PRACTICE BRIEF
Assessing Impact of Inclusive Postsecondary Education Using the Think College Standards

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Abstract

Increasingly across the United States, institutions of higher education (IHE) are offering a wide array of postsecondary educational (PSE) opportunities for students with intellectual disabilities (ID). As more students with ID aspire to college, it is incumbent upon IHEs to engage in rigorous program evaluation to assess student outcomes and identify factors that foster student success. The Think College (TC) Standards, Quality Indicators, and Benchmarks provide a unifying conceptual framework that helps to focus research and program evaluation efforts. In this article we describe use of the TC Standards to evaluate an inclusive PSE program for students with ID at a large, urban university. We report preliminary outcome data and discuss how Standards-based evaluation can both guide local program improvement and contribute to the evidence base of best practices in the field. Using this accumulated knowledge, students and families will be able to make more informed educational choices.

Keywords: Inclusion, intellectual disabilities, postsecondary education, program evaluation

Individuals with intellectual disabilities (ID) are among an increasing number of students with disabilities accessing higher education as a result of legislative, academic, and social changes. During the past 10 years, more postsecondary education (PSE) options have become available for students with ID, and with this growth, the focus of PSE instruction for students with ID has been varied (Grigal, Hart, & Weir, 2012). Findings from a national survey showed that a majority of programs developed by institutions of higher education (IHE) offered instruction in social skills training, independent living, and life skills; over half offered access to noncredit college classes; and 51% offered access to credit-bearing courses (Grigal et al., 2012). However, a significant percentage of PSE programs for students with ID provided instruction in settings primarily with other students with a similar disability, rather than in typical college classrooms.

Hart, Grigal, and Weir (2010) have emphasized the need for systematic investigation of a range of program models, using rigorous program evaluation methodologies, to identify practices that support increased access of students with ID (as well as other developmental disabilities) to authentic, inclusive PSE experiences. Although we clearly still have much to learn about the effects of student participation in inclusive programs, emerging research points to positive outcomes across a variety of domains. These include reported increases in student maturity, independence, self-confidence, and capabilities (Uditsky & Hughson, 2012); measurable gains in reading and writing skills (Folk, Yamamoto, & Stodden, 2012); successful course completion, friendship building, and participation in campus organizations (Carroll, Herman, & Wickizer, 2012); and a high rate of paid employment (Grigal & Dwyre, 2010). Continued study of the contexts, features, resource requirements, and outcomes of inclusive PSE programs, and documentation of correlates of student success, will both expand the evidence base of best practices in the field and support more informed decision-making by educational administrators, policymakers, program planners, students, and families.

Depiction of the Problem

As is the nature of educational innovations, early PSE programs for students with ID were developed in the absence of formal guidelines or empirically based standards of quality on what would constitute best practice. Observing this problem, Think College (TC) at the Institute for Community Inclusion at the University of Massachusetts Boston undertook the task of developing a set of standards, quality indicators, and benchmarks grounded in both theory and practice. A diverse group of 38 higher education professionals with content expertise and practitioners with extensive knowledge of students with ID participated in a Delphi process to reach consensus and validate the resulting standards (Grigal, Hart, & Weir, 2011b). The TC Standards are aligned with the definition of a comprehensive postsecondary and transition program as specified in the Higher Education Opportunity Act (HEOA) of 2008 (Grigal, Hart, & Weir, 2011a). These standards can be used by any higher education institution to develop, expand, or enhance inclusive options for students with ID.

The TC Standards comprise eight standards, each with its own set of quality indicators and benchmarks (Grigal et al., 2011a, b). Four standards were identified as being the cornerstones of high-quality practice: Inclusive Academic Access, Career Development, Campus Membership, and Self-Determination. Another four standards provide the interdependent elements of service or programmatic infrastructure necessary to support the cornerstone practices and result in desired outcomes over time; these are Alignment with College Systems and Practices, Coordination and Collaboration, Sustainability, and Ongoing Evaluation. The TC Standards are further delineated by 18 quality indicators and 87 benchmarks, which can be used for assessing program components. The Standards provide both "a philosophical and structural framework for planning, implementing, and assessing practice, as well as designing and conducting research" (Grigal, Hart, & Weir, 2011a, p. 4). As such, they serve as a scaffold on which to systematically build an evidence base of best practices from a multiplicity of program models. Given that one of the significant findings about PSE programs for students with ID is the great variability among them (Grigal et al., 2012), the TC Standards can provide an effective mechanism for framing research and evaluation questions such that knowledge acquisition can be synthesized both within and across programs.

Description of the Practice

The ACE-IT in College academic program at Virginia Commonwealth University (VCU) has embraced the TC Standards in all aspects of its program development and evaluation. Students with ID participating in ACE-IT in College have access to VCU's undergraduate courses and are full members of the VCU community. Data collected for evaluation purposes are structured around the TC Standards, Quality Indicators, and Benchmarks. This manuscript will describe the early evaluation outcomes for students with ID enrolled at VCU. In order for project staff to assess the effectiveness of ACE-IT in College, we have used the TC Standards to assist us in measuring the program's impact and outcomes for participating students as they earn a certificate offered through the VCU School of Education.

The ACE-IT in College Program at Virginia Commonwealth University

Virginia Commonwealth University is a large, urban university with a diverse student population of 33,000. Diversity is one of the core elements in the university's strategic plan; therefore, creating an inclusive academic program for students with ID was viewed as meeting the university's mission to educate the community at large. In 2010, VCU was one of 27 universities or community colleges across the U.S. to receive funding from the federal Office of Postsecondary Education to demonstrate opportunities for students with ID to have authentic college experiences that lead to successful career and life paths. Students with ID began taking course work in the fall of 2011, and as of the spring semester of 2013, eight students have been enrolled. The academic program serves students 18-26 years of age.

Each ACE-IT in College student completes a minimum of eight college courses (20 to 22 credits total) over four semesters, as well as a semester-long work internship. Table 1 provides information on how the credits are structured for the VCU academic program. During the final semester, students seek competitive employment in their chosen career. The ACE-IT in College model is fully inclusive, meaning that students select their courses from the VCU undergraduate course catalogue and are full and active members of the campus community. There are no special curricula or classes designed solely for ACE-IT in College students. Students take most of their courses for audit and meet

Table 1

ACE-IT in College Academic Program Requirements

Required Core Courses	Credits	Elective Courses	Credits
UNIV 101 Introduction to the University	1	Elective A	3
Science (Biological, Environmental, or Natural)	3	Elective B	3
Literature, Writing, Art, or Music	3	Elective C	3
Social Studies, Civilization, or Global Studies	3	Elective D (could be science lab if required)	1-3
Total	10		10-12
Final Semester		Employment Internship	

with an academic advisor to establish a program of study based on their career interests, identified through a person-centered planning process.

Part-time employment is encouraged for ACE-IT in College students while attending the university. This is a natural part of the college experience for any student in higher education. Five of the current students obtained part-time employment on campus. Two students entered VCU with part-time employment, one working at a health diagnostic laboratory and the other at a local grocery store. Another student is employed full time on the VCU health sciences campus. This individual completed a Project SEARCH internship program and, once employed, decided to pursue higher education. Full-time employees of VCU are granted tuition waivers to take classes for credit. A change in institutional policy was made to allow the student to obtain tuition support even for audited courses.

Institutional Partners

ACE-IT in College is a collaborative project of the Rehabilitation Research and Training Center and the Partnership for People with Disabilities, entities within VCU's School of Education (SOE). The program has the full support of both VCU and SOE administration, as well as many offices and departments throughout the university. ACE-IT in College students apply for accommodations from the VCU Disability Support Services office, meet regularly with their academic advisor in the SOE, and work with educational coaches who are VCU undergraduate or graduate students trained to mentor and support the student to navigate the campus, participate in classes, and take part in VCU social activities.

Participant Demographics

The ACE-IT in College academic program's first cohort of students enrolled in VCU in Fall 2011, with a second cohort beginning in Fall 2012. A third cohort of five students has been selected and will begin taking courses in Fall 2013. The participants described here are based on the first two cohorts consisting of eight students. Table 2 provides demographic information on the students and a sampling of courses they selected in consultation with their academic advisor.

Evaluation of Observed Outcomes

To maximize the usefulness of evaluation data for the assessment and improvement of innovative educational programs, a plan for incorporating evaluation into program planning must be in place from the outset (Moon, Utschig, Todd, & Bozzorg, 2011). For the ACE-IT in College program evaluation, the TC

Table 2

Participant Characteristics

Age Range	18 – 24 years			
Gender	5 females, 3 males			
Financial Support	on-campus employment (4) employer scholarships (2) VCU Health System tuition waiver (1) Veteran's Benefits (1)			
Employment	VCU Child Development Center (1) VCU Health Services System (1) VCU Recreation and Sports (3) private sector health diagnostics laboratory (1) local grocery store (1)			
Examples of Courses Taken	Fall 2012		Spring 2013	
	ARTF 121	Intro to Drawing	ECON 203	Intro to Economics
	FRSC 202	Crime and Science	RELS 109	Human Spirituality
	HIST 104	Survey of American History	PHYS 103	Elementary Astronomy
	MHIS 243	Music Appreciation	SCPT 209	Intro to Sculpture
	PHYS 103	Elementary Astronomy	SLWK 201	Intro to Social Work
	PHYS 107	Wonders of Technology	SPCH 121	Effective Speech
	UNIV 101	Intro to the	THEA 108	Intro to Stage Performance
	UNIV 111	University Focused Inquiry I	UNIV 103	Education & Career Planning
			WMNS 201	Intro to Women's Studies

Standards have served as the conceptual framework to guide the evaluation design, monitor implementation, and assess outcomes.

Data Collection and Analysis

The ACE-IT in College project uses a variety of mechanisms to monitor program implementation and assess outcomes within the framework of the TC Standards. To facilitate the systematic collection and review of evaluation data, a comprehensive web-based data entry system has been developed. All staff members have access to data entry screens that allow them to report their program activities and observations on an ongoing basis using both structured and unstructured data entry forms. The ACE-IT in College database accommodates input of both qualitative and quantitative data, including objective measures of student progress and project implementation. Among the key methods and instruments used to collect evaluation data is the Think College Standards, Quality Indicators, and Benchmarks Level of Implementation Scale (Grigal, Hart, & Weir, 2011b). Project staff use this rating scale to obtain an overall assessment of the fidelity of implementation of ACE-IT in College to the TC Standards and to identify specific programmatic areas where improvements are needed.

Because the data in the ACE-IT in College database are in a variety of formats and include both quantitative and qualitative information, a data analysis program capable of handling mixed data media was required. ATLAS.ti 7, a powerful data analysis program that supports investigation of complex phenomena within large amounts of unstructured data (Friese, 2012; Lewins & Silver, 2007), met this criterion. All the ACE-IT in College data were therefore imported into Atlas.ti and a coding structure was established from the TC Standards, Quality Indicators, and Benchmarks. We then used a directed qualitative content analysis approach (Hsieh & Shannon, 2005) to systematically code and analyze the data to assess fidelity to the TC Standards, and to look for evidence of outcomes associated with implementation of the Standards. This approach is appropriate in situations where an initial theory or conceptual framework about a phenomenon exists but could benefit from further explication. Because we are still in the initial years of project implementation, none of the ACE-IT in College students has yet completed the program. Consequently, we are still in an exploratory phase of data analysis. Nevertheless, some preliminary trends have been observed.

Student Outcomes

To illustrate the preliminary results we are finding, we will focus on three of the TC Standards, viz., Standard 1: Inclusive Academic Access; Standard 2: Career Development; and Standard 4: Self-Determination. First, we present composite stories representing one young man and one young woman in the program (with fictitious names), based on data extracted from the experiences of all eight of the first ACE-IT in College students. Next, we present specific examples of outcomes related to the three Standards we have selected.

"Robert's" story. From the time he was a young boy, Robert had always wanted to go to college. His brothers and sisters, who were considerably older, had graduated from VCU and that was his dream, too. However, with diagnoses of autism and ID, throughout his elementary and secondary school years, Robert was educated in self-contained special education classrooms following a functional curriculum. He was shy and kept to himself. Robert exited high school with a special diploma and a low-paying part-time job that held little interest for him. At VCU, Robert has successfully completed two courses per semester in a variety of disciplines, is a well-liked and respected employee at one of VCU's recreation centers, and spends some of his free time in the gym relaxing with other students.

"Meredith's" story. Meredith had always found school challenging. Her Individualized Education Program (IEP) indicated she had multiple disabilities, including ID. Rarely having success experiences in academic settings had a negative effect on her sense of self-esteem. Meredith's parents believed that she had the personal qualities to accomplish more in life, but were at a loss as to how to go about supporting her to develop her abilities. Since beginning classes at VCU, Meredith's self-confidence has soared. Even her demeanor has changed and she looks like any other college student, wearing her VCU sweatshirt with pride. Meredith has improved in her self-management skills, learned new study strategies, and demonstrated increased competence at her part-time job on campus, so much so that she has been mentoring new employees.

Specific outcomes. The outcomes presented in Tables 3 and 4 relate to the TC Standards of Inclusive Academic Access, Career Development, and Self-Determination. Illustrative examples of quotations

Table 3

"Robert's" Outcomes

Data Sources	Implementation Evidence	Student Outcomes
	Standard 1: Inclusive Academic Access	
PF, FF	*My son…takes regular college courses*	Growth in knowledge and understanding of music and film
FF	*Coaches are an asset – they provide quick clarity one on one with their students*	Completed all course assignments and got one of the highest grades in the class
SST	*Explored and likes text to speech software*	Able to study at home independently
ECF	*…variety of approaches available to help [the] student succeed*	Developing excellent computer skills and taking good class notes
INT	*Students pick their coursework from the VCU catalogue*	Broadening of academic interests
	Standard 2: Career Development	
EF	*[He] has done so well…he has been given more responsibility, including providing building tours.*	Got promotion and pay raise at work
SF	*I am ready to train any ACE-IT in College student at the gym where I work.*	Growth in self-confidence and leadership skills
INT	*…educational coaches and his job coach… work together…to formulate…a program that's beneficial to him*	Exploration of new potential career paths
PF	*It allows him to continue to expand his world. So many folks with ID stay at home or are stuck in a job that does not allow them to grow and change. ACE-IT in College helps you grow!*	Increased comfort level in interacting with coworkers
	Standard 4: Self-Determination	
SST	*[He] advocated for himself to move from laundry to doing maintenance work…*	Increased initiative-taking
SST	*[He] checks email and Blackboard on his own; using agenda given by VCU*	Managing personal schedules independently
SF	*I got my own place.*	Choosing leisure time activities of interest
PF	*Everything that was brought up as a concern for my son was listened to…*	Got classes that he wanted to take
SST	*Initiated email to professor regarding his quizzes*	Communicating appropriately with faculty on his own

Note. ECF = Education Coach Feedback; EF = Employer Feedback; FF = Faculty Feedback; PF = Parent Feedback; SF = Student Feedback; INT = website interview transcript; SST = Student Support Team meeting

Table 4

"Meredith's" Outcomes

Data Sources	Implementation Evidence	Student Outcomes
	Standard 1: Inclusive Academic Access	
SF	*…my coach...teaches me in a way that I can learn better.*	Increased engagement in learning, use of multiple methods of studying
SST, CTS	*Explored…campus supports for Astronomy, which included Supplemental Instruction and tutoring*	Understood material better, improved presentation skills
INT	*…we would go to class…and then [later] reinforce what was just taught….By the end of the semester, I felt I didn't need to be there anymore.*	Independent in doing school work, reduced need for educational coach
FF	*I held her feet to the fire, and she came through.*	Improved classroom participation
PF	*Watching her have some success in an academic setting.*	Started to read more and enjoy it more
	Standard 2: Career Development	
EF	*She was instrumental in helping a new teacher learn the routine.*	Improved skills in working with children (her chosen career)
PF	*This program…[increases] the students' ability to function in society and become responsible young adults.*	More poised, outgoing, and self-confident
SST	*Interviewed for and began a [new] job.*	Obtained work experience that allowed her to explore her interests
	Standard 4: Self-Determination	
PF	*Courses…taken were of her own choice.*	Sense of freedom, self-assurance
PF	*Her feedback to the [planning team] resulted in several alternate methods to help her study*	More independent problem solver
SST	*Learning to save and spend money responsibly*	Growth in maturity
INT	*I've been…doing what I need to do and then going home and doing what I need to do there*	Monitoring progress toward own goals
CTS	*Learned by communicating with classmates and professor*	Improved skills in obtaining information that is helpful to her

Note. CTS = Course Tracking Sheet; EF = Employer Feedback; FF = Faculty Feedback; PF = Parent Feedback; SF = Student Feedback; INT = website interview transcript; SST = Student Support Team meeting

from the range of data sources in the ACE-IT in College database are provided. Students demonstrated gains in specific course content knowledge, word recognition, word meaning and spelling, study and note-taking abilities, and computer skills; grew in self-confidence, leadership, and job-related competencies; and improved in communication skills, self-management, independence, and initiative-taking.

Implications and Portability

A systematic qualitative content analysis of implementation and outcome data for the ACE-IT in College program at VCU indicated that implementing an inclusive PSE program for students with ID with fidelity to the TC Standards can result in positive outcomes for students in several domains. Consistent with findings that have been reported elsewhere in the literature (e.g., Carroll et al., 2012; Folk et al., 2012; Grigal & Dwyre, 2010; Uditsky & Hughson, 2012), we observed that students made gains in academic, personal, social, and career-related skills. The triangulation of data across multiple information sources and multiple data collection methods strengthens the credibility of these initial findings.

Because none of the ACE-IT in College students has yet completed the program, the results presented here are preliminary and should be considered a snapshot of a program in progress. In addition, because of the individualized nature of the program and the timing of this article, our sample size is relatively small. As more cohorts of students are accepted into this inclusive academic program and as follow-up studies are initiated and data on post-program outcomes are obtained, we expect to be able to make more definitive statements about both the short-term and long-term impact of a fully integrated college experience for students with ID.

The ACE-IT in College academic program at VCU is inclusive and individualized based on a student's interests and desired career path. The certificate that these students earn has been established by and is awarded through the VCU School of Education. What we have presented in this article is how one PSE program is using the TC Standards to inform all aspects of its development, implementation, evaluation, and ongoing improvement.

Conducting evaluations of inclusive PSE programs for students with ID using the TC Standards, Quality Indicators, and Benchmarks as a unifying conceptual framework holds great promise for moving the field forward with a strong evidence base. Individual programs can use research and evaluation results based on the TC Standards for their own programs' development and improvement, but can also collaborate with other programs and share what they have learned about what it takes to make an inclusive PSE program work. At the national level, Think College is collecting uniform sets of program- and student-level data from the 27 funded programs. Organized around the TC Standards, this database will serve as a rich source of information for educators, administrators, and policymakers about how to design and implement effective programs. Ultimately, students with ID, and the families who support them, will be the beneficiaries of these coordinated research and evaluation efforts, by having the information they need to make thoughtful choices about the PSE options that best match each student's unique interests and needs.

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