

Year One Evaluation Findings



Lord Fairfax Community College

TAACCCT Grant
October 2014 through September 2015

Third Party Evaluation Report

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EXECUTIVE SUMMARY

Lord Fairfax Community College received a Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant from the U.S. Department of Labor on September 26, 2014. This report is the first of four annual required third-party evaluations. It documents the implementation of the grant during the first year of operation and provides an overview of how LFCC will document student outcomes beginning in the second year. Named "Knowledge to Work," this initiative seeks to use Competency Based Education (CBE) approaches, in particular direct assessment, to accelerate student completion of selected career and technical programs. Knowledge to Work also is developing a web portal that includes a search engine of educational resources mapped to competencies which will allow users to create free, personalized learning plans. Knowledge to Work is an innovation with many complex and interrelated parts as expressed by its logic model. With the assistance of TAACCCT, the College will be on the edge of innovation that is only recently surfaced in higher education. This report documents achievement of proposed activities and deliverables as well as grant accomplishments while provides an overview of next steps.

BACKGROUND AND INTRODUCTION

Following a successful proposal to the Department of Labor, Lord Fairfax Community College was awarded a Round Four Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant in October 2014. TAACCCT grants are administered by the U.S. Department of Labor (DOL), Division of Employment and Training Administration (ETA). The TAACCCT program provides capacity-building grants to spur innovation and the development of model training programs at America's community colleges and universities. TAACCCT-funded programs intend to prepare participants for employment in high-wage, high-skill occupations by using innovative and sophisticated strategies that address the unique needs of unemployed or under-employed adults. Round Four provided a total pool of \$450 million. TAACCCT resources help fund LFCC's initiative named "Knowledge to Work" (K2W). LFCC's award totaled \$3.25 million for four years to create a local, regional, and national system for TAA-eligible workers, veterans, and other adults to document competencies through individualized learning plans, leverage free and low-cost electronic learning resources, and earn industry credentials that make them marketable in three high wage, high growth industry sectors.

LFCC qualified for its TAACCCT grant by meeting six core elements stated in the Solicitation for Grant Applications: (1) evidence-based design, (2) career pathways, especially competency-based approaches to speeding students through to program completion, (3) advanced online and technology-enabled learning, (4) strategic alignment with the workforce system and other stakeholders, (5)

alignment with previously-funded TAACCCT projects, and (6) develop new and/or take to scale successful industry sector strategies. K2W seeks to create Competency-Based Education (CBE) pathways in three industry areas—information technology, health information management, and advanced manufacturing. Existing college programs in information systems technology, administrative support technology, and health information management are being converted to CBE, with different exit points tied to the AAS degree, certificate, and career studies certificate. The use of competency badges is also being explored. The implementation of CBE programs in advanced manufacturing is planned for later in the grant. Apprenticeship programs in the trades also will be implemented with personalized learning plans tied to appropriate competencies. Addressing the continuum of educational needs for TAACCCT recipients and others, adult basic education and remediation are also provided through CBE and personalized learning plans when students need this help. A distinguishing feature of the LFCC program is its intention to measure learning by direct assessment.

K2W was funded with an additional \$750,000 of grant monies above the cap to support a new national credential/competency framework. With this initiative, LFCC is developing a national web portal with English and Spanish versions. This portal will include an educational search engine for free/low cost Open Education Resources (OERs) and personalized learning plans tied to competencies. LFCC believes that this intervention will speed student completion of credentials and their entry into labor markets that require specific and general competencies mapped to employer needs.

Located physically in the Northern Shenandoah Valley of Virginia, Lord Fairfax Community College's (LFCC) service region consists of the seven counties of Frederick, Fauquier, Page, Shenandoah, Clarke, Warren, and Rappahannock, and the city of Winchester. LFCC intends to serve local and regional employers through K2W as well as to create a national model that links OERs, competencies, credentials, and certifications to jobs. Competency-Based Education (CBE) is a rapidly developing initiative across all of higher education. By embarking on this grant, especially deploying direct assessment, LFCC has set itself on a course to become a pioneer as well as a test bed from which other colleges and organizations can learn about strong practices in this emerging area.

What is Competency-Based Education?

Competency-based education is generally distinguished from other educational approaches in several ways. First, all competencies are precisely defined so as to be measurable. Second, the student must demonstrate mastery of each competency at a predefined level before moving on to the next. CBE does not rely on the seat-time as a measure of learning attainment. Rather, competency-based models seek to document what a student has learned by creating a set or system of competencies for which a student must demonstrate mastery. Third, CBE carries the potential for students accelerate their progress through a chosen program than is often the case in traditional program. Although growing in both awareness and acceptance, CBE programs are the exception rather than the rule in

community colleges. LFCC's direct assessment of competencies approach is quite rare.

Direct assessment is defined by the federal government, as "an instructional program that, in lieu of credit hours or clock hours as a measure of student learning, utilizes direct assessment of student learning, or recognizes the direct assessment of student learning by others."¹ Direct assessment programs move fully beyond the credit hour as the unit of instruction while permitting students to progress at their own pace outside of a traditional course schedule. Direct assessment transcripts therefore document not course completion and grades but specific competencies that have been mastered.

What is Personalized Learning?

According to Educause, personalized learning provides a unique, highly focused learning path for each student.² Personalized learning uses information technology systems and tools to tailor learning experiences based on student strengths, weaknesses, and pace of learning. These technologies include analytics, adaptive learning, digital courseware, and access to OERs. A profile of each student's existing competencies is then built and a plan developed to acquire the competencies needed for degree, certificate, or badge completion. Continual adjustments are made to each student's learning plan based on their performance. Personalized learning also helps instructors better target their teaching to individual students while helping students see where their own learning gaps occur.

PROJECT COMPONENTS, ORGANIZATION, AND PARTNERS

Project Components

Knowledge to Work includes four key features: (1) CBE programs to earn credentials such as certificates, degrees, and digital badges in three industries with high wage/high growth jobs; (2) individualized learning plans; (3) a national portal with a new type of educational search engine; and (4) customized, wrap-around student support services to ensure success.

K2W Logic Model

The third-party evaluator drafted a logic model in January 2015 that pictorially describes the sequence of activities thought to bring about change and how these activities are linked to the results the program is expected to achieve (see Appendix A). The model was reviewed by the K2W Leadership Team and can provide an overview for understanding the complexity and interrelated parts of this

¹ Code of Federal Regulations. Title 34-Education. Retrieved September 22, 2015 at <http://www.gpo.gov/fdsys/pkg/CFR-2011-title34-vol3/xml/CFR-2011-title34-vol3-sec668-10.xml>

² Educause. 7 Things You Should Know About Personalized Learning. Retrieved September 22, 2015 at <http://www.educause.edu/library/resources/7-things-you-should-know-about-personalized-learning>

initiative. The third-party evaluator will work with the project director and leadership team to update and refresh this model throughout the span of the grant.

Project Organization and Staffing

K2W reports organizationally to LFCC's President, Dr. Cheryl Thompson-Stacy. K2W's Executive Director is Dr. John Milam. Dr. Milam oversees the total grant and provides direct supervision for these positions:

- Database Administrator
- Web Developer
- Digital Librarian
- Workforce Navigator
- Program Assistant
- PHP Programmer

At the time of this evaluation report, the project's IT team had built and successfully launched the K2W personalized learning plan software. During its compliance review, the DOL indicated that the grant should switch from using the Microsoft technology stack to open source software. As a result, and due to existing staff skillsets, hiring is now in process to bring a PHP programmer on board. The Digital Librarian (Kiri Johnson) is cataloging digital learning resources and creating an online library. The workforce navigator (Anna Citrenbaum) is working with business and industry to ensure that program competencies are aligned with job requirements, using workforce projections to determine hiring needs in the region and nationally. The Program Assistant (Brian Breeden) supports other staff in addition to testing software and developing recruitment materials.

The Workforce Navigator position was approved by the Department of Labor some six months after the grant began owing to LFCC's request to relocate this position from the local Workforce Investment Board to K2W. After receipt of the grant, the WIB requested to be paid an indirect rate of 57%, versus the 8% as proposed. The WIB also raised other issues about prepayment and reporting requirements. In turn, LFCC decided to modify the project's Scope of Work and move the position under the College. This process took three months. Full project staffing was also delayed by hiring difficulties with candidates for the intended Chief Technology Officer position. This position was subsequently reconfigured and job tasks were distributed across the project's IT team, under the supervision of the Executive Director.

Other grant supported personnel are embedded elsewhere in LFCC's academic and student services units. These positions include:

- K2W Adult Education Instructor, Katie Branson
- K2W Career Coach, Pamela Fishback
- K2W Career Coach, Kelsey Whitacre
- Director, Office of Transition Programs, Lyda Kiser Costello (25% time)
- Coordinator of Business and Industry Training, Becky McKee (23% time)

Faculty play a pivotal role in Knowledge to Work. Members of the Faculty Direct Assessment Committee have incorporated national competency frameworks to create alternative CBE programs. Members ensure CBE program rigor while acting as both academic advisors and instructors for CBE students in their discipline. Since the grant began, members of the Faculty Direct Assessment Committee have included:

- Henry Coffman, Professor in Information Technology (grant stipend)
- Virginia Hartman, Associate Professor of Administrative Support Technology (grant stipend)
- Art Lee, Associate Professor of Information Technology
- Gene Loranger, Professor of Electrical Technology
- Beth Shanholtzer, Assistant Professor/HIM Program Director (grant stipend)
- Chris Coutts, Provost (previously Vice President for Academic and Student Affairs)
- Kim Blosser, Vice President for Academic and Student Affairs
- Brenda Byard, Dean of Career and Technical Education
- Melissa Stange, IST faculty member (100% grant funded)

KW2's Leadership Team provides guidance and oversight for the work. The Leadership Team serves the project by serving as a sounding board for policy and procedure development as well as advocating for direct assessment internally and externally. The team includes:

Cheryl Thompson-Stacy, LFCC President
 Kim Blosser, Vice President for Academic and Student Affairs
 Brenda Byard, Dean of Career and Technical Education
 Lyda Kiser Costello, Director, Office of Transition Programs
 Jeanian Clark, Assistant Vice President of Workforce Solutions and Continuing Education
 Anna G. Citrenbaum, Workforce Navigator
 Anna Rice-Wright, Trade Act Program Manager, Virginia Employment Commission
 Amy Judd, Adult Basic Education Program Manager
 Apprenticeship coordinator (Previously Becky McKee, successor to be determined)
 Valerie Priddle, K2W Grant Fiscal Agent
 John Milam, Executive Director, K2W

External Partners

K2W has identified ten local and regional employer partners in three industry sectors. A review of their letters of commitment by the third-party evaluator documents their intentions to work closely with K2W to design and implement training strategies as well as to assist in identifying competencies for current and projected employment categories.

Healthcare Sector
 Fauquier Hospital
 Valley Health
 Information Technology Sector
 Frederick County Public Schools
 Shockey
 Shentel
 Winchester City Public Schools
 Advanced Manufacturing Sector
 Ashworth
 Evolve Manufacturing
 Kraft
 O’Sullivan

Three Community Based Organization partners include: (1) Shenandoah Valley Workforce Investment Board; (2) Goodwill of the Valleys; and (3) Horizon Goodwill Industries. K2W also partners at the national level with Microsoft and the American Health Information Management Association (AHIMA) to develop the portal resources related to HIM and IT.

DATA SOURCES

Data to inform this evaluation have been gathered to date through review of LFCC’s original TAACCCT proposal and subsequent amendments, letters of employer commitment, program documentation and deliverables as well as interviews of LFCC administrators, KW2 program staff and faculty groups. Data gathering subsequent to this first annual evaluation report will include employers and industry stakeholder interviews, student focus groups, and an annual longitudinal student questionnaire. At this writing, October 2015, students have only begun to enroll in CBE programs. Members of initial program cohorts will be contacted in early 2016 to participate in focus groups, interviews, and surveys.

STATUS OF PLANNED PROJECT ACTIVITIES AND DELIVERABLES

Knowledge to Work revised its project work plan in April 2015 to incorporate the aforementioned position relocation as well as the reapportionment of work among project staff in the information technology area.

Activity	Deliverable	Description and Target Dates	Evaluation Finding
1.1 Oversight - General		Meetings, status reports, hiring, space, computers, & general planning work w/ partners. <i>[Expected Start 10/1/14; Actual Start 10/1/14; Expected End 9/30/18]</i>	Oversight has produced regular communication, development of project infrastructure including personnel hires, shared responsibility for project success, and internal and external visibility. Executive

Activity	Deliverable	Description and Target Dates	Evaluation Finding
			Director has made internal and external presentations. Executive Director has also facilitated a developing partnership with AHIMA to create a new national certificate (see narrative below).
1.2 Oversight - Reporting		Quarterly & annual progress reports, participant tracking for outcomes. <i>[Expected Start 2/1/15; Actual Start 2/2/15; Expected End 9/30/18]</i>	All quarterly narrative and financial reports have been submitted on time to Department of Labor. Cohorts for tracking have been defined by the project director and third-party evaluator. Program started admitting students in August 2015; no tracking results yet available. Intake form for new students is now in place. K2W also has worked to define coding processes in PeopleSoft to account for CBE students in LFCC's existing Student Information System.
	1. Oversight - Notes, reports	Documentation of meeting notes, required reporting. <i>[Expected Start 10/1/14; Actual Start 10/1/14; Expected End 9/30/17]</i>	All required external reporting has occurred on time. Agenda status reports for project meetings are maintained by the K2W Executive Director.
2.1 Portal - Design & Develop		Create design & wireframes for portal for search, learning plans, competencies, & portfolios. <i>[Expected Start 5/1/15; Actual Start 3/2/15; Expected End 9/1/15]</i>	At this writing the wireframes for the Personalized Learning Plans (PLPs) have been documented. The portal and portfolio wireframes have been evaluated. There is a possibility that student portfolios will be integrated with LinkedIn®. All software developed by K2W is subject to revisions and new iterations as the project acquires student and teacher feedback. Project is using open source software to develop portal.
	2.1 Portal - Create wireframes	Documentation of portal design with wireframes & feature set. <i>[Expected Start 5/1/15; Actual Start 3/3/15; Expected End 9/1/15]</i>	Wireframes and software for personalized learning plans created and are documented. Because of hiring delays, and position reconfiguration, in addition to the switch to open source platform, the portal implementation has been pushed into the second year of the grant.
2.2 Portal - Develop software		Develop software for required features. <i>[Expected Start 7/1/15; Actual Start 3/2/15; Expected End 8/1/16]</i>	K2W is hiring a PHP programmer to speed software development. Executive Director has been active in emerging national

Activity	Deliverable	Description and Target Dates	Evaluation Finding
			groups exchanging best practices in software development as well as practices for policy development to support CBE. Staff have evaluated models and vendor solutions.
	2.2 Portal - Create software	Software created & documented. <i>[Expected Start 7/1/15; Actual Start 3/3/15; Expected End 8/1/16]</i>	Underway (see above).
2.3 Portal - Develop database		Create & maintain database structure behind portal. <i>[Expected Start 5/1/15; Actual Start 3/2/15; Expected End 8/1/16]</i>	Executive Director's invited participation in national efforts (C-BEN, IMS Global) on CBE record data standards and Executive Director's review of CEDS standards have benefited LFCC's work. Database administrator is in place and is a key contributor to the K2W informational technology team.
	2.3 Portal - Create database	Documentation of database created for portal. <i>[Expected Start 5/1/15; Actual Start 3/3/15; Expected End 8/1/16]</i>	Underway.
2.4 Portal - Functional mockup		Create working, functional portal at domain http://highered.org <i>[Expected Start 9/1/15; Actual Start 6/1/15; Expected End 9/1/16]</i>	Following procurement of state-approved technology vendor for portal hosting, a web server and database server have been set up and are being used for the website production environment.
2.5 Portal - Live nationally		Make portal live, available nationally. <i>[Expected Start 1/11/16; Actual Start n/a; Expected End 12/1/16]</i>	Not yet started.
	2.5 Portal - Go live!	Documentation that portal is live nationally. <i>[Expected Start 1/11/16; Actual Start n/a; Expected End 12/1/16]</i>	The web and database servers and hosting environment have been procured and are set up and working for when the portal goes live.
3.1 Coach/Navig ator - Services		Career coaches and workforce navigator provide in-place, wrap-around support services <i>[Expected Start 1/1/15; Actual Start 1/5/15; Expected End 9/30/17]</i>	These positions are now staffed and providing services. Coaches were hired in January. One coach attended DOL convening in Washington and participated in workshop on recruiting. Outreach material has been developed and training conducted at the Regional One-Stop. The Workforce Navigator is in place and has met with all ten regional K2W partners and AHIMA.
3.2 Coach/Navig ator - Reports		Participant reports. <i>[Expected Start 7,1/15; Actual Start 4/1/15; Expected End 9/30/17]</i>	Routine reporting for participant activity to the Executive Director. New student intake form was developed to

Activity	Deliverable	Description and Target Dates	Evaluation Finding
			harmonize with information collected by WIOA, ABE, and other college systems.
3.3 Coach/Navigator - Tracking		Tracking and case management updates. <i>[Expected Start 7,1/15; Actual Start 4/1/15; Expected End 9/30/17]</i>	Now that students are being admitted, tracking and case management are underway. Project is developing case management software including review of other TAACCCT grantees. Project has also documented requirements for coaches' dashboard for case management.
	3. Coach/Navigator - Services	Documentation of services provided by career coaches & workforce navigator w/ reports & tracking. <i>[Expected Start 12/1/14; Actual Start 12/1/14; Actual Start 1/5/15; Expected End 8/15/15]</i>	The career coaches have been in place since January 2015 while the workforce navigator position started in July 2015. Admission to the CBE programs was only possible after SACSCOC approval, the result was that there were no credit students to support until September 2015. Career Coaches were engaged prior to this time in contacting prospective students, working through coach certification, training in the existing LFCC advising model.
4.1 Digital content - OERs		Electronic resources available through portal search feature. <i>[Expected Start 7,1/15; Actual Start 1/5/15; Expected End 9/30/17]</i>	Digital Librarian started July 2015 and will build on previous review of OER repositories. Executive Director met with Creative Commons, Merlot, and SkillsCommons staff at June DOL convening. Participation in IMS Global and CEDS review have helped shape efficiencies. The aggregation of OERs is underway as a primary activity by the K2W Digital Librarian.
4.2 Digital content-Assessment		Links to and creation of other online assessments. <i>[Expected Start 7,1/15; Actual Start 3/2/15; Expected End 8/1/16]</i>	Interim assessment process is in place with application, while other instruments are being evaluated. Steps to evaluate the effectiveness of intake process including TABE tests and CBE readiness are underway. The K2W Digital Librarian is in place and working closely with project staff, especially the information technology team and project director to identify resource models for the portal.
4.3 Digital content - Plans		Individualized study plans [incorporated]. <i>[Expected Start 5/1/15; Actual Start 1/5/15; Expected End 12/1/15]</i>	Prototypical individual study plans from other C-BEN colleges have been reviewed. The

Activity	Deliverable	Description and Target Dates	Evaluation Finding
			personalized plan software was created, including the database structure; these are being used now with students and will be used as a model within the portal. Their creation represents a major achievement. Documentation of database structure and requirements for plans are available. Implemented individual study plans in August 2015.
	4. Digital content - OERs	Documentation that OERs are listed for use in the portal, including assessments & plan samples. <i>[Expected Start 7/1/15; Actual Start 1/5/15; Expected End 1/11/16]</i>	Documentation is available that OERs are being used in September 2015 with students, using the Blackboard learning management system.
5.1 Apprenticeships - Listing		Provide/promote list of apprenticeship offerings. <i>[Expected Start 4/16/15; Actual Start 2/2/15; Expected End 9/30/17]</i>	Part-time apprenticeship coordinator started April 2015. Developing partnership with AHIMA is exploring apprenticeships in the medical coding field for implementation at LFCC and, subsequently, nationally. Competency maps in plumbing, HVAC, and electrician training were documented and are included in personalized learning plan software. LFCC is now identifying potential students for recruitment.
5.2 Apprenticeships - Sponsors		Work with sponsors to promote apprenticeships on the portal. <i>[Expected Start 6/1/15; Actual Start 2/2/15; Expected End 9/30/17]</i>	AHIMA is a partner for these sponsorships and received a DOL apprenticeship grant, for which LFCC is a partner. Dialog and brainstorming with regional employers to sponsor apprenticeships is underway and led by the apprenticeship coordinator.
5.3 Apprenticeships - New ones		Work with national association partners on potential new offerings. <i>[Expected Start 2/10/15; Actual Start 2/2/15; Expected End 9/30/17]</i>	The third-party evaluator attended onsite visit at LFCC with AHIMA's Chief Executive Officer to learn about the possibilities for partnership with LFCC. In-person meeting with top AHIMA staff in February in Chicago. This activity appears particularly fruitful (see narrative below).
	5. Apprenticeships	Apprenticeships listed, including sponsored & new offerings. <i>[Expected Start 1/12/15; Actual Start 2/2/15; Expected End 1/11/16]</i>	Underway. Enrollment in apprenticeships anticipated for the second year of grant.

Activity	Deliverable	Description and Target Dates	Evaluation Finding
6.1 ABE/Remedial - Services		Provide adult basic education and contextual remedial/developmental education as needed based on tests. <i>[Expected Start 1/1/15; Actual Start 1/5/15; Expected End 9/30/17]</i>	ABE instructor started in January 2015 and began serving participants in April. A pathway to CBE has been created for ABE students. Review of compensatory avenues to prepare students for CBE including preparation for ABE students to sit for the Virginia Placement Test. Personal learning plans were implemented in April for ABE students. Title IV financial aid cannot be used to provide ABE. Title IV aid may not be used for developmental education/remediation delivered through direct assessment, only through a course-based model (see below). ABE instructor reviewed PluggedInVirginia to ensure interoperability for ABE program design with CBE.
6.2 ABE/Remedial - Reporting		Report referrals to ABE & developmental ed. Track reports on completion & course success. <i>[Expected Start 7/1/15; Actual Start 2/10/15; Expected End 9/30/17]</i>	Flowcharts created to provide a schematic of instruction and support services available for ABE students. ABE and remedial students admitted to CBE study will comprise intervention cohorts for comparison of completion and course success rates according to approved evaluation plan.
	6. ABE/ Remedial Services	Document services provided w/ report referrals & tracking. <i>[Expected Start 6/1/15; Actual Start 1/5/15; Expected End 8/15/15]</i>	ABE students have been served since April using a CBE approach. Reports and tracking are underway
7.1 CBE - LFCC Program/Policy		Create LFCC competency-based education policy and program. <i>[Expected Start 10/20/14; Actual Start 10/20/14; Expected End 12/31/16]</i>	Faculty Direct Assessment Committee has led policy and practice development including integration of Student Learning Outcomes (SLOs) in CBE programs. CBE policies have been drafted and are awaiting approval through LFCC's governance process.
	7.1 CBE - Create program	Documentation of CBE program & policies, w/ faculty committee & work w/ system & state approvals. <i>[Expected Start 10/20/14; Actual Start 10/20/14; Expected End 5/1/15]</i>	Third party evaluator expects that KW2 will develop and finalize instructional, financial aid, and student support written policies for CBE students and operations to incorporate new practices during the next grant year for LFCC. Development of state policies to support CBE will be a longer process and, as

Activity	Deliverable	Description and Target Dates	Evaluation Finding
			noted, in discussing VCCS software support above, is presently a moving target.
7.2 CBE – PLA Policy Development		Review & update LFCC policy on prior learning assessment as it impacts a new CBE program. <i>[Expected Start 10/20/14; Actual Start 10/20/14; Expected End 12/31/16]</i>	The focus has shifted from PLA to count credit hours to a direct assessment model which involves documenting previously attained competencies and mapping course experiences and assessments to verify attainment. This process is complete. A new feature in the learning plan software is under development that maps competencies to credit hour equivalents. Executive Director has meet with faculty committee to explore direct and indirect assessment of competencies (through exams, CLEP, & course equivalencies).
7.3 CBE - Accreditation		Apply to SACSCOC on regional accreditation to gain approval of CBE offerings. <i>[Expected Start 10/18/14; Actual Start 10/1/14; Expected End 12/31/16]</i>	Application and approval received from SACSCOC. LFCC now will need to address the need in the approval letter for further documents and plan for an expected SACSCOC site visit (see narrative below).
	7.3 CBE - Accreditation	Documentation of SACSCOC regional accreditation approval for proposed CBE programs. <i>[Expected Start 10/18/14; Actual Start 10/1/14; Expected End 7/1/15]</i>	Receipt of this approval in July 2015 triggers all other deliverables and activities. LFCC is the first member of SACSCOC to receive approval for direct assessment.
7.4 CBE - State/System Approval		Work with SCHEV and VCCS on state and system approval of CBE offerings. <i>[Expected Start 12/8/14; Actual Start 10/1/14; Expected End 12/31/16]</i>	LFCC has interchanged with VCCS staff about tactical and policy issues around CBE. Executive Director has worked with VCCS staff to submit SARA application for CBE, permitting the College to offer CBE to residents of other states. Initial approval and conversations about subsequent software modifications have occurred. ERP integration will continue to be an issue (see narrative below).
7.5 CBE - Seek Title IV Aid		Seek Department of Education approval to offer Title IV financial aid for direct assessment of competencies. <i>[Expected Start 7/15/15; Actual Start 10/1/14; Expected End 12/31/16]</i>	This activity was not possible to pursue without SACSCOC approval. LFCC submitted proposal documents and Program Participation Agreement to USDE in August 2015 and awaiting approval.

Activity	Deliverable	Description and Target Dates	Evaluation Finding
	7.5 CBE - Title 4 Aid Approval	Documentation of U.S. Dept. of Education approval of Title IV financial aid for CBE programs. <i>[Expected Start 7/15/15; Actual Start 10/1/14; Expected End 12/31/15]</i>	LFCC has made application to the US Department of Education Office of Student Financial Aid. Standing to make this application was contingent on successful accreditation approval
7.6 CBE - Map SOC		Document competency maps tied to targeted industry occupations. <i>[Expected Start 7/1/15; Actual Start 10/1/14; Expected End 9/30/17]</i>	Faculty Direct Assessment Committee has finalized competency maps for 7 career and technical program areas and documented assessments, rubrics, and artifacts during its work in the summer of 2015.
7.7 CBE - Credentials		Provide links in portal to credential providers, including free and low cost training resources. <i>[Expected Start 7/1/15; Actual Start n/a; Expected End 9/30/17]</i>	The project has explored badge and competency systems including Mozilla. The contract with AHIMA is being expanded to include a job analysis that will be used to create a new national curriculum in health information technology and drive the creation of a new national exam/credential as well as provide a competency framework for curriculum development."
7.8 CBE - New credentials		Create additional credentials and/or competency badges as needed based on the results of this review. <i>[Expected Start 2/10/15; Actual Start 10/1/14; Expected End 9/30/17]</i>	K2W received an extra \$750,000 above the cap to create a new national credential using CBE through the use of the portal. A Comprehensive Plan was submitted to DOL. This was approved in August, a prerequisite to dialogue with AHIMA about a new, national credential related to information technology in the HIM field.
	7.8 CBE - New credential	Documentation of new, nationally recognized credential(s) created. <i>[Expected Start 2/10/15; Actual Start 10/1/14; Expected End 9/30/17]</i>	Extensive discussion with AHIMA have been productive and it appears at this juncture that a working partnership between LFCC and AHIMA will result in a new national credential framework that will integrate information technology with health information management. This will require a new national job analysis (see narrative below).
8.1 Evaluation - Procurement		Procure third-party evaluator. <i>[Expected Start 10/13/14; Actual Start 10/1/14; Expected End 12/31/14; Actual End 12/19/14]</i>	The third-party, independent evaluator was selected and procured in December 2014. Evaluation design accepted by DOL in August 2015.

Activity	Deliverable	Description and Target Dates	Evaluation Finding
8.2 Evaluation - Reporting		Prepare annual and quarterly reports as required by SOW & DOL, assist with national evaluation. <i>[Expected Start 2/1/15; Actual Start 12/19/14; Expected End 9/30/18]</i>	Three quarterly project reports have been prepared and submitted by Executive Director. The first annual report by the Executive Director is due November 14, 2015.
8.3 Evaluation- Improve outcome		Documentation of interim steps to improve outcomes and ensure project success. <i>[Expected Start 2/1/15; Actual Start 12/19/14; Expected End 9/30/18]</i>	Project logic model developed (Appendix A). In addition to review of project files and meeting with key personnel, third-party evaluator has reviewed all reports, accreditation request, and Title IV correspondence. Project participant outcomes data not yet available because of enrollment cycle. Evaluation plan approved and serves as a guide for collecting and analyzing outcome data. Assembling of cohorts to begin in fall 2015 and forward.
8.4 Evaluation - Improve CBE		Documentation of interim steps to improve CBE options in K2W and ensure project success. <i>[Expected Start 2/1/15; Actual Start 12/19/14; Expected End 9/30/18]</i>	The report in conjunction with the project's quarterly reports to DoL document the steps undertaken by K2W to improve CBE practice at LFCC as well as nationally. Collectively, these reports serve as the foundation for formative evaluation and action.
	8. Evaluation	Documentation of third-party, independent evaluation conducted. <i>[Expected Start 1/5/15; Actual Start 10/14/15; Expected End 9/30/18]</i>	The present annual evaluation report is supplemented by the DoL approved third-party evaluation report for K2W.

MILESTONES AND ACCOMPLISHMENTS

This section of the evaluation report provides more detail about the complexities of the Knowledge to Work project and supplements the previous section.

Accreditation Approval

LFCC's biggest accomplishment—on which everything else hinges—is achievement of accreditation status for direct assessment. In July 2015, nine months after receipt of LFCC's TAACCCT grant, the Southern Association of Colleges and Schools Council on Colleges (SACSCOC) approved LFCC's request to offer competency-based direct assessment programs, marking LFCC as the first college in the SACS region with this permission. Without SACSCOC approval, the entire

project could not move forward. Approval allowed the College to admit students to one or more direct assessment programs and provided LFCC with standing to file an application with the US Department of Education, Office of Federal Student Aid, to permit LFCC students participating in direct assessment programs to receive federal student financial aid.

Program Choices

By January 2015, LFCC identified seven initial career and technical programs to create direct CBE direct assessment certificates and degrees:

AAS Degrees

- Health Information Management

- Information Systems Technology

Certificate Programs

- Office Systems Assistant

Career Studies Certificates

- Cyber Security

- Hospital Facility Coding

- Information Process Technician

- Information Systems Technology, Network Engineering Specialization

The College will also continue to offer these programs in traditional credit hour formats. The two certificates are differentiated by their credit hour length and whether general education is required. Although direct assessment is not based on credit hours the touchstone equivalents provide a useful way of conceptualizing the activity required for students to complete K2W direct assessment certificates. The Career Studies Certificate is defined not less than 9 nor more than 29 semester credit hours and does not include general education. Certificate programs consists of a minimum of 30 and a maximum of 59 semester credit hours and a minimum of fifteen percent (15%) of a certificate's credit hour requirement is in general education, inclusive of one (1) three (3) credit hour English class.³ LFCC has identified faculty who teach general education classes who are interested in converting their courses to a direct assessment CBE model. In order to meet SACSCOC accrediting standards, general education for the associate's degree must still be evaluated with reference to a minimum 15 credit hour equivalent, coming from specific general education course content. This is a mixed metaphor for direct assessment, but in the spirit of CBE, specific general education courses are being converted individually to a direct assessment CBE approach that incorporates OERs and allows for self-paced learning.

LFCC will also create CBE alternatives for other programs identified in the TAACCCT grant proposal. Most institutions begin direct assessment CBE initiatives with a single program and currently there are only seven institutions with both accreditation and Title IV approval. It was necessary therefore to start with a

³ Virginia Community College System. Section 5 Educational Programs. Retrieved September 22, 2015 at <http://www.vccs.edu/wp-content/uploads/2013/07/sectn5.pdf>

manageable suite of TAACCCT specified programs. Additional programs related to advanced manufacturing, such as supervision and electrical technician, are planned, but must wait until the logistics and approvals are worked out for the seven new ones to be resolved. LFCC will identify and track outcomes cohorts entering those programs and compare student progress to traditional (non-CBE) options. Since the TAACCCT approach encompasses the entire continuum of learning, from adult education to degree competencies, the definition of the cohorts is critical and is being planned carefully. The cohort definitions will include those students whose competency work in personalized learning plans begins with non-credit adult basic education (ABE) and with apprenticeships.

National Competency Frameworks

Competency frameworks provide a mechanism for students to be assessed at their current level of attainment and to see, unambiguously, which competencies remain to be mastered to move up in a given career and to have their skills and learning recognized as the basis for lateral movement. It is one thing for a higher education institution to create a competency based framework and another to rely on a well-researched national framework that meets concerns about the validity and reliability of competencies. National competency frameworks carry immediate advantages for students and employers, especially when programs are developed with the competencies within national frameworks. LFCC's CBE programs incorporate the following:

Health Information Management. American Health Information Management Association (AHIMA)⁴

Information Systems Technology. Association for Computing Machinery-Committee for Computing Education in Community Colleges⁵

Administrative Support Technology. International Association of Administrative Professionals⁶

Trades. National Center for Construction Education and Research⁷

Assessment Development

Faculty in all CBE programs completed their selection of competency based frameworks during the spring of 2015 and selected rubrics, criteria, and assessments during the summer. Competency statements and assessment are two sides of the same coin. Unambiguous competencies aid the learner and faculty alike to understand where and when students can advance through the curriculum en route to certificate or degree completion. LFCC staff anticipate that, while competencies are in place with assessments, there needs to be flexibility in meeting

⁴ See, for example: <http://www.ahimafoundation.org/education/curricula.aspx>

⁵ See, for example: <http://www.acm.org/education>

⁶ See, for example: <http://www.iaap-hq.org/home>

⁷ See, for example: <http://www.nccer.org/>

desired levels of competency performance. Therefore, competencies and assessments will continue to be fine tuned after program implementation. In fact, once accreditation is received from the Commission on Accreditation for Health Informatics and Information Management Education (CAHIM) for the two HIM programs, the competencies will change to the newly required updated framework established by AHIMA. Since adjunct faculty teach some of the courses in the IT programs, full-time faculty on the direct assessment committee will continue to evaluate the competencies mastered in these course equivalents and map them into the national framework as needed.

Interface with VCCS

VCCS has been supportive of the long range goals of LFCC's direct assessment initiative. Knowledge to Work and LFCC staff have worked with Virginia Community College System (VCCS) both on the policy and technical fronts to prepare for CBE and for direct assessment. PeopleSoft® is the ERP (Enterprise Resource Planning) software operating throughout the Virginia community colleges system. Two versions are currently operational, one for non-credit and one based on credit hours. The software as installed lacks the utility at the present time to track and record competency attainment. Even though accelerated national interest in competencies is triggering discussions about how student information and business systems can accommodate changes necessitated by CBE models, there are no standardized solutions yet available for the PeopleSoft platform. Several workarounds have been proposed and these are being evaluated. Alterations to legacy software systems are both time consuming and expensive and although two other Virginia community colleges (Northern Virginia Community College and Danville Community College) are implementing variants of competency-based education under the U.S. Department of Education's Experimental Sites Initiative, quick changes to PeopleSoft are not imminent within VCCS. A vendor solution may be forthcoming, but the cost of acquiring new modules for CBE from PeopleSoft is not yet known.

The TAACCCT grant allows LFCC to create shadow systems to supplement PeopleSoft for documenting personalized learning plans, competencies, and course credit equivalencies. This interim solution to accommodate CBE and direct assessment at LFCC involves local workarounds. Separate credit hour based course sections for variable credit within each program area have been created to enroll CBE students who, in turn, will pursue competency attainment as specified within their personalized learning plans.

Existing VCCS policies are based on the traditional credit hour and consequently may not provide fully for competency based delivery and direct assessment. Continuing dialog about the pros and cons of a subscription model in which students would pay a flat fee in exchange for enrolling in non-credit hour based CBE programs is currently under discussion with VCCS. Ideas for a fee-for-service approach have also been discussed and presented to internal and VCCS leadership. These and other options need much further study before they can be

implemented even in an experimental fashion. All of which also requires working closely with SACSCOC and the U.S. Department of Education.

Pending Federal Financial Aid Approval

A majority of program models that provide students a means to acquire knowledge and skills to demonstrate competency based achievement are still based on credit hour equivalents.⁸ The release of federal student financial aid credit hour based programs has long been accommodated under federal rules. Direct assessment programs, however, do not rely on credit hour equivalents and are subject to detailed review. In early August 2015, after required approval for direct assessment by SACSCOC, LFCC submitted application to the U.S. Department of Education to award federal student financial aid (Title IV) for students enrolled in its seven CBE programs. Although approval is anticipated, it has not been conferred at this point.

Providing remediation through direct assessment utilizing Title IV funds is not permissible. However, remedial coursework offered in credit or clock hours in conjunction with a direct assessment program is eligible. The result is that students entering one of the seven SACSCOC approved direct assessment programs must either complete all remediation through traditional, credit hour classes prior to enrollment or complete required remediation classes during their time in the CBE program.

DETAILED IMPLEMENTATION ANALYSIS, YEAR ONE

The Solicitation for Grant Applications establishes specific evaluation questions guide the implementation phase of all TAACCCT grants. These questions are supplemented by questions generated by the third-party evaluator appearing in the next section.

Selection of Program Curriculum

Programs were chosen for adaptation to CBE based partly on regional labor market needs. To be converted to CBE, programs needed to exist in traditional online and classroom delivery first, to ensure the academy integrity of the curriculum and the credit hour equivalencies. These also are industries targeted nationally by the Obama Administration as having direct pathways from training and education to jobs that lead to in-demand, mid- to high-skill jobs with family-supporting wages. In addition to the seven career and technical programs selected, LFCC added ABE and trades apprenticeships as part of the continuum of stacked and latticed credentials.

⁸ See, for example, this Dear Colleague Letter from the U.S. Department of Education retrieved September 22, 2015 at <http://ifap.ed.gov/dpcletters/GEN1310.html>

Program Designs and Grant Funds

Each career and technical program identified above now has a CBE counterpart paid for by TAACCCT funds. Under the sponsorship of LFCC's Faculty Direct Assessment Committee, all seven certificate or degree programs are mapped to national competency frameworks to include specific competencies. Now that this work is accomplished, it is likely that the curriculum for the traditional, non-CBE programs will also change. Grant funds therefore have expanded LFCC's ability to meet workforce needs regionally and nationally. These programs also have been improved with the introduction of national frameworks. CBE alternatives will save participants time and money by providing the opportunity to accelerate competency attainment en route to a badge, certificate, or degree.

Delivery Methods

While there is no set delivery method for direct assessment, LFCC intends to provide multiple avenues for CBE students to attain program competencies and to document those avenues through the development of personalized learning plans. Avenues within personal learning plans can include self-paced study and mastery of competencies mapped to OERs and provided in the learning management system Blackboard. Use of external digital learning objects is promoted, as long as they fully incorporate the competencies laid out in the personalized learning plan. The competencies found in these avenues are stated *a priori* and rigorously assessed by faculty in the discipline. Most importantly, they are unambiguously stated in the student's personalized learning plan *prior* to the student engaging with those avenues. Personalized learning plans are expected to be modified periodically as faculty and K2W staff learn more about what works and as new OERs are identified as potential vehicles for competency attainment.

Assessment of Participant Abilities, Skills, and Interests

LFCC has developed an applicant intake assessment instrument specifically for K2W. Elements from this assessment are used to guide students' choice of CBE while other elements will be incorporated in the cohort tracking scheme as established by the approved evaluation plan. Prior to participation in LFCC's CBE programs students are interviewed by LFCC's Career Coaches to determine whether their motivation is a match for the demands of a competency-based program. It is clear that CBE student must be dedicated and self-motivated to engage in personalized learning. Prospective students are also provided the entire range of competencies for the program they are enrolling as part of the intake process. Prospective students also receive career guidance through the career coaches including the likely outcomes of the CBE program for which they enroll.

Other intake forms and processes are in place for adult education and for providing wrap-around support services. Additional data on motivational items will be collected. These and other data are used in combination with data from LFCC's student information system to explore and document which types of students succeed in direct assessment CBE.

Questions in the online CBE application require a written response, thereby allowing coaches and ABE personnel to evaluate prospective students' writing aptitude. CBE students referred to remedial education through screening may be enrolled in face-to-face remedial classes. Others may be served through OERs. LFCC is still developing its assessment methodology for screening CBE applicants for prerequisite competencies. As part of this effort, K2W is mapping a commercially-available non-cognitive assessment instrument, SmarterMeasure®, to the Virginia Placement Test for possible inclusion as a pre-admission requirement.

Partner Contributions

LFCC's direct assessment programs appeal to the workforce and to grant partners such as Valley Health and Fauquier Hospital for health information management and school systems for administrative support technology. Outreach by the Workforce Navigator to regional employers has helped them understand how a CBE approach can help them recruit and maintain a skilled workforce. As the curriculum is rolled out, LFCC intends to seek employer feedback about the perceived quality of CBE through the third party evaluation, the Workforce Navigator, faculty, and career coaches.

The Workforce Navigator has visited local employers to present the CBE program and to recruit students. The Navigator works on the alignment of job requirements with competencies. She also helps employers understand the role of competencies in human resource planning and staff development. The Navigator also engages in student recruitment along with the Career Coaches. The Career Coaches have visited the regional one-stop shops such as Valley Workforce.

The Virginia Department of Labor and Industry has been helpful in leveraging its regional presence to brainstorm potential collaborations for K2W. VDLI has also expressed its support for LFCC's inclusion of adult basic education within K2W. VDLI sees competency-based education as an avenue break down traditional workforce preparation silos. LFCC's VDLI liaison, Anna Wright-Rice, is an active participant on the grant's leadership team and has explored ways in which Knowledge to Work and its CBE approach can potentially serve employees of several businesses that are closing in LFCC's service area.

LFCC and its partners understand that the dynamics of program sustainability need to be foremost among current project goals. Part of this stability comes from full-time equivalent (FTE) funding from the state based on credit hours. As LFCC establishes a track record of producing skilled workforce graduates through CBE and direct assessment and as the program expands regionally and nationally, and as enrollment increases, it is thought that tuition revenue will provide sufficient resources for continuation. The portal when operational will also contribute to sustainability because of its national reach.

The developing partnership with the American Health Information Management Association appears particularly promising. In an onsite meeting held

in mid-September plans were developed for a new national credential that would merge competencies from information technology and health coding fields. This yet unnamed credential would be based on CBE curricula leading up to the Certified Coding Specialist (CCS) and Certified Healthcare Technology Specialist (CHTS) exams as offered by AHIMA. LFCC is working closely with AHIMA over the next several months to prepare a statement of work and budget modification in order to conduct a national job analysis for the new certification credential. A national dialogue will then be facilitated about how these results can drive a new type of IT approach for HIM CBE curriculum. AHIMA made the decision several years ago that all of its programs are competency-based. Eighteen international universities have adopted AHIMA's international CBE curriculum since it was released on June 30, 2015.

At this juncture, LFCC's partner base appears supportive of Knowledge to Work. Continued efforts by K2W Career Coaches, the Workforce Navigator, other project staff, and LFCC senior administrators to draw existing partners tighter while opening the door for new partners is critical work. It is the evaluator's experience that potential partners need to understand how and when they can contribute to new efforts, meaning that K2W will need to be nimble in identifying opportunities for them to participate productively.

A Comprehensive Plan was submitted by LFCC as part of the DOL's compliance review for the grant. This details the role of the external partners in promoting a new type of national credential/competency framework. Through its work with AHIMA, LFCC has identified a series of credentials and competency maps in information technology for health information management and these will be the focus of work in years two and three of grant activity. A significant focus of the portal is on the dissemination of these credentials and framework, as well as promoting the IT in CBE curriculum to other community colleges.

ADDITIONAL IMPLEMENTATION ANALYSIS

In recognition of the complexity of LFCC's implementation of direct assessment and development of a web portal to provide personal learning, two goals that separate LFCC's TAACCCT grant from other TAACCCT grants, the third party evaluator posed additional implementation questions that appear below. The intent is that LFCC, as well as other colleges and organizations, might learn about strong practices in implementing direct assessment.

Changes in LFCC's Business Model

Personalized learning requires a different mindset than does the delivery of traditional higher education. It holds the potential of saving students time and money while providing an opportunity to pursue a credential on terms that simultaneously satisfy perceptions about lack of rigor and provide students with flexibility. It provides faculty with new ways of creating student learning

opportunities while moving their role to that of a facilitator. Ultimately, it places the focus on learning outcomes and not simply on enrollment.

Beyond the academic delivery of direct assessment and personalized learning is the necessity for changes in business and support models. As noted above the mechanics of transcribing credit and generating bills for CBE are challenges everywhere and are the focus of several workgroups hosted by Competency-Based Education Network (C-BEN) and by IMS. Efforts by these groups are not yet mature, meaning that LFCC will need to continue to pursue workarounds. These business model practices may change as technology progress but at the present time LFCC's workarounds include:

- *Registering CBE students.* LFCC has enrolled students in a special version of the courses they would likely enter in the traditional program. There are no classes per se. Rather, students inside these CBE sections will pursue their personalized learning plans with faculty coaching.
- *Transcribing credit.* LFCC will generate two transcripts. The first is a traditional transcript, the result of cross-walking direct assessment competency attainment back to traditional courses. LFCC will generate a second, companion CBE transcript for students that will list the competencies students have attained and their level of performance. See below for further discussion.
- *Billing CBE students.* Students will be billed a credit hour equivalent for their participation in direct assessment learning. LFCC determines credit hour equivalent based on the the student's level of work based on the federal definition of 1 credit hour = 1 hour of lecture + 2 hours of homework per week for fifteen week or 45 hours of student effort per credit.
- *Financial aid.* Federal approval to award Title IV aid for LFCC's direct assessment programs has not been conferred as of this writing. This results at present in CBE students or employers paying all tuition and other charges attendant to their enrollment but this could change for eligible students when approval is conferred. LFCC will need to incorporate CBE student financial need (FAFSA) information within its system and otherwise accommodate CBE students in the same way other students are accommodated.
- *Learning management systems.* In delivering OERs for program competencies, LFCC is leveraging a variety of tools. One of these is the learning management system Blackboard. Blackboard is the current vehicle for delivery of OER content, along with assessments, rubrics, and artifact storage for the CBE programs offered by the college. OERs also are served through portal with personalized learning plans tied to competencies. K2W is evaluating the success of Blackboard in supporting CBE may install additional software to meet direct assessment needs

Transcripts

Transcribing academic credit for direct assessment is a common and weighty issue among colleges and universities seeking to implement CBE. The Executive Director of K2W has been a member of a workgroup hosted by IMS Global seeking to create an Extended Transcript (ET) prototype to support competency-based programs.⁹ IMS, working in collaboration with the American Association of Collegiate Registrars and Admissions Officers (AACRAO) and the Competency-Based Education Network, is leading the effort to create the "ET."

At this writing it is not known when the ET prototype will be made available, but it is a topic at the Educause meeting in late October 2015. At this writing, LFCC and VCCS are working together to arrive at a transcribing strategy for course equivalent and extended transcript competencies. Recognizing that at least some CBE participants will want to transfer to other institutions or training organizations, this is a key area for the college to help provide leadership. Regardless of the approach, competencies will be documented on transcripts. Currently, this may be done with the shadow system built with this TAACCCT funding.

Faculty Buy-In

Reports from national sources that faculty may be resistant to competency-based education based on the worry that programs will suffer in quality, particularly programs where faculty serve as learning facilitators rather than instructors.¹⁰ The third-party evaluator has observed no faculty resistance to CBE at LFCC at this juncture. It may emerge after programs are fully implemented and perceptions that CBE enrollments are students away from traditional programs surface. The third-party evaluator has noted no systemic barriers currently to future participation by other career and technical programs although issues of faculty workload and compensation which are still to be determined may impact future buy-in.

Program Rigor

As is the case in all new innovations, LFCC needs to ensure prospective students, external stakeholders, and the public that its CBE programs are rigorous. Because they rely on assessment of student performance, CBE programs are inherently rigorous. It appears that regional employers immediately understand the utility of CBE in locating qualified candidates. Efforts that educate the public, faculty, and students about how CBE can result in additional rigor based on learner performance to meet pre-defined competencies connected to workforce needs may help to persuade those individual who harbor doubts.

⁹ See, for example: <http://www.imsglobal.org/cbe/index.html> Retrieved September 22, 2015

¹⁰ See, for example: Center for American Progress (2013, November). Meeting Students Where They Are: Profiles of Students in Competency-Based Degree Programs. Retrieved September 23, 2014 at <https://www.americanprogress.org/wp-content/uploads/2013/11/CAEL-student-report-corrected.pdf>

Enrollment Management Practices

Student recruitment began in earnest when the College received SACSCOC approval for its direct assessment programs. In other words, it was not possible to admit students to the K2W program until July 2015. A corresponding decision was made to move the start date for the first K2W enrollment period until mid-September 2015. At this writing, students are being recruited for all seven credit equivalent programs, ABE, and apprenticeships. It is anticipated that more students, including veterans, recent high school graduates, and others will enroll during the current and future enrollment periods.

The College has created a [website](#) for Knowledge to Work that provides an overview of the program and current programs. This site links to the [LFCC website](#) and provides information about how prospective students can learn more about the College and apply. K2W has also published and distributed a brochure that discusses the accelerated, employer focused, and personalized nature of CBE including its links to high wage, high growth programs.

Scale-up and expanding enrollment

Local and regional enrollments likely will be supplemented once the project's web portal is operational. Because the web portal will serve as an access point for curated OERs it is anticipated that it will attract considerable notice among colleges and workforce entities especially those with programs and training in the health care, information technology, advanced technology, and administrative support sector. The developing partnership with AHIMA will also result in enrollment from students across the United States as well as internationally. Last, lack of federal approval for awarding Title IV aid is also a limiting factor in enrollments at this writing.

Career Planning

Career Coaches are providing career counseling for prospective CBE students. In addition to screening students for a fit with CBE programs. K2W's local employer and community partnerships allow more up-to-date knowledge about local and regional employment trends than would otherwise be found from secondary sources. Using the latest employment outlook information is important to prospective students decision-making about whether to join the program. Similarly, program faculty are acquainted with local and regional labor markets and will work with students as those markets change to understand those dynamics, including how program competencies are aligned to job requirements. AHIMA's research effort will also be used to provide students with additional career planning information. The Workforce Navigator will assist in identifying specific program-related job openings in the region.

Student Characteristics

At this writing students are just being admitted to CBE direct assessment programs. In addition to the standard LFCC admissions form, K2W intake forms collect additional demographic data not found on the VCCS's standard application. As part of the evaluation, intellectual and motivational characteristics that contribute to their decisions to participate and subsequent success will be collected where possible. The third party evaluation plan specifies the combination of student data characteristics with progression data to differentiate successful CBE students from others. It is anticipated that this analysis will begin in early 2016.

Analysis of Portal Usage

The K2W portal is not yet operational and will be rolled out in stages. However, when it comes to fruition, will analyze a variety of analytics and usage characteristics, such as the location of visitors, pages visited, and the frequency of use of OERs and other learning materials. Project staff are currently using tools such as Google Analytics to produce this information about the website. This informs web design and marketing the program.

Expansion of LFCC's Capacity to Develop CBE

The work at LFCC to establish direct assessment is visible to the K2W Leadership Team, the Faculty Direct Assessment Committee, and K2W staff. The commitment from the College's leadership has translated into the delivery of CBE in a relatively short, one-year timeframe since the TAACCT grant was received. It is not too early to talk about scaling this innovation at the College even though CBE students have only been enrolled for a week or more at this writing. At LFCC's fall invocation, several faculty expressed interest in converting other programs to a CBE approach and to mapping their general education courses to competencies. CBE is one of the ideas proposed for the college's required SACSCOC Quality Enhancement Plan. As of this writing, faculty in English, math, humanities, and anatomy and physiology have expressed interest in converting their courses to CBE. Program leads in supervision, business, and early child development have also expressed interest in using this approach. Future LFCC program development will build upon the extensive review and approval required by SACSCOC for accreditation and the U.S. Department of Education for Title IV financial aid before proceeding.

Articulation/Transfer

Articulation will be an increasingly large issue as graduates and former students seek transfer opportunities in other 2-year and 4-year institutions. CBE is not fully developed on a national scale and registrars are typically accustomed to working with credit hours for transfer and not competencies. In the absence of national direction, many colleges are likely to accept CBE for general electives on

transfer and not as part of their existing degree or certificate programs.¹¹ There is little besides advocacy in national networks that LFCC can do to improve the acceptance of transfer credits by other institutions in the absence of national guidelines.

OUTCOMES/IMPACT ANALYSIS

Data Sources

Data to populate cohort progress are not available at the time of this report since students have only begun to enroll in CBE programs in mid-September 2015. Implementation evaluation has been gathered to date through review of LFCC's original TAACCCT proposal and subsequent amendments, program documentation and deliverables, interviews of LFCC administrators, KW2 program staff and faculty group. Data gathering subsequent to this first annual evaluation report will include employers and industry stakeholder interviews, student focus groups, and an annual longitudinal student questionnaire. At this writing, September 2015, students have only begun to enroll in the College's CBE programs. Members of initial program cohorts will be contacted in early 2016 to participate in focus groups, interviews, and surveys to gather formal information about the implementation phase of the grant as well as to identify factors that hinder or accelerate outcomes.

Cohort Analysis

The third party evaluation will document the quantitative outcomes of LFCC's CBE programs compared to carefully selected comparison groups to establish, where reasonable, causal inferences when student data become available. Cohort analysis will be used to analyze student rates of progress through their programs, certificate attainment, entry into employment, and retention in employment. The evaluation will seek to match the demographic profile of successful students with successful outcomes. Course completion rates will not be calculated given that direct assessment of learning CBE students has no course analog. Qualitative techniques also will be employed including interviews of program staff and faculty, interviews of employers and industry stakeholders, and focus groups with students. Forthcoming student enrollments will permit the evaluation to document those changes in outcome measures prescribed in the SGA:

1. Total unique participants served/enrolled;
2. Total number of participants who have completed a TAACCCT-funded program;
3. Total number of participants still retained in their program of study or another TAACCCT-funded program;
4. Total number of participants completing credit hours;

¹¹ Reluctance to transfer CBE units is not exclusively an issue for 4-year institutions. Community colleges also lack universal mechanisms to articulate CBE credit. See for example a procedure in force at a Minnesota community college: Retrieved September 23, 2015 at <http://www.anokaramsey.edu/about/Information/Policies/Chapter3/3B2-11.aspx>

5. Total number of participants earning credentials;
6. Total number of participants enrolled in further education after grant-funded program of study completion;
7. Total number of participants employed after grant-funded program of study completion (non-incumbent workers only);
8. Total number of participants retained in employment after program of study completion (non-incumbent workers only); and
9. Total number of those participants employed at enrollment (for purposes of this reporting, "Incumbent Workers") who receive a wage increase post-enrollment.

Evaluation Plan Feedback

Feedback received from a Department of Labor review of the project's third party Detailed Evaluation Plans suggests that the evaluation "more clearly outline the proposed comparison group, including their similarity to the treatment group, and what variables and data sources will be used to match the two groups." As the Detailed Evaluation Plan (DEP) noted, the constitution of the treatment group (students entering CBE) is not fully known, and will not be fully known until after the recent enrollment period, making premature any effort to precisely match the treatment group to a comparison group consisting of current students enrolled at at LFCC or elsewhere. The DEP also noted the likelihood of small cohort sizes in treatment groups and reported the current size of corresponding face-to-face or traditional programs. Simply put, small cell sizes limit the generalizability of quantitative analysis.

As stated in the DEP, "a critical issue in this evaluation is comparability, i.e., ensuring that comparable groups are formulated so that accurate estimation of the effect of CBE learning can be made." The evaluator will work with LFCC's institutional research office to identify comparison groups for the seven CBE programs and other entering cohorts using CBE based on the term in which their participants complete their personalized learning plan and begin their study. Given the anticipated small number of potential CBE participants and non-participants enrolled in several of the seven programs, it is not feasible to randomly select a comparison group from the non-participant pool. The Detailed Evaluation Plan contained seven specific steps for making valid comparisons on pages 13 and 14:

1. The number of CBE participants in each program and collectively will be determined at the end of each term.
2. A random sample will be drawn from all career and technical students enrolled in corresponding terms to equal the absolute number of CBE participants in order to populate the comparison group.
3. Where appropriate—as mentioned immediately above—comparison groups also will be drawn on a program-by-program basis.
4. Intervention and comparison cohorts will be drawn for fall, spring, and summer terms.
5. The evaluator will subsequently work with LFCC personnel to identify covariates among the comparison and intervention groups.

6. The evaluator then will perform a Propensity Score Analysis that, in turn, will be used to remove covariate bias across both groups. PSA will provide a more unbiased picture of the effect of CBE.

Students will be included in the appropriate intervention (treatment) group when they complete their personalized learning plan in conjunction with program faculty. Students who complete this critical intake step will then begin their guided learning in their CBE program and their outcomes will be matched to the comparison group.

INTEGRATIVE ANALYSIS AND CONCLUSIONS

Areas of Distinction

As a cutting edge initiative, Knowledge to Work is likely to continue to experience growing pains. What is conceptually easy oftentimes runs into the reality of bureaucratic inertia, policies and procedures that require modification, incomplete technology, and alternations to longstanding business models. As noted above, LFCC understands these challenges from the perspective of launching what appears to be the first community college direct assessment program in the nation. While implementation has not been without issues at LFCC, a larger part has been rewarding and forward-looking.

What happens during the next two years will more fully tell Knowledge to Work's story. That is not to say that all challenges identified in this report will have been met. In fact, it is likely that developments in technology and external bureaucratic processes may still be unresolved after TAACCCT funds have been expended. Regardless of continued workarounds and finding creative ways to offer CBE in a world dominated by credit hours, LFCC should keep building toward the best possible delivery of direct assessment.

In the third party evaluators opinion LFCC has distinguished itself during the first year of TAACCCT funding in these areas:

(1) seeking and receiving the first approval by SACSCOC to offer direct assessment of competencies. No other higher education institutions in the 11 state SACSCOC region has this permission;

(2) development of seven CBE degrees and certificates available through direct assessment;

(3) creation of plans for a new type of educational search portal that will link OERs with program competencies and personalized learning plans. This portal is being built with open source software and will contain links to OERs that have been curated by K2W staff;

(4) application for Title IV student financial aid eligibility for direct assessment programs. Lack of approval has impacted initial enrollments from low-income students although approval is expected soon. As of this writing, only seven

other institutions in the United States have received approval for direct assessment of CBE. LFCC is the first community college to be so recognized;

(5) enthusiastic faculty buy-in from the Faculty Direct Assessment Committee. Given the success of these efforts, this buy-in may sweep wider though LFCC resulting in CBE alternatives across the entire institution;

(6) solid and pervasive support for Knowledge to Work from the President and her Cabinet who have persevered through initial obstacles in the first year;

(7) visionary leadership from the program's Executive Director who has spotted many networking opportunities to move the program forward; and

(8) participation in national networks including C-BEN, the CBE4CC network, and IMS as well as statewide advocacy in Virginia. LFCC has learned much from these exchanges and, in turn, the field has learned from LFCC's growing pains.

Opportunities for Progress

Although conferred with permission to offer direct assessment, Knowledge to Work must still report to SACSCOC its progress in these areas:

- Details of faculty workload.
- A clarification of how academic policies will be changed to address aspects that are specific to the Competency Based Education programs (for example: Satisfactory Academic Progress)
- An organizational chart with reporting structures for all personnel involved in Competency Based Education programs
- Examples of promotional materials that will provide clear information to prospective students about the program.

Issues of faculty workload are ubiquitous among CBE programs and there is no single solution. Prorating compensation and load according to credit hours taught, the time honored method for making such calculations, is not possible in a direct assessment model. Additionally, there are no standard models for compensating faculty according to the number of CBE students they mentor although some colleges are experimenting with setting a threshold number.

Two primary avenues are before LFCC, although other avenues may be considered: (1) base faculty compensation and load on the credit hour equivalents required to collect tuition and fees in the traditional manner; or (2) set a reasonable compensation amount based on the expected interaction with CBE students. Whichever decision is made by LFCC, it is likely to need adjustment as more is known about the experience of other institutions engaged in direct assessment. Some guidance now exists from the private sector. Davenport University, for example, permits students entry any time during a 15-week period while keeping all instructional modules open during the term. Faculty pay is based on whether or not any students enrolled during the first 13 weeks as a "look back" approach so that faculty are not paid for no enrollments and so that faculty can be paid based upon ranges in enrollments.

Other academic CBE policies similarly will require knowledge of how other colleges are equating time to competencies and LFCC's forthcoming experiences, as in the case of satisfactory academic progress. Other academic policies including residency requirements for degree attainment will also need to accommodate those CBE students who will not set foot on campus. There is much work to be done in this regard and although there is no timeframe for when these policies need to be turned over to SACSCOC and no immediate local experience from which to draw, it would behoove K2W to begin formal policy and procedure modification now with the thought that these documents could be revised as future circumstances dictate.

The portal now starting development is an important part of this effort as a way to supplement the efforts to establish direct assessment. It is not, however, the primarily task before Knowledge to Work. The testing and cataloging of OERs was a crucial accomplishment of the first year which students and faculty depended on them to create personalized learning plans and use the learning management system. A shadow system has been built and is being refined using open source software to track competency attainment in personalized learning plans. The use of an LMS to deploy rubrics and assessments takes some of the pressure off having having to have a fully functioning portal already in place. The portal embodies the same vision of learning plans tied to competencies and using OERs as the college's programs, so the development has benefitted from getting these offerings in place.

Recruiting and retention of students is a critical opportunity for Knowledge to Work. Initial recruitment numbers have been less than hoped. An enrollment management plan for Knowledge to Work that intersects with a similar plan for LFCC by identifying specific market segments and how they might match with CBE is desirable at this juncture. Because the demands of CBE require self-motivation, not all new students enrolling at the College would be good candidates. It would be wise for all prospective students hear a clear message that CBE can save them time and money. Retention-wise, the assumption has been made that focused and self-motivated students would complete degrees and certificates. This assumption will be tested in the outcome portion of the third party evaluation and in the interim, faculty and staff should be encouraged to keep journals of what is working and to share that wisdom across the entire institution.

Formative Lessons

Knowledge to Work has existed for only one full year and has been fully staffed just since July 2015. While still new, the program has learned some critical lessons that are worth sharing, several of which are reinforced by the experiences of other early community college implementers of CBE.¹² Formative findings thus far include:

(1) CBE programs require changes to community college institutional culture. Direct assessment requires even further changes since the time honored processes

¹² See for example: Mathematica Policy Research (2014, April). Developing Competency-Based Program Models in Three Community Colleges. Retrieved September 24, 2015 at <http://www.mathematica-mpr.com/our-publications-and-findings/publications/developing-competency-based-program-models-in-three-community-colleges>

used to produce credit hours are no longer in play;

(2) faculty are central to the success of CBE models. LFCC's Faculty Direct Assessment Committee has been pivotal in working through national competency frameworks and supporting the implementation of direct assessment;

(3) there is little to be gained by doing it alone. LFCC has derived considerable benefit from participating in new networks consisting of other institutions struggling with how to implement direct assessment;

(4) there is no "one size fits all" software solution that can simultaneously track competencies while assisting faculty to embed OERs in instruction. LFCC is legitimately faced with developing an open source platform to drive its direct assessment efforts. It is fortunate for other colleges and organizations that this platform is required to be shared in the public domain at conclusion of LFCC's TAACCCT grant.

Evaluative Conclusions

Substantial progress is evident in all phases of LFCC's TAACCCT grant. All Department of Labor required milestones and amended milestones have been met during the first year. Most importantly, LFCC has distinguished itself within its accreditation region and nationally through pursuit of a direct assessment approach. The alternative would be to simply embed competencies within existing credit hour coursework as has been the recent history of colleges engaged in early forms of delivering competency-based education. K2W is ambitious and will undoubtedly find other avenues for continuous improvement other than those documented in this report. It is anticipated by this third party evaluation that the second year of the grant will consolidate the work captured in this report and that new challenges will emerge.

APPENDIX A
K2W Logic Model

K2W LOGIC MODEL

ASSUMPTIONS

1. Competency-based learning accelerates students' completion of workforce certificate and degree programs
2. Direct learning assessment leads institutions and faculty to develop new learning pathways
3. Higher education needs new direct assessment models.
4. LFCC is committed to transformational change
5. LFCC will build capacity to fully implement competency-based programs built upon direct assessment.

INPUTS

1. Resources from TAACCCT grant.
2. Staff and faculty expertise in Competency-Based Education (CBE) and Open Education Resources (OER).
3. Commitment from LFCC's administration and faculty.
4. Support from national organizations and networks.

ACTIVITIES

1. Faculty and staff training to develop competency-based degree and certificate pathways and programs in selected areas.
2. Development of wrap around student support services.
3. Partnerships with area employers for curriculum development and employment opportunities for graduates.
4. Recruitment and induction of students.
5. Development of partnerships with AHIMA and Microsoft.
6. Creation of a web portal and search engine connecting learners to OER resources used to create individual

OUTPUTS

1. Establishment of Competency-based programs via direct assessment of learning.
2. Curriculum reflects competencies drawn from standards established by national partners.
3. Student-centric materials drawn from its experience in educating students about CBE and direct assessment are developed.
4. Templates for individual education plans using CBE.
4. Integration of web portal and search engine within LFCC's selected programs.

OUTCOMES

1. Students in CBE programs are retained at rates higher than a comparison group.
2. Graduates of LFCC's CBE programs earn credentials at a rate faster than comparison groups.
3. Graduates obtain jobs directly related to their chosen fields.
3. Graduates are retained in employment

IMPACT

1. Competency-Based Education becomes the primary vehicle for Career and Technical programs at LFCC.
2. LFCC's experience in establishing CBE and direct assessment informs and educates national work in workforce development and

Knowledge to Work (K2W):

A Portal for Competencies and Individualized Learning

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173 Skirmisher Lane

Middletown, VA 22645-1745

KnowledgeToWork.com

HigherEd.org

LFCC.edu



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