

Investing in Innovation Fund (i3) Development Grant 84.411C Application

Absolute Priority 4—Improving Academic Outcomes for Students with Disabilities

Think College Transition: Developing an Evidenced-based Model of Inclusive Dual Enrollment Transition Services for Students with Intellectual Disabilities and Autism

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NOT APPLICABLE

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Meg Grigal
Debra Hart
Maria Dragoumanos
Maria Paiewonsky
Alberto Migliore
David Temelini
Julia Landau
Jerry Mogul
John Johnson

Appendix G: Letters of Commitment

Boston Public Schools
Massachusetts Advocate for Children
GOLDEN
University of Massachusetts, Boston
Roxbury Community College

Massachusetts Executive Office of Education

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NOT APPLICABLE

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Copies of evaluation tools: LASSI-HS, PEEK Scale, Self-Determination Scale

Think College Information

References

Pertinent Provisions in the Higher Education Opportunity Act

A. Significance

A1.Extent project would implement novel approach: In the 21st century, going to college is becoming a minimum requirement for getting a good job and succeeding in the workforce. College and career readiness is now the driving force behind school improvement efforts such as the Common Core State Standards Initiative (ACT, 2010). However, these initiatives seldom focus on or include youth with intellectual disabilities and autism. High school students with intellectual disabilities and autism (ID/A) have the least inclusive educational experiences, the lowest levels of academic achievement, and the fewest postsecondary education goals reflected on their transition plans (Grigal, Hart, & Miglore, 2011; Newman, Wagner, Cameto, Knokey, & Shaver, 2010). Only 11% of high-school students with ID go on to attend a two-year or four-year college (Grigal, Hart, & Migliore, 2011). Subsequently, students with ID/A also have the poorest college and employment outcomes of all disability groups (Windsor & Butterworth, 2007; Newman, Wagner, Cameto, & Knokey, 2009).

Many students with ID/A remain in high school and receive special education services until the age of 21 (Wehman, 2012). During these last 2-3 years in high school, students typically participate in self-contained or segregated life-skills or vocational programs. These experiences do little to support successful transition into adult life and the majority of these students exit high school and enter into a lifetime of sheltered employment and day habilitation (Gidugu & Rogers, 2012). A recent survey of 11,599 adults with ID in 16 states found that only 14.7% were competitively employed (HSRI, 2012). In 2011, the employment rate for transition-aged individuals with ID/A (ages 16-21) was 18% - less than half the employment rate for transition-aged students without disabilities (Butterworth, et al., 2013). This gap becomes worse as people with ID/A age. Only 32% of adults between the ages of 20 and 30 are employed, compared to

74% of those without disabilities (Sulewski, Zalewska, Butterworth, & Migliore, 2013).

Given these poor outcomes, Think College at the Institute for Community Inclusion (ICI) has identified a strong need for a novel, evidence-based, inclusive model of transition that leads to both improved college preparation and competitive employment outcomes for youth with ID/A. The **Think College Transition (TCT) Model**, will build upon knowledge of current practices of transition programs developed in partnership with local colleges for youth with ID/A (Grigal, et al., 2012; Kleinert, Jones, Sheppard-Jones, Harp & Harrison, 2012) as the current practices that comprise these programs have not been researched to determine their efficacy or outcomes. Think College, the leading research and technical assistance entity focused on inclusive higher education for students with ID/A in the United States, maintains a dataset of higher education programs serving students with ID/A that provides information on 214 existing US programs. Transition-aged youth with ID/A are served at 35% of these programs (TC Database, 2013). Because these programs vary significantly in their focus and approach, there is no data on effective practice and limited data on student outcomes (Grigal et al, 2012, Papay & Bambara, 2011). Replication efforts are fragmented at best and none have undergone efficacy testing.

This grant would support development, refinement, and research on the TCT Model, an inclusive dual enrollment transition model, for youth with ID/A that will result in increased academic achievement and student growth in inclusive higher education, employment, and self-determination skills. The model offers an innovative approach for students with ID/A by providing transition services in academic and social environments of a college campus, taking into account unique characteristics of students with ID/A, including learning challenges, social challenges, and academic preparedness. **A2) Contribution of project to development and advancement of theory, knowledge:** This project will contribute to development and

advancement of theory, knowledge, and practices in the field of transition services for youth with ID/A by developing, refining and researching an evidence-based, inclusive, transition model that incorporate principles of dual enrollment for transitioning youth ages 18-21 with ID/A as well as aligned with new provisions for inclusive college programs outlined in recent federal legislation. The 2008 Higher Education Opportunity Act (HEOA) created a new college option called a comprehensive postsecondary transition (CTP) program specifically for students with intellectual disabilities (see Appendix J) to continue academic, career and technical instruction at an IHE.

The model builds on principles of dual enrollment, a practice that allows high school students to simultaneously be enrolled in high school and college (Blackboard Institute, 2010). Typically practiced with HS students in advanced placement courses, it is emerging as a promising practice for students from underserved populations, including students with ID/A (Grigal, et al., 2012) yet, there is currently no accepted or evidenced-based model for those services. Current research on these programs for students with ID/A are descriptive in nature, and reflects that existing programs are not inclusive, and have not implemented services in accordance with current HEOA provisions or documented the subsequent outcomes. The proposed project will advance knowledge and practice in the fields of higher and special education by developing a transition model that that is fully inclusive, and reflects both current federal guidance and evidenced-based transition practices and will demonstrate its effectiveness by documenting its impact on the academic achievement and growth of students with ID /A. It will also generate and refine much needed assessments that are sensitive to the variability of this student population and can be used to determine efficacy of dual enrollment transition services. If successful, this model could then be replicated with LEAs in partnerships with IHEs nationwide. Further, creating such a model would help to better inform legislators and policy makers involved in reauthorization of the

transition components in IDEA as well as support state and local transition leaders to consider further expansion of dual enrollment transition programs for youth with ID/A to achieve greater college and career readiness and support more successful adult outcomes.

A3) Extent project will improve outcomes achieved by other practices: Development, implementation, and refinement of TCT Model will improve student outcomes related to inclusive education, access to higher education, employment, and self-determination. **Greater access to inclusive education.** Typically, students with ID/A who receive transition services via their high school are not fully included in high school general education classes, and some receive completely segregated instruction in a special education classroom or specialized school. Ninety-two percent of transition-age students with ID participated in separate segregated special education settings (Yu, Newman, & Wagner). To meet least restrictive environment provisions of IDEA, inclusive learning environments for transitioning youth with ID/A who are older than 18 should reflect the learning environments experienced by their peers. The TCT Model does just that by increasing students' access to inclusive education environments, as students would be accessing instruction in typical college classes (for audit/credit) with peers without disabilities. **Greater access to higher education.** Currently students with ID/A have very limited access to higher education. Only 11% of students with ID (Grigal et al, 2011) and only 23% of students with autism (Migliore & Lugas, 2011) have the goal of attending a 2 or 4-year college or university on their individualized education plan. Newman et al (2011) found that young adults with ID/A had lower postsecondary education participation rates in 2 year (18.9% ID and 32.2% A), 4 year (6.7% ID, and 17.4% A), and vocational technical colleges (16.4% ID and 21% A) than students with other disabilities. Emerging research and legislation has demonstrated increased focus on access to higher education for high needs student populations (Kleinert, et al.,

2012; Folk, Yamamoto, & Stodden, 2012; Hafner, Moffat, Kisa, 2011). This project will improve high school students' with ID/A access to higher education by supporting access to college courses and other typical college experiences, allowing students hone their abilities to navigate this important adult learning environment as part of their transition services. **Better employment outcomes.** Current vocational training experiences for youth with ID/A consist primarily of job training and tryout experiences that are either unpaid or paid via a subminimum wage stipend (Wehman, 2010). However, research has demonstrated the strongest predictor of post-school employment is paid employment prior to exiting high school (Test, et al., 2009) and higher education (Carnevale, Smith, & Strohl, 2010). The TCT Model would provide access to paid and unpaid internships, as well as paid employment during students college based program, potentially leading to greater employment outcomes once they exit the K-12 system. **Improved student self-determination.** Self determination and its associated constructs have been connected positively to improved post-school outcomes including employment rate, higher pay, and longer-term employment as well as enhanced independent living and community inclusion for youth with disabilities (Chambers, Wehmeyer, Saito, Lida, Lee, & Singh, 2007; Durlak, Rose, & Bursuck, 1994; Wehmeyer & Schwartz, 1997). Students must practice self-determination skills to facilitate improved success in college (Thoma & Getzel, 2005). Unfortunately, opportunities for students with disabilities to practice self-determination skills in high school are limited (Carter, Lane, Pierson, & Glaeser, 2006; Mason, Field, & Sawilowsky, 2004; Thoma, Nathanson, Baker, & Tamura, 2002). The TCT Model will support development of self-determination skills via student-centered planning, choice making for inclusive course access, engagement in college work and social environments.

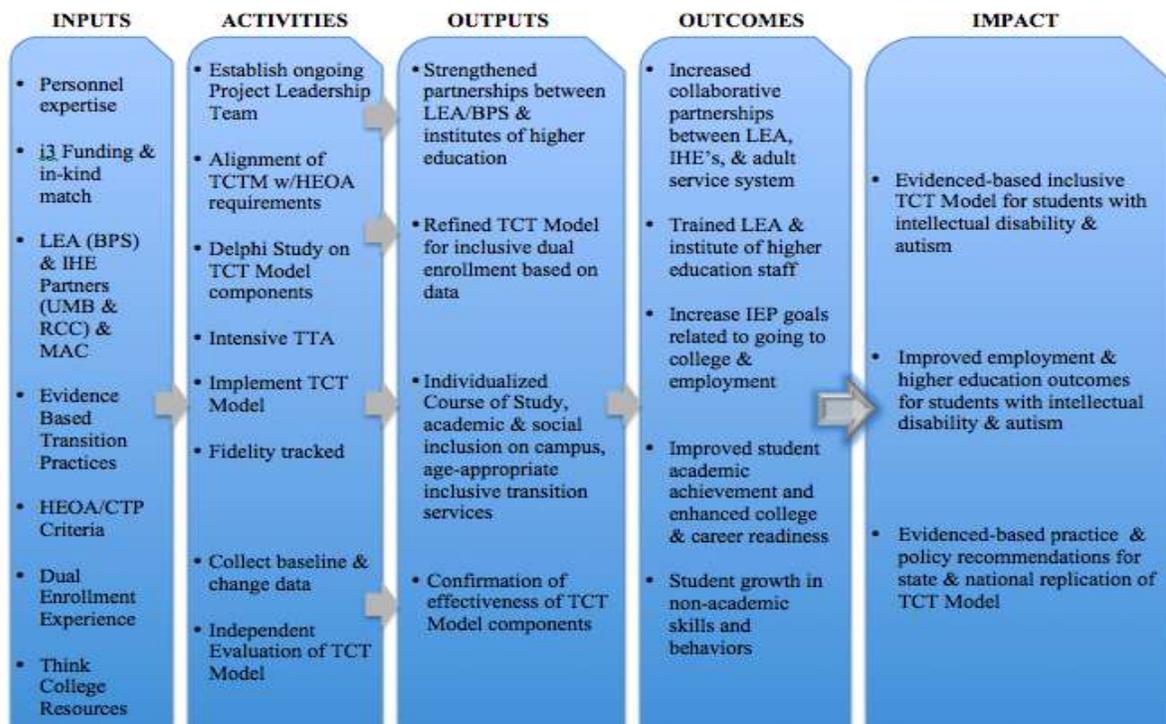
B. Quality of the Project Design

B1.Extent project addresses absolute priority: This project addresses each component of **Absolute Priority 4—Improving Academic Outcomes for Students with Disabilities** subpart (b) -Designing and implementing strategies that improve student achievement (for students with disabilities in inclusive settings, including strategies that improve learning and developmental outcomes (i.e., academic, social, emotional, or behavioral) and the appropriate transition from restrictive settings to inclusive settings or general education classes or programs. This project results in improved outcomes for transitioning students ages 18-21 with ID/A, resulting from participation in an evidenced-based, inclusive dual enrollment transition initiative. The TCT Model will focus on improving academic achievement of students with ID/A by providing access to inclusive, age-appropriate college settings, including courses, internships, jobs and social settings that enhance students’ academic, social, emotional, or behavioral outcomes.

B2) Clarity and coherence of project goals, including plan to achieve its goals: This project is designed to improve student academic achievement and post-school outcomes by developing and implementing an evidenced-based model of inclusive dual enrollment transition services for students age 18-21 with ID/A in two and four year colleges. To understand the plan of operation it is important for reviewers to understand the separate structure of colleges and other institutions within the University of Massachusetts Boston (UMB). Think College at the Institute for Community Inclusion is a separate entity within the University system from the College of Education and Human Development. The TCT Model Logic Model in Figure 1 depicts the strong theory supporting our supposition that the model will increase academic achievement as well as improve student outcomes for youth age 18-21 with ID/A. The project will implement the following plan of operation to achieve the four project goals. **Goal 1: Ensure systematic implementation of project activities and broad dissemination of findings. 1.1 Establish Core**

Management and Project Leadership Teams for operation of project. Project staff will establish an internal management structure to ensure project activities and evaluation activities are implemented, project objectives and timelines are adhered to. **1.1a** In YR1 the **Core Management Team** (CMT) will be established, comprised of ICI personnel, and lead personnel from Boston Public Schools (BPS) and MA Advocates for Children (MAC). The CMT will meet weekly to discuss day-to-day implementation, and ensure all research, training, implementation, and evaluation activities are conducted according to the management plan (see page 14). The PC will ensure that meeting agendas, notes, and resources are archived online using project management software (TEAMWORK PM). **1.1b Establish Project Leadership Team.** During YR1, Q1 PIs will work with CMT to convene Project Leadership Team (PLT). PLT will include all members of CMT, as well as membership from community partner organizations that are integral to project success and sustainability. PLT will meet remotely (via Adobe ConnectPro) monthly, and in person quarterly to: a) provide initial input on the Delphi participants; b) determine solutions for project challenges; c) assist in dissemination of materials and training that will be used by others in state and nationally; and d) communicate project progress with state education and higher education leadership. Independent Evaluator will be invited to PLT meetings and have access to all minutes/notes from each meeting. MAC will chair the PLT, ensure that agendas, meeting notes, and resources shared are archived on Teamwork PM (online project management software). **1.2: Broad outreach and dissemination of TCT Model, associated tools, resources, and evaluation findings.** Project staff will work closely with MAC to ensure that project information is shared with stakeholders including BPS secondary and transition staff, adult employment agencies, the Executive Office of Education, and relevant parent training and advocacy groups.

Figure 1: Think College Transition Model Logic Model



MAC's expertise in developing universally designed and culturally responsive materials for families including those from underserved populations will help project ensure that all training and dissemination materials reflect principles of universal design and cultural and linguistic competence (Trevedi & Jones, 2010). One critical barrier to accessing high quality college-based transition services is lack of professional and parent knowledge about state of the art practices (Martinez, et al, 2012; Griffin, 2011). To ensure that knowledge of program and its goals are widely known, MAC will conduct outreach to underserved families regarding transition and higher education services. Their expertise in policy analysis will be used to identify policy and practice barriers related to transition and postsecondary education that are present in RCC, CEHD/UMB, and BPS. MAC will use this information to develop outreach strategies to overcome these barriers. All resources, tools, and strategies formatted by Publications and

Dissemination Coordinator and posted on Think College website. **Goal 2. Create TCT Model for students w ID/A reflecting HEOA guidance and evidenced-based dual enrollment transition practices using a Delphi process.**

2.1 Review HEOA and evidence-based practices. Project staff will conduct a review of guidelines in the Higher Education Opportunities Act (HEOA) to ensure that all relevant components are reflected in a draft model. Staff will also conduct a review of evidence-based transition and dual enrollment practices available in research and practice literature.

2.2 Draft TCT Model. TCT Model reflecting practices aligned with HEOA requirements and evidenced-based predictors of post-school success will be drafted. Draft will be programmed into Survey Gizmo to support remote access and review by Delphi participants.

2.3. Conduct Delphi Process to Confirm Essential Model Components. A Delphi process will be implemented in the second quarter of YR I to confirm the essential model components. The Delphi method is a “group facilitation technique that seeks to obtain consensus on the opinions of ‘experts’ through a series of structured questionnaires (commonly referred to as rounds)” (Hasson, Keeney, & McKenna, 2000). It is used to achieve consensus among experts where little or no previous research exists and to address questions that are not easily quantifiable. The method allows for both quantitative and qualitative input, through combined use of a five-point Likert scale on level of importance, along with narrative qualitative comments on any item. These comments and ratings impact the language, placement or inclusion of an item in subsequent rounds. Between 12-15 panelists for the Delphi will be selected by PIs in collaboration with project partners and PLT during the first project quarter. Each panelist will have a minimum of 2 years of practical experience in transition and inclusive higher education for youth with ID/A. Three rounds of iterative feedback will be sought, compiled, and reviewed. Subsequently the TCT Model will be modified to reflect expert input. In addition to rating

essential components, Delphi panelists will be asked to address clarity of language in proposed model and its alignment with guidance included in HEOA. **2.4 Finalize TCT Model.** TCT Model will be finalized May of 2014, the CMT begin preparation of TTA materials.

Goal 3. Implement TCT Model with students with ID/A in BPS in collaboration w College of Education & Human Development (CEHD)/UMB) & Roxbury CC. 3.1 Develop TTA

materials. Once TCT model is confirmed via Delphi process, CMT will identify TTA material.

Think College/ICI has significant training resources on inclusive higher education and, whenever possible will use or adapt existing resources to meet training needs. Additional training materials will be developed to align with essential model components and HEOA guidelines. An online TTA needs assessment for all partners will be conduct annually to identify priority need areas for training and TTA needs will be a standing agenda item for both CMT and PLT meetings. **3.2**

Provide training to BPS, UMB and RCC personnel. A training schedule will be devised and implemented. Initial training (spring/summer of YR1) will focus on introduction to TCT model, a description of components, and an explanation of how each components will be implemented and measured. Given the intention of continuous improvement and refinement of the model, additional training will be provided to project partners in response to staff turnover, implementation challenges, lack of fidelity, and/or challenges related to specific student needs

3.3 Implement TCT Model. PIs, Project and Evaluation Coordinators will work with BPS and College Liaisons to implement the inclusive dual enrollment TCT Model with 60 students (treatment group) with ID/A over 4 years. Eligible students will be between 18-21 years old, have ID/A and receive transition services from BPS. Participating students will meet the definition of ID provided by the American Association on Intellectual and Developmental Disabilities (AAIDD) or the definition of Autism Spectrum disorder as described in the

American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-V) (2013). Student selection will be based on the criteria outlined in Sec. E (p.23) and take place in January of each project year. While specific model components will be finalized after the completion of the Delphi process, the required alignment with the HEOA provides the basic structure for the model. The inclusive dual enrollment transition programs will offer academic advising and a structured course of study related to the students' career goals. Students will participate in existing college classes (for credit or audit in internships or work-based training with peers without disabilities. Students will receive academic and social supports via an education coach, receive accommodations via the college disability services office, and work with peer mentors to navigate the campus to access college clubs, organizations, and other campus activities. **Goal 4. Gather and use quantitative and qualitative data from multiple perspectives to ID impact of TCT Model on student transition outcomes. 4.1 Collect quantitative data on students via pre/post assessments.** IRB applications will be submitted to both ICI/UMB and BPS IRB's. Upon receipt of IRB approval, data collection activities will commence. Profile information on incoming students will be collected including existing psycho-educational test scores and demographics. Three quantitative student pre/post-test assessments will be administered to treatment and control students at beginning/end of each semester (See page 23 for List of SCALES) and goal attainment scaling will be used to monitor achievement of student goals. Data on all student activities will be recorded via a secure online evaluation system using Intuit Quickbase with coded identifiers to maintain student privacy. These data will include student demographics, course enrollments and related grade point average, internship and paid employment hours and wages, and participation in social activities. Finally, the Independent Evaluator (IE) will establish mechanisms to monitor extent to which

each element of model is being implemented with fidelity using an Implementation Log that has an integrated fidelity protocol. **4.2 Conduct Qualitative evaluation activities.** Project staff will engage in a variety of qualitative research (e.g., focus groups, participatory action research, interviews) with students, families and staff to a) facilitate feedback on the effectiveness of the TCT Model; b) capture student experiences and insights about their participation in the program; c) ensure any needed refinements to the model are captured and implemented; d) identify components of model critical to improving student outcomes; e) MAC and the Evaluation Coordinator will conduct pre/post focus groups with students and family members from control and treatment groups; and f) secure partner feedback about specific implementation issues (critical elements of success or existing barriers) related to college environments, type of courses and student disability. Participatory Action Research (PAR) with treatment and control groups will commence spring of 2014 to explore how their experiences/goals differ and will be ongoing throughout the project. **4.3 Continuous refinement and improvement of model.** This project will use a modified Knowledge-to-Action Process Framework (Graham, Logan, Harrison, Straus, Tetroe, Caswell, & Robinson, 2006) to plan, implement, and evaluate its activities and outcomes. This framework will undergird all evaluation and other project activities as reflected in Figure 2 Knowledge-to-Action Iterative Cycle (KTAIC) model. Core Management Team will use KTAIC framework to ensure model efficacy as well as clarity and utility of implementation protocol using iterative feedback mechanisms with students and their families and project partners (see page 19). **4.4 Conduct independent project evaluation to identify impact of TCT Model on student outcomes, monitor adherence to management plan:** Dr. Johnson will serve as project's Independent Evaluator. For complete description of his goals and activities see Section E on page 22.

B3) Clarity of project goals, and project activities includes plan for achieving goals, w/ risks to project success and strategies to mitigate: Please see Section B.2 on p. 6 to review project goals, plans for achievement. Potential risks to project success and strategies to mitigate risks are described next. The risk of low student participation & attrition will be addressed by reviewing benefits/contributions of participation, stipends, continuous student recruitment to increase sample pool to mitigate attrition and use of statistical methods that account for small sample size (e.g., adjustment of alpha levels; combining factors; calculating composite scores and conducting composite analyses). Lack of model fidelity will be address by ongoing online & F/F and /Just in time' TTA for RCC, UMB, & BPS, and implementation log with fidelity checks; staff turnover will be addressed by ongoing TA needs assessment, personnel training, and TA evaluation; Lack of project communication among partners will be address by use of Teamwork PM and established communication channels and schedules.

C. Quality of the Management Plan

C1) Management Plan: Table 1- Management Plan p. 14 provides project goals, subordinate objective, timelines and milestones and personnel responsible for completion. **Table 2 on p. 19** provides the project's **Annual Performance Targets and Related Metrics**. **C2) Commitment of key partners:** This project has confirmed commitments from its primary key partners, BPS and MAC and from its collaborators, Roxbury Community College and College of Education and Human Development/UMB. Additionally as evidenced by his letter of commitment, Dr. Johnson has agreed to serve as Independent Evaluator. Further, the Executive Office of Education has indicated their support of this project and has agreed to assist with disseminating project findings statewide (see Appendix G: Letters of Commitment & Support).

Table 1: Project Management Plan, Responsible Personnel, Milestones & Timelines

Key: PI=Principal Investigator; CP=Co-Principal Investigator; PC=Project Coordinator; EC=Evaluation Coordinator; RA=Research Associate; P= Publications & Dissemination; B=Boston Public Schools; CEHD=College of Education and Human Development/UMB; R=Roxbury Community College; M=Massachusetts Advocates for Children; I=Independent Evaluator																														
Goal 1: Ensure systematic implementation of project activities and broad dissemination of project findings.																														
Objective 1.1: Establish a management structure for implementation and operation of all facets of TCT Model project.																														
Milestones	Responsible Personnel											Year 1				Year 2				Year 3				Year 4						
	PI	CP	PC	EC	RA	P	B	U	R	M	I	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
• CMT established & meetings scheduled & conducted	X	X	X	X	X	X	X	X	X	X	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• PLT established with stakeholders & meetings scheduled	X	X	X	X	X	X	X	X	X	X	•																			
• Monthly remote/in-person PLT meetings held	X	X	X	X	X	X	X	X	X	X	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• i3 project established on Teamwork PM management software (communication, file sharing/retrieval, calendar)			X			X					•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• Protocol & mechanisms for communication, product & TTA material review established & followed by CMT & PLT	X	X	X	X	X		X	X	X	X	•																			
• Process & format for publications determined	X	X	X			X					•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• Complete APR	X		X									•					•				•								•	
• Attend project directors meeting	X	X	X				X			X			•					•				•								•
• Project timeline/milestones reviewed by IE	X		X							X	•		•					•				•								•
Objective 1.2: Implement dissemination plan for TCT Model & all related project findings & materials.																														
Milestones	Responsible Personnel											Year 1				Year 2				Year 3				Year 4						
	PI	CP	PC	EC	RA	P	B	U	R	M	I	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
• Dissemination plan developed	X		X			X				X	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• 2 Manuscripts drafted and submitted to journals	X	X		X	X	X				X													•	•	•	•	•	•	•	•
• Evaluation findings posted on Think College website			X										•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• 2 Insight Briefs w/ evaluation findings written & disseminated	X	X	X	X	X	X				X													•	•	•	•	•	•	•	•
• Findings presented at national conferences	X	X	X			X	X	X	X	X													•	•	•	•	•	•	•	•
Goal 2: Create the TCT Model for students with ID/A that reflects current federal guidance and evidenced-based dual enrollment practices using a Delphi process to confirm essential model components.																														

Objective 2.1: Identify key components related to a Comprehensive Transition Program (CTP) as identified in the HEOA of 2008.																											
Milestones	Responsible Personnel											Year 1				Year 2				Year 3				Year 4			
	PI	CP	PC	EC	RA	P	B	U	R	M	I	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
• CTP Components identified & reviewed with CMT and PLT	X	X	X	X			X	X	X	X		•															
• CTP components refined and finalized	X	X	X	X								•															
• Collaborate with IE to share process and outcomes of activity			X	X			X	X	X	X	X	•	•														
Objective 2.2: Identify evidenced-based practices (EBP) on transition & dual enrollment for the TCT Model.																											
Milestones	Responsible Personnel											Year 1				Year 2				Year 3				Year 4			
	PI	CP	PC	EC	RA	P	B	U	R	M	I	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
• Transition EBP and predictors reviewed & identified	X	X	X	X						X		•															
• Dual Enrollment EBP reviewed & identified	X	X	X	X						X		•															
• Transition & Dual Enrollment EBP/predictors integrated into TCT Model & aligned w/ CTP requirements	X	X	X	X						X		•															
• Collaborate with IE to share process and outcomes of activity	X	X	X	X						X		•	•														
Objective 2.3: Conduct Delphi process to confirm essential TCT Model components.																											
Milestones	Responsible Personnel											Year 1				Year 2				Year 3				Year 4			
	PI	CP	PC	EC	RA	P	B	U	R	M	I	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
• Delphi process scheduled	X	X	X	X	X	X	X	X	X	X	X	•															
• National content experts identified	X	X										•															
• Key model components uploaded into Survey Gizmo			X	X		X						•	•														
• 3 scoring rounds of Delphi conducted and analyzed	X	X	X	X	X	X	X	X	X	X		•															
• Collaborate with IE to share process and outcomes	X			X						X		•															
• Draft model components for TCT Model finalized	X	X	X	X								•															
Objective 2.4: Finalize TCT Model for students with ID/A.																											
Milestones	Responsible Personnel											Year 1				Year 2				Year 3				Year 4			
	PI	CP	PC	EC	RA	P	B	U	R	M	I	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
• Draft TCT Model presented to PLT for feedback	X	X	X	X	X	X	X	X	X	X			•														
• TCT Model components reviewed by Independent Evaluator	X	X	X	X	X	X	X	X	X	X			•														
• TCT Model components finalized	X	X	X	X						X			•														
Goal 3: Implement TCT Model in a urban LEA (Boston Public Schools) in collaboration with a four-year (College of Education & Human Development/UMB) and a two-year community college (Roxbury Community College).																											

Objective 3.1: Conduct TTA needs assessment and develop training & technical assistance materials																											
Milestones	Responsible Personnel											Year 1				Year 2				Year 3				Year 4			
	PI	CP	PC	EC	RA	P	B	U	R	M	I	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
• Conduct TTA Needs Assessment with BPS, RCC, CEHD	X		X			X					•	•															
• Determine priority TTA Materials	X																										
• Conduct inventory of existing relevant TC training materials			X							X		•	•														
• New TTA materials developed on each model component	X	X	X			X				X		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• TTA materials reviewed by PLT ongoing	X	X	X	X	X	X	X	X	X	X		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• TTA materials finalized & structured for online & F/F access	X	X	X			X				X			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Objective 3.2: Provide intensive training & technical assistance to BPS, UMB, & RCC personnel.																											
Milestones	Responsible Personnel											Year 1				Year 2				Year 3				Year 4			
	PI	CP	PC	EC	RA	P	B	U	R	M	I	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
• Training TA schedule established each semester			X			X	X	X	X		•	•															
• TTA provided as scheduled	X	X	X			X	X	X	X		•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• Ongoing TA provided as needed	X		X			X	X	X	X		•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• Culturally responsive family outreach & training provided			X			X			X				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• Evaluation of TTA conducted			X			X	X	X	X	X	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Objective 3.3: BPS, UMB, & RCC implement TCT Model with fidelity.																											
Milestones	Responsible Personnel											Year 1				Year 2				Year 3				Year 4			
	PI	CP	PC	EC	RA	P	B	U	R	M	I	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
• Implement TCT Model with 60 Students w/ ID/A			X	X	X	X	X	X	X			•	•		•	•		•	•		•	•		•	•		•
• Ongoing culturally responsive family outreach conducted	X		X						X			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• Monitor student courses, employment, social engagement			X	X		X	X	X	X				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• Ongoing fidelity checks conducted	X	X	X	X	X	X	X	X	X				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• Monitor & record barriers to TCT model implementation	X	X	X	X		X	X	X	X				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• Strategies to overcome barriers identified & implemented	X	X	X						X				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• IE reviewed Implementation Log quarterly			X							X			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Goal 4: Collect and analyze quantitative and qualitative data from multiple perspectives to identify impact of TCT Model on students with ID/A achievement and transition related outcomes.																											
Objective 4.1: Collect quantitative data on student courses & employment and pre/post assessments using the LASSI-HS, the PEEK Scale, and the Adolescent Self-Determination Scale-Short Form.																											

Milestones	Responsible Personnel											Year 1				Year 2				Year 3				Year 4						
	PI	CP	PC	EC	RA	P	B	U	R	M	I	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
• Secure IRB approval (UMB/BPS)	X	X		X	X		X	X	X		•																			
• Identify and assign students for treatment/control groups	X	X	X	X	X		X			X	•	•					•				•								•	
• Secure Student Consent/Assent	X			X	X		X						•				•				•								•	
• Implement (pre-test) LASSI-HS, PEEK, SD Scales	X	X		X	X		X	X	X	X				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• Develop & implement GAS scoring rubrics	X	X		X	X		X	X	X	X				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• Collect existing student psycho-educational evaluation data	X	X		X	X		X	X	X		•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• Analyze all pretest data	X	X		X	X					X				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• Compute overall GAS scores				X	X					X				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• Implement (post-test) LASSI-HS, PEEK, SD Scales	X	X		X	X		X	X	X	X	•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• Analyze post test data	X			X	X		X	X	X	X	•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• Collect student course & employment data			X	X	X	X	X	X	X	X				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• Analyze & synthesize student course & employment data	X	X		X	X					X				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• Collaborate with IE to share outcomes	X	X	X	X						X				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Objective 4.2: Conduct qualitative evaluation activities including student & family focus groups & PAR with students with ID/A.																														
Milestones	Responsible Personnel											Year 1				Year 2				Year 3				Year 4						
	PI	CP	PC	EC	RA	P	B	U	R	M	I	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
• Conduct student focus groups (treatment/control group)	X		X	X	X		X			X				•	•			•			•				•				•	
• Conduct pre/post family focus grps (treatment/control grp)	X		X	X	X		X			X				•	•			•			•				•				•	
• Conduct PAR with students (treatment/control grp)	X		X	X	X		X			X				•				•			•				•				•	
• Collaborate with IE to share process & outcomes	X		X	X	X		X			X	X			•	•			•			•				•				•	
Objective 4.3: Continuous refinement and improvement of model using iterative feedback mechanisms (KTA Framework) with partners to ensure model efficacy as well as clarity and utility of the implementation protocol.																														
Milestones	Responsible Personnel											Year 1				Year 2				Year 3				Year 4						
	PI	CP	PC	EC	RA	P	B	U	R	M	I	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4			
• Verify TTA needs	X		X	X			X	X	X	X	•	•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• Confirm utility of TTA via feedback from teachers, CMT, PLT	X	X	X	X	X		X	X	X	X	•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• Compile feedback on essential model components	X	X	X	X	X		X	X	X	X	•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• Refinement of model components based on quant/qual data	X	X	X	X	X					X	•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
• Refinement of implementation protocol based on data	X	X	X				X			X				•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

Table 2: Annual Performance Targets & Related Metrics

Annual Performance Targets	Metrics
Management Structure & Dissemination	
160 CMT meetings with 90% attendance 48 Project Leadership Team meetings Number of dissemination goals completed as listed in the management plan	CMT Agendas, meeting notes, attendance PLT meeting agendas, meeting minutes, attendance, action plans, annual report 2 journal articles, 2 Briefs, 2000 project brochures disseminated, 2 presentations
Create Think College Transition Model	
Number of critical model components HEOA/CTP identified 80% response rate for each round of Delphi 90% participation in TTA needs assessment 160 hours of in person, online, phone training 960 hours of in person, online, phone TA	Key Components of HEOA/CTP, EBP dual enrollment/transition Delphi response rate, CMT & PLT review TTA needs assess response rate Training log and participants Technical assistance log and recipient list
Think College Transition Model Implemented	
20 Fidelity checks conducted 60 Treatment /60 Control participants	2x/month fidelity checks, Impl. log review Roster of treatment and control participants
Quantitative & Qualitative Data Collection & Analysis	
540 student pre/post assessments conducted 8 Student focus groups 4 Family focus groups Data (60 students YR 1 and 20/yr YRs 2-4) 60 GAS scores Calculations of students employed	Student pre/post scores on assessments Transcript of each focus group, # course enrollments/completions, internships Overall GAS scores, # students employed, hrs/wk, # in PSE

C3) Procedures for ensuring feedback and continuous improvement: To ensure that TCT

Model components are created and implemented using iterative and continuous improvement

practices, the project will implement a modified **Knowledge-to-Action (KTA) Process**

Framework (Graham et al., 2006) (see Figure 2 KTA Framework (For large print version see

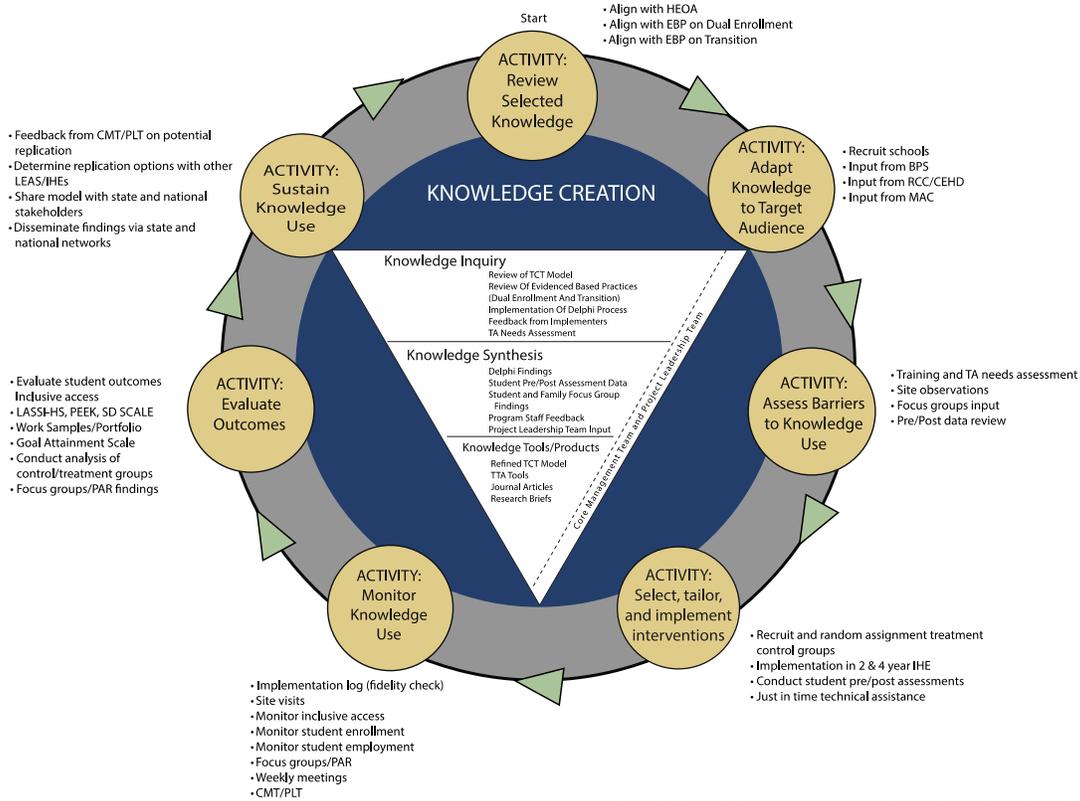
APPENDIX: J). The KTA process is comprised of 2 concepts: 1) **Knowledge Creation**, which

encompasses 3 steps towards an outcome that tailors knowledge for the end user, including: *1.1*

knowledge inquiry; 1.2 knowledge synthesis; and 1.3 knowledge tools and products.

Figure 2: Knowledge-to-Action (KTA) Process Framework

**Knowledge to Action Iterative Cycle
Think College Transition Model**



*Modified from Graham, Logan, Harrison, Straus, Tetroe, Caswell, & Robinson, 2006

The **Action Cycle**, comprised of 7 phases (clockwise from 12 o’clock position on KTAIC model), including; **2.1 Review selected knowledge; 2.2 Adapt knowledge; 2.3 Assess barriers to knowledge use; 2.4 Monitor knowledge use; 2.5 Select, tailor, and implement interventions; 2.6 Sustain knowledge use; and 2.7 Evaluate outcomes.** The model emphasizes that **Knowledge Creation** may occur prior to or in conjunction with the **Action Cycle**; and interactions between these 2 concepts can be ongoing. Each of 7 Action Cycle phases can influence subsequent or preceding phases, and all phases can be influenced by Knowledge Creation elements. This framework also emphasizes that knowledge derived can be both *empirical* and/or *experiential*. Given our intent to involve students, families, BPS transition personnel, college personnel and other primary stakeholder groups (PLT) in guiding project

activities, acquisition and use of experiential and empirical knowledge will have great value.

D. Personnel (see Appendix F: Resumes/Vita of Key Personnel)

D1) Adequacy of staffing plan: The following key personnel compose core project team from ICI in addition to personnel from MA Advocates for Children and the Independent Evaluator both via subcontract with ICI. **Meg Grigal, Ph.D., Principal Investigator (.5 FTE):** Has 23 years of experience working with transitioning youth and adults with I/DD. Dr. Grigal has served as PI or Co-PI on 6 postsecondary education grants for students with ID over the last 13 years. Dr. Grigal has conducted and published numerous research studies on transition and PSE for youth with ID/A as well as books, book chapters, and monographs. Dr. Grigal has consulted and provided training on transition and postsecondary education in 25 states as well as in England, Germany, and Sweden. **Debra Hart, M.S., Co-Principal Investigator (.2 FTE):** Has over 30 years of experience working with people disabilities, their families, and secondary and postsecondary faculty and professionals. Ms. Hart is currently, PI for National Consortium on PSE for SWID, under Health and Human Services and PI on TPSID National Coordinating Center under Office of Postsecondary Education. Ms. Hart is an internationally known expert on higher education options for people with ID and has provided consultation with interested parties in Japan, Sweden, Israel, Korea, Australia, and Ireland. **Maria Dragoumanos, M.S., Project Coordinator (.75 FTE):** Coordinates TTA projects for high school personnel, families, and students around implementing effective secondary transition-related practices to improve post-school outcomes of students with disabilities. **Maria Paiewonsky, Ed.D. Evaluation Coordinator (.5 FTE):** Dr. Paiewonsky has worked in special education over 25 years with a focus on evaluation and TTA on transition of students with ID/A from high school to adult life. Her research focus is on evaluation of transition services and PAR to ensure that students with disabilities are equal partners in research. Dr. Paiewonsky has co-authored two book chapters on

transition and postsecondary education. **Alberto Migliore, Ph.D, Research Associate (.5 FTE):** Dr. Migliore's expertise is quantitative research, including correlational and intervention research and secondary data analyses. Currently, Dr. Migliore works on evaluation protocol development, quasi-experimental designs, survey development, and related data collection and analysis. **Massachusetts Advocates for Children (MAC):** MAC's focus is on special education, legal services, and impact of trauma on learning and education reform in Boston. Mac also has had a concentration in transition of youth with disabilities to adult life. **Jerry Mogul, M.S.** Director of MAC and **Julia Landau, J.D.**, Project Director both have extensive experience in the transition of youth with disabilities from high school to adult life and will serve as personnel on this project. **Independent Evaluator, John R. Johnson, Ph.D.:** is Associate Professor at San Diego State University and a private consultant on evaluation and program development. Dr. Johnson has worked as researcher for Transition Research Institute and National Transition Alliance and has collaborated with Office of Special Education Programs, Rehabilitation Services Admin, and Department of Labor. Dr. Johnson has published journal articles on employment and transition and authored and directed evaluation grants. **Boston Public Schools, Liaison, TBD:** BPS plans to hire a district Transition Coordinator who will serve as Liaison.

E. Quality of Project Evaluation

E1) Clarity & importance of key questions to be addressed by project evaluation. This evaluation plan has 4 goals: 1) to inform and continuously improve project planning, development, implementation, and management using an empowerment evaluation approach; 2) to monitor and assess the level of fidelity that project activities and the proposed project model is being implemented and to identify factors that facilitate or challenge successful implementation; 3) to offer ongoing feedback to project stakeholders that informs shared and collaborative problem-solving and decision-making; and 4) to gather evidence about project's effect on student

outcomes (e.g., academic performance and goal attainment). These questions evaluate project efficacy with respect to student outcomes related to academic performance, goal attainment, learning and study skills, college readiness, and self-determination. The project evaluation will gather and analyze data to identify overall growth and changes, differences between the experimental and control group with respect to student outcomes, and extent to which enrollment and completion of TCT Model are predictors of student outcomes.

Participants will be matched on age, disability, state assessment test status, and scores on existing psycho-educational test scores from BPS. Measures of student academic achievement will include number and type of college courses accessed, courses completed, exit document attainment. Additional outcome data will include frequency of internships and paid employment including hours worked and wages earned. Other student outcomes related to information processing, test strategies, attitude, motivation, time management will be measured via pre/post administration of Learning and Study Strategies Inventory - High School Version (LASSI-HS) (Weinstein, & Palmer, 1990). Student perceptions/expectations about college will be measured via Perceptions, Expectations, Emotions and Knowledge about college (PEEK) Scale (Weinstein, Palmer, & Hanson, 1995). Growth in student self-determination skills including domains of autonomy, self-regulation, psychological empowerment and self-realization will be measured via Adolescent Self-Determination Scale-Short Form (Wehmeyer, Lopez, Little, & Shogren, 2011). Student goal achievement will be measured using goal attainment scaling (Kiresuk, Smith, & Cardillo, 1993). Goal attainment uses a 5-point scale ranging from -2 to +2, allowing for computation of an overall GAS score that is equivalent to a T-score that is normally distributed with a mean of 50 and a standard deviation of approximately 10 (Turner-Stokes, 2009).

E2) Evaluation plan includes analysis plan and analytic approach: Evaluation will employ a

match-pairs pre-post test randomized control design. Minimum sample size will be 120 students with equal distribution of 60 subjects randomly assigned to experimental and control groups. Experimental group is defined as enrolled and participating in TCT Model program. Control group will receive traditional transition services offered in their high school. A priori power analyses using *G*Power 3* (Faul, Erdfelder, Lang & Buchner, 2007) were conducted to provide a preliminary estimate of minimum detectable effect size (MDES) for a sample of 120 subjects. Conventional discretionary values were used such that $\alpha = .05$ (probability of Type I error) and $1 - \beta = .80$ (probability of Type II error). The power analysis was conducted for a matched-pairs t-test and 2 factor ANOVA with a maximum of 4 degrees of freedom in the numerator for the ANOVA. The MDES calculated for matched-pairs t-test was .26 and .323 for a 2 Factor ANOVA with 4 df in the numerator and 118 df in denominator. These estimates suggest that 120 subjects is a reasonable sample size for detecting the smallest program effects that can be detected with a high degree of confidence (Schochet, 2005).

The dominant method of analysis will be multilevel latent growth curve modeling (ML-LGM) to examine differences in student outcome measures across experimental and control group participants. ML-LGM will be used to account for nested factors. For example, students are nested in two factors including the high school they are enrolled in and the campus in which they are receiving TCT Model services. SAS will be used to conduct all analyses and SAS PROC Mixed will be used to conduct ML-LGM analyses (Singer, 1998). ML-LGM analyses model the average baseline performance and the rate of change for the sample as a whole by estimating average intercept and slope parameters (i.e., fixed effects) and simultaneously modeling individual differences (i.e., random effects) at student and group levels (e.g., campus, school). Two Factor analyses of variances and chi-square analyses will be conducted to identify specific

difference between experimental and control groups with respect to all relevant factors (i.e. demographics, assessment scores, GAS). Finally a hierarchical multiple regression analysis will be conducted to determine extent to which the number of months of enrollment and program completion predict selected student outcomes. **E3) Extent evaluation plan articulates key components and outcomes:** The 3-step empowerment evaluation approach described by Fetterman (1996, 2001) will be integrated with empowerment evaluation methodology, “Getting to Outcomes” (GTO), developed by Wandersman, Imm, Chinman, and Kaftarian, (2000). Dr. Johnson will employ GTO strategies to facilitate project staff and key stakeholders to: 1) establish or clarify mission, purpose and goals of project; 2) assess current status of implementation of project activities and achievement of project goals using a 1 (low) to 10 (high) rating scale; and 3) plan for future (specifying goals, strategies to achieve goals, and evidence that goals have been met). The first “taking-stock” rating will be completed within 180 days of initial approval of grant utilizing GTO approach and questions and every 6 months thereafter. Data drawn from each taking stock rating will be compared to subsequent taking-stock ratings to document change over time. In addition, information gathered from taking stock ratings will be reviewed by CMT as part of KTA plan for continuous improvement and may result in updated goals/objectives that by consensus would improve progress. Fidelity to treatment for implementation of interventions will be monitored by 3 types of fidelity measurement (Fixsen, Naoom, Blasé, Friedman, & Wallace, 2005). For context fidelity indicator, all program staff will receive training from same trainer on program services and assessments they are to implement. Compliance fidelity will be monitored through on-going support and communication to facilitate implementation of interventions. Competence fidelity will be evaluated by reviewing student outcome data.