4), and "Essential" (5). Below each component was a text box to provide panelists the chance to anonymously offer any desired additional comments.

Panelist Selection

The pool of potential reviewers with expertise in the desired areas could be considered somewhat small. To ensure the widest possible participation, ensure panelists had relevant knowledge and expertise, and ensure that our own networks or relationships did not determine or limit participation, we excluded the research team from nominating potential panelists. We sought nominations for Delphi panelists from staff of national centers on transition and postsecondary education as well as from other leaders in their respective fields. Individuals were allowed to self-nominate, if desired. A rubric was used by project staff to rate qualified panelist nominees who met one or more criteria. These included: 1) authorship of scholarly, peer-reviewed work relative to one or more of the key components, 2) program leadership as a principal investigator or director of federally funded transition or college access projects, or 3) experienced practitioners (e.g., education advocates, parent engagement specialists, program coordinators) with 10 or more years of service in the transition field. Selected panelists were required to score at least 80% on this rubric. Twenty-five individuals met the criteria to participate as Delphi panelists. These final panelists had content expertise or long-term experience in a range of related topic areas including dual enrollment, inclusive postsecondary education, supported employment, interagency transition teams, self-determination, and/or family partnerships. We sent final nominees an email describing the study and inviting them to participate in three rounds of the Delphi process.

Potential panelists were told that the purpose of the Delphi study was to confirm, through a narrowing down process, the essential components of inclusive college-based transition services, (i.e., what must be in place to prepare students with IDD to access postsecondary education and paid employment). We informed panelists that they would complete three rounds of feedback, responding to an online survey taking approximately 30 minutes, and complete the full process within 6-8 weeks. In addition to the ratings of key components and activities, panelists were provided with a comment box to share any suggestions for editing, clarifying, or strengthening terminology for each key component. A small stipend was offered for each round of feedback completed.

Twenty-two nominees accepted the invitation to participate. These individuals represented a range of public and private institutional organizations and advocacy groups and represented a large geographic span of the United States. There was an intentional balance of professionals whose expertise ranged across the content areas (see Table 1). Sixty-five percent of the nominees completed all three rounds of the Delphi process and another 15% completed at least two rounds. In Round 2, perspectives from two college program directors, a state college and career readiness director, and two secondary transition researchers, were lost through attrition. Apart from one state college career readiness director, 15 other participants contributed college program and secondary transition knowledge. In Round 3, perspectives from three college program directors, an educational policy advocate, a family advocate, three transition researchers, and a director with integrated employment experience were lost through attrition. This gap in participation possibly reduced some feedback relevant to the panelists' expertise but did not eliminate contributions from the remaining participants who contributed similar knowledge and experience. Despite some survey attrition, the composition of the panel

and the content knowledge was not compromised. This was due, in part, to having panelists with experience across topics (e.g., postsecondary education and employment; college career readiness and interagency collaboration) and panelists with dual roles (i.e., researchers who were also parents of students with disabilities; practitioners who collaborated with researchers on transition initiatives).

Results

The research question guiding this Delphi study was “What do experts in the transition and inclusive postsecondary and related fields determine to be essential aspects of inclusive college-based transition services?” The Delphi panel determined these essential aspects after three rounds of ratings. After a review of the initial responses, ratings, and comments obtained from each round of the Delphi process, researchers identified key component areas and activities by using a combined 80% or higher rating of “Essential” and “Very Important” as the requirement for inclusion in the next round. We eliminated components that did not meet the 80% threshold from the updated survey. Thus, the final list of key components reflects only those rated as “Essential” or “Very important” by 80% of the panelists. We sent a survey to panelists every two weeks until three rounds were completed.

Round 1

In Round 1, we asked respondents to rate a total of 105 activities listed under 13 proposed key component areas. Twenty-one panelists provided responses to Round 1 of the survey. After a review of panelists' ratings and comments, 55 activities remained, divided among nine key component areas, reduced from the original thirteen. One key component area, “Interagency Transition Teams,” and all its associated activities, did not meet the threshold of 80%, and thus the key component area was eliminated. Four other key component areas were merged into two areas due to suggestions from panelists and the high ratings of activities within these two key component areas. Specifically, the key component area “Student Enrollment” was merged with “Student Advising and Course of Study” and the key component area “Policies for Assuring Satisfactory Student Progress” was merged with “Student Support for College Success.” After Round 1, we reviewed panelists' feedback to address language issues. Some remaining key component areas and activities were reordered to address flow and support ease of use.

Round 2

In Round 2, we asked respondents to review 55 activities categorized under nine key component areas. Seventeen of 21 (80%) reviewers completed the Round 2 survey. Any key component area or practice not receiving a combined rating of at least 80% as either “Essential” or “Very Important” was eliminated. After Round 2, 44 activities remained in the survey for the final round, distributed among eight key component areas. Research staff discussed comments and ratings provided by respondents. Staff used the information to revise the wording of some items and to add and adapt some items in preparation for the Round 3 survey. Specifically, activities from the key component area “Preparation for College” were redistributed to the “Family Partnerships” and “Integrated

Paid Employment” key component areas. We eliminated the “Preparation for College” area. We made additional language modifications to the activities in the remaining eight key component areas.

Round 3

Round 3 of the Delphi process began with a total of 44 activities under eight key component areas. Thirteen of the 21 reviewers (62%) completed the Round 3 survey. We deleted some activities using the same formula of at least 80% agreement as “Essential” or “Very Important.” After Round 3, 41 activities and eight key component areas remained. Additional feedback from the respondents led to a revision of the key component area “Family Partnerships,” and it was changed to “Family Engagement and Partnerships” to better reflect the need for collaborative activities. The final round of the Delphi process resulted in the confirmation of eight key component areas and 41 activities deemed “Essential” or “Very Important” for inclusive college-based transition services. Figure 1 lists the final key components of college-based transition services and the associated activities.

Discussion

While college-based transition services have been evident in practice for multiple decades (Goldstein, 1993; Grigal et al., 2001; Neubert et al., 2002; Zafft et al., 2004), the field has lacked clarity about the activities essential to this form of transition services. Through this Delphi study, we sought consensus from reviewers representing a variety of related fields on the key component areas and associated activities of college-based transition programs for students with IDD.

One of the chief changes resulting from this Delphi study was the reduction in overall key component areas, reducing the number of potential key component areas from 13 to eight final key components areas. In some cases, key component areas were combined. In other cases, a key component was modified into a practice and subsumed into a different category. The final list of components offers a comprehensive picture of the transition program students would experience including foundational aspects (Key Component 1: Community-based Transition Services and Key Component 2: Student Self-Determination and Self-Advocacy), family collaboration (Key Component 3: Family Partnerships and Engagement), student advising and support (Key Component 4: Advising, Course of Study, and Enrollment and Key Component 5: Student Support for College Success), related professional development (Key Component 6: Staff Development), connecting activities (Key Component 7: Integrated Paid Employment), and sustainability (Key Component 8: Evaluation; see Table 2). Some reviewer comments indicated that certain activities did not rise to the level of being included in the final list but should be considered as part of training provided to staff who are involved in addressing the key component. This discussion highlights both panelist ratings and input drawn from comment included at the end of each section in the survey. Participants were encouraged to use these comment sections to offer clarifying points.

Key Component Area 1: Community-based Transition Services

The first key component area and its eight associated activities reflect the need for high-quality transition services for students ages 18 or older to be offered outside of the typical high school environments. Community-based instruction promotes instruction occurring in the community—a natural environment where students are more likely to use the skills—as opposed to in a classroom setting. While community-based transition services have been used in practice for decades to support youth with IDD develop employment and community navigation skills (Certo & Luecking, 2011; Gaumer et al., 2004), the nature of the community-based transition activities referenced by reviewers focuses less on settings and more on the interdisciplinary nature of college-based transition programs and the need for adequate staff training.

In addition to some traditional aspects of community-based transition experiences, such as alignment of activities to transition assessment and the need for family preparation, the activities deemed essential in our findings also included staff facilitation of person-centered planning and development of individual learning plans. Student-focused planning is a key feature in transition service models (Kohler et al., 2016) and often references person-centered planning. Person-centered planning (PCP) is an approach that has been used for decades in special education to ensure that the needs and desires of the person with the disability are the focus of planning (Taylor & Taylor, 2013). PCP also promotes principles of self-directed services and supports (Martin & Zhang, 2020).

Key Component Area 2: Student Self-Determination and Self-Advocacy

The activities retained in self-determination and self-advocacy as “Essential” or “Very Important” place students firmly as leaders making decisions across all aspects of their experiences and set the stage for them to take a lead role in asking for supports from post-school providers. Staff are placed in the role of facilitators and supporters. The Delphi panel emphasized preparing and supporting students to be effective leaders in a PCP process. In fact, through each round of the Delphi process, reviewers emphasized that not only should students have these planning and leadership opportunities, but they should also have sufficient instruction and practice using self-advocacy skills. This kind of PCP process is implied but not specified in special education legislation, but has been specifically identified in higher education legislation.

Section 767(d)(6) of the Higher Education Opportunity Act (HEOA), includes language outlining the required aspects of higher education programs seeking to obtain model demonstration project funds under the Model Comprehensive Transition and Postsecondary Programs for Students with Intellectual Disabilities (TPSID). The TPSID program provides grants to institutions of higher education (IHEs) or consortia of IHEs to enable them to create or expand high-quality, inclusive, model comprehensive transition and postsecondary programs for students with ID. The grant application requirements included a stipulation that funds would be used to establish a model comprehensive transition and postsecondary program for students with ID that integrates PCP in the development of the course of study for each student with an ID participating in the model

program. Reports about the TPSID grantees reflect that PCP was used by 98% TPSID programs serving students in the 2018-2019 academic year (Grigal et al., 2019).

Key Component Area 3: Family Engagement and Partnerships

Families are the key decision makers in special education, but as students get older, transferring some responsibility from the parents to the students is a natural part of the transition process (American Student Assistance, 2018; Sheen, 2017). The third key component area confirmed by the Delphi process was family engagement and partnerships. The activities comprising this key component focused on parents and students assuming new roles and responsibilities. This might entail setting new expectations for students at college, providing opportunities for conversations about self-advocacy, providing opportunities to practice disclosure, and seeking accommodations. Two elements that did not rise to the level of being retained as essential activities but were addressed as training needs included 1) facilitating families to participate in orientation activities and other family events provided by the IHE for all students, and 2) seeking family participation in partnership meetings for program sustainability.

Students enrolled in college-based transition programs are still officially high school students, and parents retain their rights to free and appropriate education, least restrictive environments, and due process, just as they would in a conventional transition program. The focus in this key component area was building the capacity of family members to step back and support the student, but not be the sole decision maker as students engage in the college-based transition programs. One reviewer encapsulated the sentiments of several other reviewers, writing,

Expectations of both students and families must be very clear from the beginning, including the level of independence that will be expected, the goal of a paid job in the end, and [the] support from the families on all this. Expectations of staff for students and families should also be explained and agreed upon up front.

Two additional recommendations that came up several times included having a stronger emphasis on culturally responsive activities and introducing information to families in such a way that they can absorb the new expectations. Reviewers highlighted how discussions about college with parents must “be considerate of cultural beliefs, traditions, and norms” and recommended that parents need multiple opportunities to access information at different points in the process. As one reviewer said, “I know that there are times when I get a lot of info coming at me and I probably only absorb and retain that which is relevant to me today or in the very near future.” Multiple reviewers commented on the critical role of parents in college-based transition programs and how important it is for practitioners to respect the process that parents need to understand and prepare for these services.

Key Component Area 4: Advising, Course of Study, and Enrollment

The fourth key component area addresses student goal development as well as course selection and access. The activities identified as “Essential” emphasize the need

for access to typical college courses and the opportunity to take both credit and non-credit classes. The emphasis on inclusive course access mirrors current federal guidance related to Comprehensive Transition Programs (CTP), programs approved to offer students with ID access to federal student aid. To be approved, colleges and universities must document students participating at least half of their time in the program in academic components, including coursework with students without disabilities or in internships or work-based training in settings with individuals without disabilities. CTP programs should not be approved that show less than 50% inclusion in academic courses or internships/work settings. Inclusive course access has been growing nationally for adult students with ID, but is not universally provided (Grigal et al., 2022).

Several reviewers suggested that students with IDD in college-based transition programs are likely in the early stages of their career development education and need exposure to college classes to allow them to explore both academic and personal interests. Further, some reviewers indicated that for young students at the beginning of their postsecondary education, a course of study should include core courses like those any other first-year student is required to take, as well as courses to help inform their career interests. The retained activities describe a need for regularly updating a course of study aligned with a student's evolving goals and interests. Like other college students, students with IDD attending college-based transition programs may change their desired paths as they are exposed to new and different coursework and experiences. Students who once thought they might want to work with children may decide after a semester interning at a daycare center that they no longer have that career goal, and choose to go another way. Finally, the retained activities reflected in a student's schedule should include both academic and non-academic activities, such as employment.

Key Component Area 5: Student Support for College Success

This key component area addresses access to supports and services as well as progress monitoring. The retained activities highlight the importance of having access to existing university supports and accommodations via the disability services office (DSO). This is significant because students with IDD are not always offered access to services from DSOs. Data from the TPSIDs reflect that only 66% of students with ID received supports or accommodations from the DSO on their campus. Among the students who received supports or accommodations from the DSO, only 5% received all their supports and accommodations from the DSO. The Association for Higher Education and Disability (AHEAD), the professional organization for disability service providers, developed a white paper noting that accommodations are not given to ensure success but to ensure access (Thompson et al., 2011). It states that students with ID, once admitted or participating on campus, regardless of their student status, should be able to request and receive accommodations that address their needs.

Panelists also deemed program specific supports, such as having access to education coaches or peer mentors, as essential. In some iterations of college-based transition programs, students are supported by paraeducators who work on the college campus with the student rather than in a high school setting. Their role, sometimes referred to as educational coaches, are often categorized as support personnel, assisting

students to make the adjustment to college, including academic, social, and independent expectations (Paiewonsky et al., 2010). Peer mentors may also assume some of these responsibilities, but ideally their work is more focused on social support and connections on campus (Culnane et al., 2016).

Additionally, the Delphi panel retained the need for monitoring of students' satisfactory academic progress. This kind of monitoring in college is typically related to receipt of financial aid and entails a review of cumulative grade point average, completion rate for attempted credit hours, and degree completion within 150% of the average length of the program. Given the nature of college-based transition programs, student progress would more likely be monitored via progression toward IEP goal achievement. Several reviewers highlighted the need to be explicit in this key component area, with one reviewer summarizing that student progress in college-based transition programs should be evident in transition assessments and measurable progress toward annual postsecondary goals.

Key Component Area 6: Staff Development

The sixth key component addresses staff knowledge and training both for college-based transition program staff and for high school counselors. College-based transition program staff can include high school transition educators and administrators and dedicated program staff, such as a program coordinator or support staff. Training about inclusive higher education is not frequently included in personnel preparation programs, so it is likely that college-based transition programs and their collaborating local education agencies (LEA) and IHEs would need to seek external training or in-service training.

Reviewers commented that school counselors need information to recommend college-based transition programs, and need to build opportunities for high school students with IDD and their families to learn about college-based transition programs. One specific suggested practice was to regularly schedule office hours for school counselors to meet with students with IDD and their families to discuss these options.

Like their LEA counterparts, reviewers also shared comments about the need for faculty training to support college-based transition programs. They suggested that faculty receive training in Universal Design for Learning but recognized the barrier that faculty do not often have time in their schedules for staff development. One reviewer suggested that faculty were more likely "learning from the actual experience of teaching working alongside of and collaborating with individuals with learning differences. Resources need to be readily available, but faculty seem to be more interested in finding answers when they need them." This comment reflects research regarding faculty preparation for inclusive teaching at the higher education level including ongoing support and accessible resources (Jones et al., 2016).

Initial studies indicate that although faculty will likely learn as they proceed through a semester, they also want some preparation regarding inclusive postsecondary education, specifically citing the importance of sharing the values, purpose, and goals of this inclusive model as well providing recommendations for academic accommodations

and grading (Hall et al., 2021; Taylor et al., 2021). Faculty have also recommended that they are offered a customized orientation to inclusive postsecondary education (Jones et al., 2016).

Key Component Area 7: Integrated Paid Employment

The seventh key component addresses employment exploration and preparation. The student activities deemed “Essential” or “Very Important” related to personalized planning and assessment and participating in employment training experiences, such as work-based learning and internships with peers without disabilities. Additionally, there was a focus on ensuring that students have access to the same employment services available to other college students, such as the college or university career center. There was also a focus on program-specific employment support personnel (job developers, employment specialists). Reviewers suggested that college career centers could offer students in college-based transition programs support in résumé development and interviewing workshops as well as in meetings with career counselors. Reviewers suggested job developers as the appropriate staff to provide job development services for the college-based transition programs, if available.

There was strong agreement that college-based transition programs include paid work experiences in which students earned competitive wages. Further, several reviewers recommended that references to unpaid, or volunteer, experiences, be removed from retained activities. This focus on paid employment stems from a long-standing concern that individuals with IDD do not experience the same career development support as their peers without disabilities. Instead, their preparation focuses on a small inventory of predictable low-skill, low-wage jobs or worse, facility-based “work-readiness activities” that do not lead to adult life experiences, dignity, and independence (Siperstein et al., 201; Wehman et al., 2018; Winsor et al., 2017). Compensation for completing these work readiness tasks is usually defined as subminimum wage, or in some cases, no wages are provided. Students enrolled in higher education programs receiving TPSID funds have higher employment rates than other adults with IDD (Grigal et al., 2022). To achieve positive employment outcomes, reviewers indicated that job developers from college-based transition programs should help guide the creation of job development processes and protocols.

Key Component Area 8: Evaluation

The final key component area, evaluation, addresses various stakeholders’ involvement in evaluation activities as well as the frequency and duration of these activities. This component frames evaluation activities as accountability, suggesting that data be collected from a wide range of stakeholders, including students with and without disabilities, parents, faculty, disability services, district transition coordinators, and employers. The Delphi panel also deemed long-term follow-up data “Essential” or “Very Important.” Given that college-based transition programs are designed to offer students with IDD a bridge between high school and adult life, determining if students have achieved either their employment or postsecondary goals after having exited their transition program is necessary to determine program effectiveness. Additionally, the

interdisciplinary nature of college-based transition programs requires various interagency team members to review evaluation data. If desired outcomes are not being achieved, the LEA staff, administrators, college, university, or other involved community agency staff may need to adjust their activities. Reviewers suggested that program evaluation data should not focus on satisfaction surveys but instead focus on student progress and outcomes toward postsecondary goals.

Implications for Practice

A primary implication for practice of the newly identified key component areas and many, if not most, of the activities identified, would impact the development and implementation of students' transition plan in their IEPs. The activities referenced in key component area 2 (person centered planning) and area 4 (students' course of study) directly influence the development of measurable postsecondary goals. These goals would address both academic and employment skills, as well as goals related to self-determination, academic accommodations, study skills, social skills, and transportation skills (Paiewonsky et al., 2018).

Additionally, it would also be necessary to establish clear staffing roles, determining who serves as the college-based transition staff and to identify the role of other key staff from the LEA, from the college or university, or from an agency involved in implementing the college-based transition program (Hanson, 2019). Often, partners establish a memorandum of agreement outlining the responsibilities of each member partner (Grigal et al., 2017). These agreements can identify how many students will be supported each semester, who will supervise educational coaches and mentors, the training to be provided, and what direct and indirect resources will be available to the students (Conroy et al., 2013). Oversight of the implementation of services, including the monitoring of student participation, progress, and outcomes, as well as addressing any revisions in the staffing structure, would need to be included in the responsibilities of the director of special education or other designated school administrator (Paiewonsky et al., 2020).

With the key components of college-based transition services identified, each designated partner can develop guidance to prepare for, implement, and evaluate college-based transition program policies and activities. These component areas and associated activities offer practitioners in both secondary education and higher education a framework to help them communicate the goals and objectives of college-based transition programs to potential stakeholders and to plan strategically and collaboratively. Given the varied service settings and array of professionals involved in implementing college-based transition services, these findings offer a concise set of activities as a starting point for program planning.

For coordinators of such programs, these components can direct their focus on initial priorities, such as establishing inclusive college services, providing student-centered advising, and overseeing support services. For secondary school personnel, the components can help identify priorities related to establishing the policies and activities needed to guide hiring decisions and consider oversight responsibilities. For college-

based transition service practitioners, these eight key component areas offer a guide for joint efforts related to employment opportunities for students, ensuring that career development staff at the college are seen as relevant partners. The key components also demonstrate the importance of supporting parents in their new roles and supporting professionals to serve as facilitators in the development and application of student self-advocacy and self-determination skills.

Future Research Directions

Implementing a Delphi study to identify the essential components of college-based transition services was an important step in outlining the policies and activities that practitioners need to establish and evaluate this form of transition services. Understanding priority activities can give practitioners and administrators from both college and secondary settings the necessary guidance needed to initiate responsive and innovative services, especially services requiring multi-stakeholder collaboration. However, the results of this study do not sufficiently describe or explore how these activities can be developed over time and how they can be generalized across various colleges and universities. Also worthy of future exploration is determining if and how these key component areas and activities differ from those prioritized by postsecondary programs enrolling only adults with IDD. Additional research is needed with college-based transition services practitioners to identify the extent to which the key components are used in practice, and the resulting outcomes associated with them. Exploring the use of collaborative inquiry and action research with college-based transition services practitioners could further our understanding of these key activities and determine if any are missing from an applied perspective. Future research could also focus on identifying specific professional development needs of college-based transition staff. Finally, empirical research is needed to determine the effectiveness of college-based transition activities on students' post-school outcomes.

Limitations

Results of this Delphi study must be considered with some limitations. First, nominating and selecting individuals with expertise in one or more topic areas of college-based transition services for students with IDD leads to a small pool of panelists. We sought to enhance objectivity by seeking and confirming nominations from advisors and making selections of nominated panelists using a rubric of their qualifications. Criteria included participation in state or national systems-change grants, presentations at state or national conferences, published articles or briefs, and training or consultation in secondary or postsecondary transition services. However, the field of professionals and advocates with knowledge of secondary and postsecondary transition services for this low-incidence population is narrow, and it is possible that the final group of panelists may have not adequately represented all potential perspectives from related fields.

Another potential limitation of this study is a concern identified by Linstone et al. (1975) that expertise may be illusory, meaning, identified experts are not necessarily the most knowledgeable people, and may lack the ability to see the global picture. This has the potential to thwart their abilities to contribute to effective organization decisions. To the extent possible, staff sought nominations from a wide geographic area and were

successful in securing participation from seven regions of the United States. This purposeful nomination process was intended to increase the possibility of building our understanding of agreed-upon model components.

A final limitation of the study was the fluctuation of response rates over the three rounds of the study. We expected that participation would decrease based on other Delphi studies (Avella, 2016; Dukes, 2011), and indeed, they did, going from a high of 95% for the first round to just 60% for the third round. We made every effort to reduce participant fatigue by limiting the Delphi rounds to three over six weeks (Avella, 2016) and providing stipends for each round completed. It is possible that we would have collected different feedback had we retained the full panel for all three rounds.

Conclusions

The purpose of this study was to identify key components and associated activities of college-based transition programs to offer the fields of special education and higher education guidance for development of a model for college-based transition programs. Through a Delphi process with a panel of experts in inclusive postsecondary education and related fields, we identified eight key components and 41 corresponding activities as essential in the planning and implementation of college-based transition programs. Researchers and practitioners can use these findings to develop and enhance college-based transition programs and build a much-needed model of practice for college-based transition services. They can also use these findings to make the distinction with administrators and other stakeholders between college-based transition services and the more traditional transition services offered by special education staff. This is important for advocates of college-based transition services who may initially face reluctance in supporting this innovative model of transition services. Having these key components is a first step in articulating the need for these critical services, implementing them, and evaluating the outcomes of college-based transition services ensuring that students with IDD achieve desired postschool outcomes.

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Table 1: Delphi Panelists Role Affiliation, Region, and Knowledge

Panelist role	Affiliation	US Region	Content experience	Round 1	Round 2	Round 3
Center director	University	Mid-Atlantic	Employment, IPSE, transition services	X	X	X
Faculty researcher	University	South West	IPSE	X	X	X
Faculty researcher	University	South West	IPSE, peer mentoring	X	X	X
Faculty & college program director	University	South East	IPSE	X	X	X
Faculty researcher	University	Mid-West	Transition services	X	X	X

Faculty & college program director	University	Mid-Atlantic	IPSE	X	X	X
Program director	University	Mid-Atlantic	Family partnerships	X	X	X
Faculty researcher	University	North East	Disability services; postsecondary education	X	X	X
Training associate	TRC	Mid-Atlantic	Employment, transition services	X	X	X
Training associate	TRC	Mid-Atlantic	Employment and postsecondary education	X	X	X

Program director	TRC	North-East	Employment-training and systems change	X	X	X
College program manager	TRC	West	IPSE	X		
Executive director	Training Center	North-East	Employment, transition	X	X	
Program director	University	Mid-West	IPSE	X		
Senior associate	Legislative advocacy	North-East	Inclusive education and transition services		X	
Faculty	University	North- East	Special education for	X		

			students with high support needs			
Training associate	Family advocacy center	North-East	Parent and family engagement in transition	X	X	
Center director researcher	University	North-East	IPSE	X	X	
Faculty researcher	University	Mid-West	Interagency collaboration, transition services	X		
Center director	Advocacy organization	North-East	Parent engagement, transition	X	X	X

Education specialist	State education agency	North-East	College and Career Readiness	X		
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Key: IPSE= inclusive postsecondary education; TRC=Training and Research Center.

Table 2: Final Key Components and Activities of College Based Transition Services Post Delphi

Key role definitions: College-based transition services involves collaboration from both secondary transition and college staff. Each staff person has specific roles and responsibilities that are sometimes carried out individually and are sometimes done jointly, depending on the task. In these key component activities listed below, we reference three key roles:

1. College-based transition services staff responsibilities are those activities that are shared by both college and transition staff
2. Transition staff responsibilities are those that are carried out by secondary transition staff
3. College staff responsibilities are those that are carried by college staff

1. Key Component Area 1: Community-based Transition Services
A. College-based transition services staff collaborate with interagency transition team members to develop policies and activities to offer transition-age youth with disabilities community-based transition services and supports.
B. Special education teachers/transition specialists/coordinators are adequately trained and have experience in community-based transition services.
C. Transition staff communicates with secondary education teachers, students, and families about inclusive transition models that include inclusive postsecondary education experiences, integrated paid competitive employment, and skill development related to independent living and self-determination.

D. Transition staff facilitate person-centered planning and formal and informal transition assessments to help identify students' school and post-school preferences and interests and to develop in school and post-school goals.

E. High school transition staff help students align goals to community-based transition activities as a result of transition assessment outcomes.

F. Staff prepare students and families for community-based transition supports and services.

G. Staff assist students to develop individual learning plans that include academics, career development and independent living goals.

H. Students receive instruction in the use of needed public or personal transportation, such as public buses, taxis, paratransit, ride sharing with other students, and other naturally occurring transportation options.

Additional items to be included in training: Staffing hours are flexible to support students' access to transition related activities before and after traditional school day hours.

2. Key Component Area 2: Student Self-Determination and Self-Advocacy

A. Students will be provided with ongoing instruction and support to lead and/or effectively participate in their person-centered planning meetings.

B. Students participate/lead a person-centered planning process to identify, update and continuously monitor their postsecondary interests and goals.

C. Students are supported to direct their choice of courses, activities, and employment experiences.

D. Students receive instruction on identifying and understanding their disability and self-advocating for available accommodations that are most effective for them in college, work, and community settings.

E. Students receive coaching and are supported regarding the types of questions to ask community and adult service providers about future services.

F. Students are supported to participate in all aspects of employment, such as creating a resume, setting up job interviews, making follow-up phone calls, and negotiating job changes.

G. Students receive coaching and instruction as necessary to manage their personal schedules that include courses, employment, and social activities.

3. Key Component Area 3: Family Engagement and Partnerships

A. Staff assist students and parents to assume new roles and responsibilities in transition activities.

B. Staff discuss critical transition issues with families including but not limited to: • college-based transition programs expectations • college as a postsecondary option • high school versus college expectations • changing role of families • community-based instruction • mobility and travel • safety and risk • student schedule

C. College-based transition services staff use culturally responsive activities when working with students and families.

D. Students and their families are provided with ongoing conversations and support regarding the different expectations between high school and college.

E. Students referred to college are provided ongoing opportunities to develop skills and strategies for postsecondary success, including disability awareness and disclosure, using academic accommodations, and initiating self-advocacy skills.

Additional items to be included in training: Families will have the opportunity to participate in partnership meetings for program sustainability. Families will be encouraged to participate in orientation activities and other family events that are provided by the IHE for all students (the families of students without disabilities).

4. Key Component Area 4: Advising, Course of Study, and Enrollment

A. The college or university provides opportunities for the inclusion of students with IDD in credit and non-credit courses with their college peers.

B. Students register for courses that are fully integrated college/university-catalogued courses with the same departmental designations, course descriptions, numbers, titles, and credits.

C. Students' course of study is coordinated and supports acquisition of skills and knowledge related to their desired goals.

D. Students' schedules include employment, academic, and non-academic activities.

E. Students' goals are reviewed regularly by the student and staff and modified as needed to reflect changes in student interests and preferences

Additional items to be included in training: The college/university officially registers or admits students as degree seeking, non-degree seeking, or non-matriculated students at the college/university, and records courses administered through a college-based transition program on official college/university transcripts.

5. Key Component Area 5: Student Support for College Success

A. Students have access to accommodations and support provided by the college/university disability services office.

B. Students have access to trained educational coaches and peer support, such as mentors and tutors.

C. The college or university will have a method to monitor students' satisfactory academic progress after each semester throughout their course of study.

6. Key Component Area 6: Staff Development

A. Ensure that high school counselors have up-to-date information about program-of-study offerings to students with intellectual and developmental disabilities (IDD) to aid students in their college decision making.

B. College-based transition staff are adequately trained in inclusive higher education, universal design, and effective faculty practices.

7. Key Component Area 7: Integrated Paid Employment


A. Staff use the results of transition assessments, including person-centered planning, to help students identify career goals.

B. College-based transition staff promote student participation in community-based competitive employment related directly to course selection and career goals using employment specialists and a work-based learning plan.
C. Students have access to IHE Career Services, as well as other career supports, (e.g., job developer, employment specialists).
D. Students participate in internships and work-based training with their peers without disabilities.
E. Student participation in paid work experiences is related to personal choice and career goals, such as paid internships, work study, service learning, or other paid work on or off campus.
F Job development staff should establish and expand employment networks within the community.
8. Key Component Area 8: Evaluation
A. College-based transition services staff conduct accountability and evaluation of transition services and outcomes on a regular basis, including data from key stakeholders, such as students with and without disabilities, parents, faculty, disability services, district transition coordinators and employers.
B. College-based transition services staff collect student follow-up data for up to two years after exiting school.
C. College-based transition services staff review all data compiled by the interagency team and other stakeholders.

Figure 1: Retained Key Component Areas and Activities by Delphi Round

ROUND ONE					ROUND TWO					ROUND THREE				
Key Component Areas (KCA)	# of Activities	Added Activities	Removed Activities	Final # Activities	Key Component Areas (KCA)	# of Activities	Added Activities	Removed Activities	Final # Activities	Key Component Areas (KCA)	# of Activities	Added Activities	Removed Activities	Retained Activities
Interagency Transition Team	10		-10	0										
Community-Based Transition Services	12		-3	9	Community-Based Transition Services	9			9	Community-Based Transition Services	9		-1	8
Student's Self Determination and Self-Advocacy	10	+2	-4	8	Student's Self Determination	8	+1	-1	7	Student's Self Determination	7			7
Preparation for College	7		-3	4	Preparation for College	4		-1	3-T out					
Advising and Course of Study	10		-3	7	Advising Course of Study & Enrollment	12		-5	7	Advising Course of Study & Enrollment	7		-2	5
Student Enrollment in College	8		-4	4	Student Support for College Success	5		-2	3	Student Support for College Success	3			3
Student Support for College Success	6		-2	4 + 2 T in	Social and Academic Integration	5		-3	2 T out	Dual Enrollment Staff Development	2			2
Social and Academic Integration	5		-3	2 T out	Dual Enrollment Staff Development	2			2	Policies for Assuring Satisfactory Academic Progress	1			1 T out to SACS
Dual Enrollment Staff Development	5		-3	2	Career Development and Employment	7	+1	-2	6 + 1 T in	Career Development and Employment	7		-1	6
Policies for Assuring Satisfactory Academic Progress	1			1 T out to SACS	Family Partnerships	2	+1		3 + 2 T in	Family Partnerships	5	+2		7
Career Development and Employment	6	+3	-2	4, + 3 RC	Evaluation	6		-2	4	Evaluation	4		-1	3
Family Partnerships	7		-5	2										
Evaluation	12	+2	-8	4, + 2 RC										
Total Activities Prior to Round 1 = 105				Round One Total = 55					Round Two Total = 44					Round Three Total = 41
KCA Prior to Round 1 = 13		KCAs after Round One = 9			KCAs after Round Two = 9					KCAs after Round Three = 8				

T= Transferred
RC=Reviewer Comment

 KCA Removed or Merged