SREB

Direct From the Inside: KCTCS Direct2Degree Program

The Kentucky Community and Technical College System received a Wave III-B Next Generation Learning Challenges grant in 2013 to focus on breakthrough models for enhancing college completion. The KCTCS Direct2Degree (D2D) grant targeted low-income students in rural areas. The grant proposal noted that 29 percent of Kentuckians hold a college degree, while 54 percent of jobs in Kentucky will likely require a college degree by 2018. The Direct2Degree grant was designed to accelerate the rate of degree attainment in Kentucky; the degree paths it proposed would be more cost-efficient for students than traditional paths. D2D paths were designed to break through traditional term-based instruction and be more flexible to meet student needs.

KCTCS included the Southern Regional Education Board's Educational Technology Cooperative as one of several partners in the grant. SREB's Educational Technology Cooperative (ETC) was to observe the grant's rollout as a third party and report to both the grant's leadership and its own membership on implementation progress and promising practices.

Contents

SREB conducted grant-related interviews with students, faculty, administrators and consultants. The analysis from these interviews provides insight into the components of the program that worked well and those that presented barriers to effective implementation.

The appendix to the report lists all interviewees and their respective roles in the grant pilot. The D2D program design, based on the KCTCS Learn on Demand (LoD) program, provided a sequential modular program so as to increase degree completion; full-time students would

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take only one module at a time at an accelerated pace, not four or five courses concurrently in a 15-week semester. By focusing on one module at a time, the student could potentially complete more modules in a traditional semester. In addition, students could reduce time-to-degree by enrolling immediately in the next module — when they finished one — without waiting for the next semester to begin. This kind of self-paced instruction provided more individualized progression for students and focused more on competencies — so they could move more quickly through the competencies they had already mastered — or ones they could master quickly.

The D2D program was designed for students to earn an associate of arts or associate of science degree in general studies, which would guarantee transfer of credit to any public institution in Kentucky. KCTCS found that many students had collected as many as 80 credits to earn a 60-hour associate degree. By limiting students' course choices and creating a linear sequence for students from one module to the next, the students could progress through pathways that would save time and tuition dollars, without wasting either on unnecessary credits.

KCTCS designed two financial aid models to support the program: a monthly subscription model and a flat-rate model, each permitting students to take courses sequentially. The more courses a student could take within the term, the lower the total cost of the degree. The National Center for Higher Education Management Systems (NCHEMS) and SREB assisted KCTCS by providing cost analyses and cost structures to achieve affordable options for students that would also be scalable to more students and sustainable over time for the system. This was to ensure that the program would be affordable, sustainable and scalable. KCTCS determined the curriculum needed to be set up in modules that students could manage in three to five weeks. Course loads needed to be manageable for faculty, and these loads needed to be linked reasonably to compensation models. The program needed to provide student support services, technology information systems, online learning environments and faculty development. And it had to be compatible with institutional and system administrative support functions and processes.

The D2D program did not progress as the grant proposal outlined. If the grant's experimental design was to be successful, it would depend on Kentucky's community college system finding a way to give a non-traditional group of students a new way to experience college courses. Such a pathway would require KCTCS to simplify various administrative policies. But, in the end, some well entrenched student information system, financial aid, and business regulations got in the way.

SREB's interviews with 17 individuals, including students, faculty and administrators focused on six significant themes to capture the experiences of key individuals associated with this experiment and to record potential lessons learned. The themes are explored in detail in this report. Within the section on each of the six themes are excerpts from interviewees that provide direct insight from those closest to D2D.
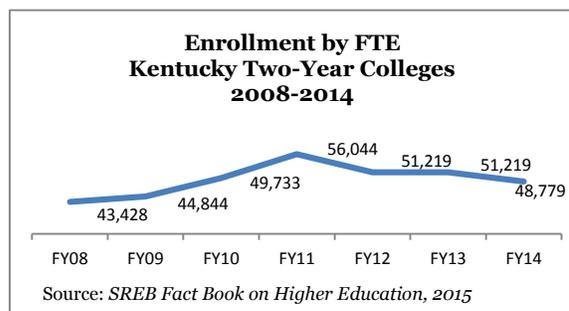
1. Goals and Target Market

- **A new focus on college completion and affordability**

As the D2D grant proposal pointed out, Kentucky had been challenged by 1997 legislation to reach the national average in educational attainment by 2020. When the proposal was developed in 2012, Kentucky was 9 percentage points short of its goal for residents holding a bachelor's degree.

Kentucky's two- year colleges kept a sharp focus on their role in helping the state meet the college attainment goal. Even so, demographic projections showed that two-year college full-time enrollments would decline during the grant period, after a 2012 peak, as the number of traditional age-college students in the population declined. If two-year colleges were to help the state's public higher education enterprise meet the state's attainment goal, their long-standing, historical emphasis on access to college would need to shift to degree completion. The strategy was clear: *they*

would have to find ways to make college more affordable and the path to the degree faster.

In practical terms, administrators charged with implementing D2D clearly understood the goal and the imperatives. The key administrative contacts were Sandy Cook, James Selbe and Bill Ryan — all key in implementation. Cook, who served briefly as the first program administrator before retiring, was instrumental in writing the proposal. She pointed to early data that showed many students had taken 80 credit hours to earn a 60-hour degree. She wanted to promote D2D as a way to reduce time and cost and incentivize more bachelor's degrees.

Enrollment by FTE
Kentucky Two-Year Colleges
2008-2014

FY08: 43,428 FY09: 44,844 FY10: 49,733 FY11: 56,044 FY12: 51,219 FY13: 51,219 FY14: 48,779

Source: *SREB Fact Book on Higher Education, 2015*

But, students swayed by D2D's cost and time savings in earning an associate degree were not always convinced that earning a bachelor's degree was worth the effort.

Selbe noted that when the two-year online enrollment growth peaked — mirroring declines in equivalent-full-time enrollments in two-year colleges — the emphasis on two-year college programming and services necessarily shifted from access to completion. Affordability, he noted, had to become a key issue for these colleges. D2D could help students achieve both cost reduction and completion. Ryan emphasized the importance of the program as a means of keeping students in their courses — and as a recruitment tool for business and industry — thereby promoting degree completion. The student success coaches concurred, noting that students could not only save money, but advance quicker to both their degree and career objectives.

- **A shift in target audience**

KCTCS targeted adults who were unemployed or under-employed and who were a little older than the traditional college student — between ages 25 to 35. They sought students who would be interested in online, modularized learning. They marketed the fact that the new programs (both LoD and D2D) were competency-based. But they also needed to find individuals who valued having a degree. As one interviewee said, "Our overall idea was looking for students who placed a high level of intrinsic value on education, understood online, self-paced technologies — [and] had the need ... to learn online."

- **The marketing strategies for D2D**

While such a shift in goals and target students would usually trigger a change in marketing, KCTCS did not engage in much marketing for D2D. By the time the grant program was cleared for registrations, it was too late for a marketing campaign. LoD and other students already engaged in online courses in KCTCS institutions were recruited for D2D courses. No specific eligibility requirements were established.

The kinds of students identified as good candidates for D2D included adult learners trying to progress quickly to a degree; adults with technology skills and a propensity for online learning; and adults with some college but no degree. The ones interested were often LoD students who wanted to try D2D; sometimes they were full-time employees, parents, busy people — often ones coming late to register.

- **Comments of interviewees on goals and target market**
  - We wanted to use D2D as a platform for students to move on and get their four-year degree... That's an important ... goal in Kentucky. — Administrator
  - Online enrollments in KCTCS had begun to peak. And the system did not have as much online [enrollment] as it really wanted; ... the whole emphasis had shifted from access — that was still important — to success, or at best completion. — Administrator

- If there wasn't a way [for students] to … potentially accelerate … to completion and … increase students' savings, then the model wasn't going to work… . Affordability was still the highest goal, and scalability would be second and sustainability third, only because of the infancy of the program. — Administrator
- It's really for the adult learner who is trying to progress at a quicker rate and who has technology skills so they can move forward with D2D. — Success Coach
- [T]he D2D program was aimed more at the full-time student. The student that … wanted to progress towards the degree [efficiently] … in terms of time and cost. — Administrator
- The future market is business and industry. Developing programs to promote and engage as a recruitment tool … as a retention tool, not as a training tool, but truly as a retention tool. — Administrator
- Other than internal messaging, we didn't do any marketing. — Administrator
- There's another way to entice students who might not even think about college: just get started and see what it's like. — Success Coach.
- We're getting a lot of students who are full-time employees… and parents and investing in other areas of their lives, and they simply can't carve out for themselves the time and the travel necessary to take classes on campus. — Faculty
- Actually, several of these students had already been in LoD… . And they like LoD, so they wanted to try [D2D]. — Success Coach
- I'm not the average student; I'm 56 years old… I don't have anything to gain by doing this two [more] years to get a bachelor's degree. I don't think [it] would serve me well… . I just want to get an associate degree and try to get back to work. — Student

Note: See Appendix for full list of interviewees.

2. Business Model and Financial Aid

- **Focusing on affordability, sustainability and scalability**

Development of the business model for D2D began with the recognition that state funding was waning, tuition increases needed to support traditional campus and online business models were impacting affordability of KCTCS programs. The goal of the D2D team was to develop a cost model that enabled enrollment in the D2D program to cost less for both KCTCS and its students. The challenge was to identify the broad range of costs and revenues necessary to support the program and distribute the costs in a balanced way between KCTCS and students. With assistance from the National Center for Higher Education Management Systems (NCHEMS), the team developed and employed a comprehensive set of calculations to determine potential revenues and costs. From the calculations, it was able to construct a sufficiently effective business model that would lower costs to students and provide revenues for KCTCS to develop and sustain delivery of the program.

- **Monthly tuition…the most novel innovation**

Traditional higher education business models, which charge a set tuition rate by course, do not provide an advantage or incentive to learners for early completion. A key benefit of the "learn-at-your-own-pace" competency-based education model, however, is an incentive to complete courses early and begin others immediately. The D2D team, therefore, opted for a monthly subscription plan to enable cost-avoidance and savings. By emulating the Pell-as-a-Paycheck model, D2D students could move through courses in a two-year degree program in less than two years and save the monthly tuition for any months they finished early, estimated to be between $175 and $190 a month.

The subscription model presented a challenge in how to refund tuition to students who dropped a course in the middle of a month and how to pay faculty who had been hired to teach them. While the

team ultimately developed a new set of automated business procedures for such situations, their implementation during the pilot involved manual reimbursements and salary adjustments.

- **Financial aid for non-standard terms — the *real* obstacle to innovation**

From the outset of the D2D project, KCTCS leadership was committed to redesigning the financial aid process to match the needs of students who would be learning at their own pace. They applied for and were granted experimental site status by the U.S. Department of Education (US DOE) to develop a direct assessment financial aid process. Unfortunately, the application and approval process was drawn out; it held up D2D development and testing for almost 12 months.

Further, a complication arose when consultants working on the KCTCS financial aid system questioned the LoD enrollment model, which permitted students to enroll any day of the year and have 15 weeks to complete a course. This model permitted LoD students who enrolled in one standard academic term who did not complete all competencies at the conclusion of the term to continue in the course into the next term. The consultants determined that allowing students to cross terms with incomplete coursework conflicted with financial aid regulations. Further, the consultants interpreted regulations to mean that if any LoD students were permitted to cross to a new term with incomplete work, they and all LoD students were ineligible for financial aid.

Based on the consultants' recommendations, KCTCS discontinued the cross-term enrollment model for LoD. KCTCS offered students the option to enroll any Monday — the rolling-Monday enrollment option — but students were required to finish the coursework before the end of the standard term.

These complications with financial aid for LoD students stifled plans for D2D. KCTCS planned to use the non-standard, cross-term, enrollment model to enable D2D students to advance continuously through their studies, without regard to terms. While some officials at KCTCS felt the consultants' interpretation of US DOE rules could be challenged successfully, KCTCS was not able to get clear guidance from the US DOE. KCTCS decided to wait for an experimental program to be established before continuing with changes in the financial aid system.

- **Comments of interviewees on the D2D business model and financial aid**
    - We were looking for ways to operate so that we don't have to depend on taxpayers' money. KCTCS needs to make these delivery models sustainable because of the dwindling revenues coming in from our state legislature. — Administrator
    - NCHEMS came in to work with us on a statistical approach to how we calculate the tuition on a monthly basis. That was a real challenge. We worked closely with our data people and with the people in our accounting office, and business services to pull the data from PeopleSoft to fit into the model that NCHEMS put together for us. And we learned a lot through that process. — Administrator
    - Some of us had heard about the financial aid paid by the month (Pell-as-a-Paycheck model). The plan was to create the sequential path, to create an alternative financial aid model where students would get their aid by the month's end. — Administrator
    - The whole financial aid model is a monster that I can't even begin to get my head around. I don't think we understood truly the depth of what it's going to take to solve this non-term problem. We've had one year -plus to try new approaches – put solutions in place. I think D2D definitely highlighted the need for the non-term financial aid. If we really wanted to be an innovative system and find different ways to help people create success instructionally and have this additional option, we have to provide them the support from a financial perspective. — Administrator
    - In this model where it was going to be linear, modularized, competency-based, it was going to be a subscription model where students would pay a flat amount and pursue as much as they could. — Administrator
    - The tuition was scheduled to be paid monthly as opposed to term based. You can finish as many modules in a month as you can. I think that was the real novelty of the idea. It just flew

dead in the face of bureaucracy of how we count higher education credits and terms. It just didn't work. Could it down the road? Yes. — Consultant

- We had to scrap the monthly subscription even though we really wanted to do it. I think community colleges need to do it once they can figure out how to make the financial aid work. — Administrator
- This model, while on paper and in theory sounded great, it just simply could not overcome the structures of financial aid and, you know, the term-based system that we can't seem to shake ourselves from in higher education. — Consultant

Note: See Appendix for full list of interviewees.

3. Instructional Design

- **D2D program design: built on a legacy model**

The instructional design of an educational program and its courses are critical to student success and learning outcomes. The D2D program design was built on KCTCS's successful LoD online program. LoD was built using the LEAP model — which makes essential learning outcomes the framework for students' overall college experience and uses real-world problem solving through inquiry, discovery and analysis.

When you build a new program on an existing, successful model, it is generally easier to make incremental improvements and implement the new program quicker and take it to scale. The infrastructure for LoD was already in place, with courses, a learning management system, student support services, a revision cycle, and faculty's familiarity with the content.

The D2D program limited the number of course choices to complete in each degree program. KCTCS administrators felt that by reducing course choices and giving students more guidance for the sequencing of their courses, students could move more quickly through the program to degree attainment. The program changed the number of courses a student takes at one time — and the pace at which a student takes the course. It is based on the premise that students do not learn at the same pace. The intent was for students to progress through a module in three to five weeks and immediately enroll in the next sequential module. Such a significant change in curricular structure required extensive planning. It also required improvements in faculty scheduling, changes in course loads and improvements in courses availability — so students who finished one module could move to the next immediately. The premise was that students could register for courses any day of the year, not just at established registration periods. Students would not lose time with the traditional breaks during and between semesters. These adjustments were all the more difficult because KCTCS maintained the traditional calendar and schedules at the same time for other students.

D2D also provided for shortening the time students would spend in developmental education by integrating developmental education into the D2D modules. This strategy reduced the number of developmental credits students would need to take, thereby saving financial aid resources for degree-credit courses. D2D courses were also guaranteed transferable within the same program or a related field to any Kentucky community college or university, allowing students a more portable curriculum for advancing to a bachelor's degree.

As with the LoD program, the D2D model used a pre-test so that students would get credit for prior knowledge and not have to spend valuable time on competencies they had already achieved, while still verifying overall competencies with a post-test to show mastery of the subject.

- **The D2D instructional design process**

The D2D curriculum was designed to be more student-centric than traditional curricula — to allow students to work at times, paces, and places that fit their lifestyles. Pre-tests gave students the chance

to show what they know about a subject and have it recognized as they started a module. They could then begin the next module when they could demonstrate that they had mastered all the course content.

D2D modules were based on the widely recognized four-door e-learning design. The four doors represent the library, the playground, the café and the evaluation center. The library contains the information needed to master the content, the playground is the area for practicing skills, the café is the social learning area – a real challenge in a self-paced online course – and the evaluation center is for performance testing. It is difficult to implement social forums, collaborative projects, group discussions, or real-time conversations either student-to-student or student-to-faculty in a self-paced environment.

Adapting the content from the LoD program to D2D was a challenge. An instructional designer worked with faculty teams and review teams to make changes. Typical course content had to be reformatted to fit the module format. The instructional designer and faculty worked extensively to define the competencies and match the content, activities and assessments to the competencies. This focus on the competencies helped to reduce extraneous content. Nevertheless, dividing the units into modules resulted in competencies that were repeated in several modules.

Faculty needed training on objectives, competencies and assessments, and they needed help in aligning assessments with competencies. They also needed help in identifying resources to supplement texts that would normally be used in traditional classrooms and in designing for and facilitating self-directed learning.

Consistency was important to students, and when they didn't find it where they expected it they were frustrated. Many students appreciated the consistent templates within the learning management system (LMS), because it provided familiarity with location and flow of content among courses. Others were annoyed by inconsistencies that they could not control: results on assessments of content mastery that were inconsistent among faculty and across content areas; grading practices were not consistent among faculty, for example.

Some changes in the program frustrated students. Students struggled with how to identify the important concepts in a course and within a textbook — especially knowing what to study and what would be on assessments — when they didn't have contact with teachers to point them out. They didn't know if the practice materials supplied by publishers — even if the materials were related to their textbooks — would be helpful unless they knew their instructors had determined the materials were aligned with their expected competencies. If faculty used publisher-developed test questions, the tests often proved troublesome. Often the content of the text material — and the related test questions — was difficult to separate into course modules. Students sometimes found that the questions on a test were not related to the assigned reading material, but found later they were related to subsequent material. With no teacher immediately present during testing to ask about the appropriateness of the test items, students were frustrated. Some students also did not like being tied to a computer in order to read the e-books or lecture materials. They preferred a PDF file they could download and read when or where they chose. Printed materials could be taken to waiting rooms, read during a lunch hour or a break of any kind.

- **Interviewees on instructional design**

  - The advantage of competency-based education's design in LoD is the course is already there, the design is already in place, it's easy to scale. If we had to open up additional sections of our LoD course, it's easy enough to do. We were able to maximize an existing infra-structure and design model — and capitalize on how everything was already in place. And like all good instructional things, there was a consistent review and revise cycle. And we were able to work closer with more faculty, focusing on assessment strategies. — Administrator
  - A real challenge is with students who need developmental education. They are demotivated once they get into that developmental path. So, we wanted to help individuals quickly get through the developmental work they needed. We wanted to embed any developmental work

in [D2D] courses so [students] coming into D2D would not ever get enrolled in a developmental class. We used LoD to deliver what we called transitional education; it's really [integrated] developmental education. ...We wanted to embed that developmental work in those courses so anybody coming in to D2D would not ever get enrolled in a developmental class. — Administrator

- In this model, you've got to make sure that courses are available when [students] need them. With the linear course schedule ... [a student's] next course is always going to be available [to them]. — Financial Aid Director

- I was able to focus on one course at a time. I didn't have all the added pressure of trying to meet a variety of demands from a variety of teachers. I could give my best in the course I was working on. And I could do it around my life. I'm very active in my community as a volunteer, a mom [and] a wife. I was able to progress at my own pace — not waiting for somebody else to catch up. But [I was] also able to take the time on ...an area in which I needed more time. One class at a time, one focus at a time, which D2D offered, was invaluable. I would definitely recommend it. — Student

- The way that the course is set up [with] pre- and post-tests [means] the students can easily test for credit-for-prior-knowledge. [And] they can move right through the content as they master the content. — Dean

- The [D2D] modules were initially developed to be taken [in LoD] on their own so that a student would have [taken each one] as 0.75 credits [for approximately] five weeks. My job as lead designer was working with what [KCTCS] already had outlined and helping them find other materials to supplement that lecture [material] and review some of their questions.

  Basically, each unit would correspond to a week's worth of work. So, when you started putting all of those modules together in sequence, it's almost more work than the student would be doing in a [regular course]. We used a four-door e-learning model: (1) [one for reference] content... like the library, (2) [another for course] content that you really want student to access and go through, (3) a playground area, [with] ... practice materials; (4) and an evaluation room [for] ... final assessments. — Instructional Designer

- We used Blackboard Exemplary Course scoring rubric. The review team would use that to score courses, and the review team would consist of other subject matter experts in the field and ... people who had ... some experience with teaching online or developing online courses. They used a rubric for their basic score of the course and provided overall feedback for the course.

  I tried to incorporate some ways to have a little bit of social learning and that was always a challenge with students progressing through at different times. The faculty also tried to include social media and social learning — [to have] different ways to access the content, to all hit on the same topic or concept ... in different ways. — Instructional Designer

- I like all the study aids that the eBooks gave. [But] I would have liked to have a book in my hand to have that flexibility to travel with it. ... I was trapped in front of the computer. I couldn't take my laptop outside and read; I don't have that good of a laptop. — Student

- I supported [faculty] by making sure that [everything] aligned and by developing practice activities that would build toward the final assessment. Faculty generally used the assessment tools within Blackboard or the external assessment tools like MyLab's material. — Instructional Designer

- In a classroom setting, you have a teacher giving... a lecture, and [it's] what's going to be on the exam. Well, if you don't have that, then you have to learn the whole chapter..., because you never know what to expect on the quizzes and exams.

  [In LoD and D2D], you have to learn more, because you're not interacting with a teacher so you have no idea what may be on this exam. So you have to try to learn everything that's in

[the] chapters or at least where it's at so you can go to it if you have to reference it.
— Student

- Also, I thought some of the testing [was] real obscure and odd. I literally found myself answering a question that [I found] later in the textbook. So I thought that the testing of the knowledge that was covered could have been a little better.   — Student
- If [the course is] competency-based, what do we want [students] to do? And if they're competent [does it mean] they [score] at least 80 percent or higher — so the students are above average most of the time? I distinctly remember an accounting faculty member who developed a couple of [D2D] courses, and [knowing] that a lot of business students just want to pass, [she] set the passing score at 70 — like having a C. She did end up [moving it] up to 80 in the end.   — Instructional Designer
- I was a little aggravated that the grading scales weren't consistent. I had one class where the grading scale was 95 to 100 to be "competent," but of course I found out that it's up to the discretion of the teacher how they want to do it.   — Student

Note: See Appendix for full list of interviewees.

4. Technology Infrastructure

- **Aligning policies, procedures and processes with technology innovation**

As KCTCS sought to improve its completion rate of college graduates with D2D, it realized that D2D depended on several existing systems that supported students, faculty and staff in complementary ways. Yet, these technology systems were not nimble in reacting to innovative academic needs and business functions. Because they were independently programmed and linked as needed later, they were not amenable to quick changes. As KCTCS sought to change academic policies and procedures and adjust related financial aid, business and student support policies, it found the technology support systems could not adapt quickly enough. For example, most of the functionality of the learning management system (LMS) and the student information system (SIS) had been originally designed for face-to-face, instructor-led, term-based instruction. These systems had to be reprogrammed to be delivered for self-paced, not term-based, and competency-based courses

The SIS was an academic term-based system which could not accommodate a student taking both term and non-term programs. It was not set up for open entry and exit and could not keep track of the competencies that a student had completed. It was also not able to account for financial aid by the month. Although SIS vendor, PeopleSoft, worked closely with KCTCS to fix the problems, the speed of change didn't match the need of innovation. Change requests, help desk tickets and manual work-arounds slowed the implementation of the pilot.

KCTCS worked with the LMS vendor, Blackboard, to make modifications to the system — which was also term based. But the progress was slow. The LMS had the technical capability of adaptive, self-paced learning, but few KCTCS faculty members knew how to set that up.

- **Faculty facilitating with technology**

KCTCS faculty had varied levels of expertise with technology. Some worked well with such online technology tools as Blackboard, Soft Chalk, online labs and ebooks. Some, however, though they were familiar with the technology, did not have the technical skills to create engaging, student-centric online course environments. Most of the content for D2D was available through the existing LoD courses. Instructional designers and other technical staff used faculty as the subject matter experts, but the designers and technical staff had to ensure good module design and make the courses functional with innovative technology tools.

KCTCS faculty were not unusual; the *Chronicle of Higher Education* documents that professors are aware of high-tech teaching methods but few use them. In a study of almost 4,000 faculty of two- and four-year institutions, 40 percent of professors were aware of innovative methods, but only 20 percent had tried them.

Percentage of Faculty
Engaged in Innovative Technology

40   20

Aware   Tried

Souce: Chronicle of Higher Education
July 27, 2015
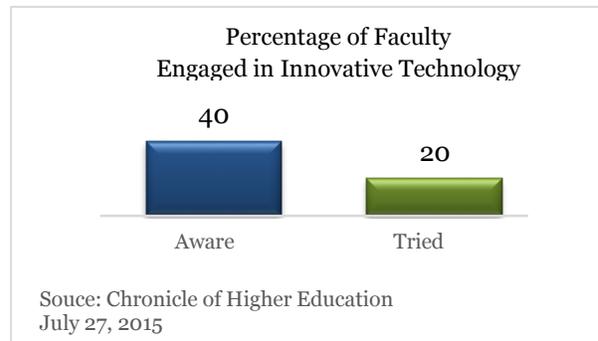
- **Student expertise with technology**

The KCTCS D2D students who were interviewed had very similar responses about their experiences with technology: they struggled. One student coach observed that the students with better technology skills moved through the modules more quickly than those who were less tech savvy. A dean of distance learning noted that even when a student is comfortable with social media, that does not mean he/she is a digital learner. To be successful digital learners, students need to know how to troubleshoot technology problems. With the daily releases of bug fixes for various systems, plus browser updates and multimedia releases, students need high levels of digital literacy to cope with technical updates. They need to be able to use different operating systems, and they need to be able to diagnose conflicts between hardware and software. They need basic knowledge of how to document error messages, observe which systems are open or in use at the time of a problem, how to change properties in browsers or software applications, and in general how not to be afraid of technology. Since many KCTCS students did not have these levels of technology literacy, KCTCS realized that faculty, coaches and technical support staff needed to be available to help students get through basic troubleshooting steps.

In a spring 2015 survey of approximately 28,000 students over the age of 25, Eduventures found four items among the most important to success for high-performing students.

- clear course objectives or expectations
- easy-to-use technology
- good course pacing
- attention from faculty

- **Interviewees on technology infrastructure**
  - [The fact that] so many of our processes, procedures and policies were tied to term-based education — that was especially challenging for our [student information] system (SIS). I can't emphasize enough how disruptive LoD was to our operation at the system office and at the colleges… . It's so simple to say, 'we want to [let students start] this educational opportunity every day of the year and make it competency-based,' but it was so different [from what we had].   — Administrator

  - A big problem with financial aid is policies and procedures as they relate to the student information system. PeopleSoft was not set up to track competencies. — Administrator

  - We segregated student populations between term and non-term. Through a combination of I.T. and human-based monitoring systems, we kept [the groups] from mixing in the student pool and not financially crossing terms. — Administrator

  - PeopleSoft is very much a term-based operation right now. People at KCTCS have been working with PeopleSoft to [seek] more flexibility [to] manage our curriculum and enrollment processes. Even Blackboard [the learning management system (LMS)] was term-based… . So, the technologies that we needed for most of [course] delivery were not [available] in the SIS or the LMS. But we have worked with both of those companies, and [it has been] slow moving to get the technologies changed. Fortunately, [KCTCS has] brilliant people in our technology solutions department… . We were able to come up with work-

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arounds [to] customize approaches that helped us improve PeopleSoft and Blackboard.
— Administrator

- As a student finishes early, it's changing the end date of one course and the start date of the next course to get them enrolled. There's a lot of technology [steps] — time in submitting tickets or whatever through our technology solutions — to keep students moving forward with their coursework. — Success Coach

- The faculty experience in technology is variable. Some faculty were much more comfortable [with it], and they wanted to use technology. One really basic authoring tool that [we] used was Soft Chalk. You can copy and paste a Word document into the Soft Chalk application, and it publishes the document on a Web page that links to the learning management system. Some of the faculty were more comfortable with doing that on their own.

   [For the] adjuncts teaching the courses, they would have to understand that it's not just doing a weekly discussion board with the student. [Their] grading had to be different too. — Instructional Designer

- As far as them being online, it's not that they don't understand the content. It's the whole technology aspect. I think a lot of times we think just because a student can get online, get on Facebook ... that they're digital learners – but they're really not.

   [Some students] don't understand when you say, "Can you try a different browser? Do you have your computer updated or do you have the plugins?" [At] times, the technology itself is a barrier and becomes that struggle for them to [enroll] in the course and complete the course. — Dean

- Our returning adults are not as tech savvy. I think they had a greater challenge going through the classes. But then there are those that had a high level of competency that just (whizzed) right through it... . There are those who could manipulate technology better, and it made the course easier. — Success Coach

Note: See Appendix for full list of interviewees.

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5. Student Experience

- **Admission, advising and orientation**

A program like D2D requires a strong advising program so students fully understand how the program differs from others they have experienced, including high school and previous college courses. The program offers significant advantages, but it also has drawbacks. Students must know about the potential advantages from the beginning; they also need to understand the limitations early so they don't risk failure within the first few weeks — a period that represents a significant proportion of the course time.

Admission to a program like D2D is more difficult than regular admission. Picking students who are likely to be successful in a compressed learning environment is something program planners need to consider. In this pilot, it was not a prime consideration, but interviewees raised the issue that not all students are suited for it.

- **Supporting D2D students: coaches, tutoring, monitoring**

D2D offers more than course-based instruction to help students master course competencies. Most significantly, it offered student coaches to help students navigate the online environment and learning experience. It also provided tutoring and electronic monitoring of student engagement with the course management system. But, because the time in each course is compressed, students must

know about the coaching and tutoring programs early, how to access them, and how to use them for them to be helpful. Effective orientation to these services is essential if students are to make use of them to help with their course requirements. The monitoring program alerts students and faculty when students appear to be lagging in efforts, and it is important they respond immediately when alerted.

- **What a student needs to do to achieve success — and what gets in the way**

Keys to student success in the online, compressed-term academic environment seem to be patience with the course reform process, time-management skills, independence as a learner, and willingness to reach out when in academic difficulty. Starting immediately as the course begins and keeping pace seems to be the strategy that works. Faculty believed the students they served had the ability to succeed. Those who did not failed because they could not deal with the pace of the course or the independence they were given.

Students seemed to recognize they were involved in a pilot — an experiment of sorts. They were frustrated that things were not all worked out — the test questions were imperfect, the LMS had a different look and feel for each course they took, so they had to learn how to navigate each course they took, and the rules were inconsistent from instructor to instructor. Students who migrated from LoD to D2D were sometimes confused in thinking that some rules of one program applied to the other. But for the most part, they took the rules in stride and were encouraged that they could be worked out for future students.

Students who did not make it through the course often failed because their busy lives got in the way. Many had jobs and heavy family demands. It is not unusual for students to report they have both a full-time and part-time job. Or, that they have several children and also take care of aging parents. School takes — at best — third priority in their lives. Students regularly report that time-management skills alone are not enough to overcome the demands they face. While D2D offers the chance to take and complete a course in five weeks, it also demands five intensive weeks that many adults cannot manage.

In some cases, these students who are attracted to the five-week compressed courses are often less technologically savvy. When they run into technological difficulties, they have fewer resources on-hand to resolve their questions. If delays in getting help drag on, the compressed nature of the course complicates their problem and they often lose the momentum they might have had.

- **Communication**

Communication was a concern from students. They missed the regular discussions they had with instructors and did not find a substitute for that interaction from others. One student talked about it as never knowing if he was on the right path in his learning. Others were frustrated because they did not get responses to their emails from faculty quickly enough. Students also reported the turn-around on receiving grading assignments was not quick enough to give them the feedback they needed for the five-week compressed term.

On the administrative side, information about support services was not as consistent or as compelling as it needed to be to get students engaged early. KCTCS implemented Starfish to flag students who were disengaged from the LMS as a way to ensure more timely faculty responsiveness.

Communication from students to instructors about their engagement with the course was not as forthcoming as it needed to be. When students disappeared from the course because other life responsibilities took higher priority than the course, students generally failed to communicate their intentions to faculty.

- **The non-standard schedule: challenges and advantages**

The D2D schedule was built on courses that were presumed to take five weeks. Students could complete the courses as quickly as they could, or they could take a little longer than five weeks. But faculty had to turn in grades for students soon after the five weeks had passed. So the courses were

not completely untethered from time. The sense on the part of students that they had more freedom from time — but still had constraints — proved a difficult adjustment for many. For some, it was liberating. Faculty, however, were caught in the tension of offering the freedom of no deadlines within the course, but imposing harsh deadlines at the end — ones that came very quickly for students who had busy lives or tended to procrastinate.

The format of the schedule contrasted not only with traditional courses, but also with the KCTCS LoD program, which offered the same material over 15 weeks but required full-time students to take three courses at a time. Many of the D2D students had been recruited from LoD so the conflict affected a high proportion of the students. The students interviewed easily identified the advantages of the D2D program. Key for them was the ability to concentrate on one course at a time. In addition, they were able to learn at their own pace within the restrictions of the five-week course. And, while some missed the interaction of classmates and a teacher in a traditional classroom, they also recognized they were freed from the typical distractions a classroom creates.

- **Interviewees on the student experience**

  - D2D is not for everybody. I'd have a better intake process … to interview and admit students who would succeed in this world. — Administrator

  - There's still some improvement needed in advising students about what exactly D2D courses entail… . It's a compressed — a more concentrated — course. It's not a shorter course… . Before registration we're beginning to try to give students an idea of exactly what's going to be asked of them and at what pace they will need to work. — Faculty

  - [Competency-based education] needs students to be self-motivated. But with our success coaches and [other] things … in place, students [have opportunities] to be successful. — Financial Aid Director

  - The D2D students have access to BrainFuse [an online tutoring service], student services, the call center, 24/7 support and the coaches. — Administrator

  - I felt like [the email from the coach] was just like a mass e-mail… . I did contact the success coach [later]… . It's been 27 years since I've been in college. I've been in the workplace… raising a family… living a life. To be planted back in a classroom was stressful. Her encouragement probably … [helped] me do better in the course… . She … turned out to be a real valuable resource for me.   — Student

  - The coaches can reach out and communicate with [students]… . to help them get back on track and try to get them re-engaged or provide other assistance. — Success Coach

  - Starfish [has] automated flags that go to the student, instructor and success coach if the student doesn't log into the … LMS in five days. — Success Coach

  - I think Starfish is a robust tool, and I don't think we're using it to the fullest extent. [We need] an exploration and explanation to faculty on how to use it. — Administrator

  - Students [can get] help with BrainFuse for math or writing or another subject… .[Few] students in D2D classes [did.] With five-week sessions, you don't really have time… . We need to make sure our students know Starfish and BrainFuse are there. And we need to encourage the faculty to encourage students to use it. — Success Coach

  - For most of the students, even those who failed the course, the work … seems to suggest that they … exhibit … talent, expertise, skill … to do the work. A student who's able to work on a consistent basis [will succeed… . — Faculty

- A lot of life events get in the way... . The ones who succeed [can] balance their studies [with] their family and jobs. — Success Coach

- You've got to really focus ... or it's not going to stick with you... . Students who ... really focus on the program are phenomenal — and they really do high-quality work... . There has to be lots of ... self-determination to do well in a program like this. — Faculty

- They struggle not with their courses but with lack of time. Many of them either sign up for too many courses or have too many things on their plate to have a chance for success. Sometimes they do have time, but they have a lack of effort. They cannot organize their work, and they postpone beginning the course. And then it's too late.   — Faculty

- The biggest benefit was that there are no distractions. I don't have to go to the college [or] deal with the social part of it... . One of the biggest advantages [was] being able to take the class and learn the material and get these credits in a no nonsense way. It's like I'm going to work every day... . It's just you against this class and this material. — Student

- You do not have the benefit of whatever learning could take place in a brick-and-mortar classroom... . — the learning that ... goes beyond the textbook... . The flip of that is sometimes a brick-and-mortar class [can be a huge distraction.] Physically being in the class surrounded with other students did not [always] benefit me. These courses ... taught me probably as much as I would have learned in a traditional course... . — Student

- Communicating with the instructor is important. Sometimes [when] the students have something going on in their lives... .[they don't say]: "I've got a problem; I'm [not] going to be showing up for a week, and I'll catch up when I get back." — Success Coach

- Students actually expect ... quicker [turn-around time] on their papers. So I tried for no more than a 48-hour turnaround, but I think that some instructors are used to a little bit more relaxed setting. I login twice a day, but I'm not on [the computer] at one o'clock in the morning when [students] might be completing all [of their work.] — Faculty

- By the time I got ... answers to the questions I had, they were no help to me. I had already gone past what I was working on... . Rapid responses are critical. — Student

- Faculty need to reach out to students the very ... first day ... to give them reassurance ... and continually use the [support] systems in the course to contact those students and remind them that you're still here... . Faculty need to provide prompt and specific feedback to students about the coursework and also their standing in the course — and make it as positive as possible. — Faculty

- I think sometimes instructors are left in the dark at the end of the day. And then all of a sudden, [students say], I talked to my advisor who told me this. And we [say] ...why didn't your advisor copy me on that email to let me know what was going on? — Faculty

- I'm dyslexic. So one of the things I'd hope they would consider is how to address that... . I have real concerns that I can be successful in an online math class. In other words, pretty much a self-taught math class. — Student

- The input from teachers is almost nonexistent in these classes. You get nothing from them. And I don't mean that in a negative way. What can they do? You're not in a classroom so they can't lecture you; they're there to answer questions, but when you're going so fast [with] this material, by the time they respond, you've already moved on to another chapter. That was one of my least favorite things. — Student

- The deadline in D2D was really five weeks per module, but if [students] finished in three weeks, they'd move right onto the next course. That's the linear sequential pattern ...for

D2D. So, if the student could devote that type of time just to the class they could get it finished and move on to the next module. — Success Coach

- The biggest issue ...[with] both [LoD and D2D] programs is students thinking they have all the time in the world and waiting until the last minute to do everything... . [Students] don't realize that instructors have a timeframe. If [instructors] don't [turn] their grades in by a [deadline], [college officials ask,] "Why aren't your grades completed?" — Faculty

- [Administrators] have to work better with faculty; we have to be more responsive. So [two] lessons learned are the importance of communicating expectations to students and for faculty to keep the student engaged and moving. — Administrator

Note: See Appendix for full list of interviewees.

6. Innovation Leadership

- **Committed to innovation**

D2D was not the first time KCTCS had emphasized innovation. From its formation in 1997, KCTCS has been constantly reframing and reinventing what it means to be a community and technical college system. From putting all 14 colleges on a single enterprise resource planning (ERP) platform to establishing the competency-based LoD program years before the recent CBE movement started, KCTCS has been committed to challenging its colleges and the status quo.

- **The notable innovations**

There were two primary innovations KCTCS built into the D2D program: (1) the linear, one-course-at-a-time model and (2) the monthly tuition subscription and financial aid model. These were supported by prior innovations of modular, competency-based courses built for the LoD program. While these would both prove challenging to design and implement – their design came directly from the needs of KCTCS students. The linear course model, which proved to be popular with the pilot students, enabled students to concentrate on one course at a time, full-time. The advantage of this focus for the KCTCS student, who typically has low preparation for courses and is then pulled in four or five different course directions, promises to improve success and retention. The monthly tuition and aid model provided 12 starting points per year thus increasing the ability of students to start on their schedule. It also would spread the cost of college evenly across a program of study. Finally, the monthly completion opportunities enabled students to finish their program when they demonstrated competence — avoiding the chance of being stuck in a final six-month term with only a few credits left to earn.

- **First mover advantages ... and disadvantages**

Trends consistently show that first entrants into a new field of innovation face high development risks and costs, but they also accrue opportunities for quicker, earlier and greater insights. They also gain expertise in solving the problems and iterating new and more advanced models — considerably ahead of their peers. By moving early in the development of new instructional models, KCTCS built a space for incubation. For these students, it turned out to be one fraught with challenge.

Its experience in developing LoD gave it efficiency, as it was able to re-purpose the LoD modules for D2D. Overcoming such a challenge as this meant it could move LoD students from course to course *manually* within the PeopleSoft system, and it helped the D2D team allocate time and resources better.

The disadvantage in being a "first mover" was clearly the lost opportunity in trying out the subscription and financial aid models. While KCTCS knew the chance of getting these models approved by the US DOE was risky, it had identified fall-back positions to enable the System to lead the exploration of other new solutions. Even these were stalled by policies that precluded even

modest alterations that might have made the experiment work. On balance, however, this short-term delay resulted in KCTCS's pursuit of the US DOE experimental site waiver.

- **Interviewees on innovation leadership**
  - I see so many things that have just been recycled over my forty years, but this is different. This has the potential to change our country. — Administrator

  - I think, if there had been another goal that was to help position KCTCS on a national forefront, it did that. It seemed like every couple of weeks, we had some institution showing up (at the system office) wanting to know what KCTCS had done and how they had done it. — Administrator

  - KCTCS has been out in front of it longer. And we learned a lot of lessons. If we had it to do over again, would we do it the way we did? Probably not. But there's something to be said for having six years under their belt and being able to make adjustments — now, that other schools are just trying to get their tiptoes in the water. — Administrator

  - These models really push, because we've never done it before. — Administrator

  - We had a team of people across all the functional areas of the system office, because it did impact every functional area starting with technology to the chancellor's area. — Administrator

  - It takes champions like (then Chancellor Jay Box) to do things that have never been done. — Administrator

  - After the [Gates Next Generation Learning Challenge] grant was awarded, the staffing changed so it was my responsibility to pick the ball up and figure out what the D2D program was going to look like and then try to run with it. I was serving almost as a one-man show. — Administrator

  - It's almost like creating another college and standing it up alongside of your traditional one. In a system, from almost the very beginning, almost every college gets touched in some way with this new innovation and new way of thinking. — Administrator

  - Continuous improvements, disruption and reinventing – there's always room for improvement when you're talking about helping students. — Financial Aid Director

  - What we've learned is that we're headed in the right direction; that this is the way that American higher education has to go to be successful. — Administrator

Note: See Appendix for full list of interviewees.

7. Implications and Lessons

- **Implications**

The CBE business model: A 'ball of worms'

The KCTCS D2D design team began with the premise that students, learning at their own (and presumably at a faster-than-typical) pace would benefit from a business model that rewarded early completion with cost savings. The team believed a monthly subscription model would do just that. Modeling on existing experimental efforts, such as PELL-as-a-Paycheck, KCTCS felt it was on solid policy footing in proposing a variation of this program for its D2D grant effort. Instead, it opened what one interviewee described as a "ball of worms." Even with the national reputation for innovation KCTCS garnered with the Learn on Demand program — with the executive sponsorship

of Chancellor Jay Box who also served as a KCTCS college president and with Jim Selbe as a skilled project manager — KCTCS stalled D2D implementation over complex rules and policies. They were all key to financial aid for students taking instruction in non-standard academic terms. In fact, D2D never really got off the ground as it was originally conceptualized.

In the spring term of 2015, KCTCS regrouped. By modifying its financial aid and business models, KCTCS was able to pilot the D2D academic program on a quarter term. It was then able to gain approval from the U.S. Department of Education to become an experimental site for the direct assessment of competency-based education. The new license to innovate with competency-based learning — and even the challenges from financial aid and business models — led to a continuing commitment to improve the model for future iterations of the D2D program.

Windows and champions

While disruption can occur despite the best leadership, innovation cannot. A useful way to analyze the effectiveness of leaders on the scale of innovation is to look specifically at how they perform during windows of opportunity. The Next Generation Learning Challenge grant funded by the Bill and Melinda Gates Foundation opened such a window of opportunity for leaders at KCTCS. The two-year grant enabled them to assemble the grant development team, to build an operational D2D model and to craft the ideas into a viable and funded grant proposal. Within the three-years of proposal development and grant deployment, a number of KCTCS staff took pivotal roles in advancing the program.

As the D2D grant period began, KCTCS had experienced individuals assigned to key roles on the project. Chancellor Jay Box, executive sponsor of the D2D proposal, secured funding for the initial development and piloting of the program. Sandy Cook was the key champion for the project —with more than 10 years' experience designing and leading system-level innovations. Along with Box, Cook built a diverse team of professionals from across all related functions; they began to execute a strong, well-framed development process for the initiative.

With the retirement of Cook soon after the project began in June 2013, James Selbe, a former KCTCS college president, became the project manager. Selbe coordinated D2D as it encountered multiple challenges. Policy barriers necessitated the abrupt shift in financial aid and tuition models. By the time the go-live date for the D2D pilot approached in January 2015, Selbe had decided to leave KCTCS for another career opportunity. Responsibility for the pilot shifted to Ryan, who had been hired about the same time as Selbe to manage the LoD program. Box had become president of KCTCS about that time — and Rhonda Tracy, was hired in April 2015 to become the system chancellor. Ryan oversaw the spring 2015 pilot of the D2D program, but departed KCTCS after its conclusion as the funding for his position ended.

Several lessons are evident. First, a continuous executive sponsor — Chancellor, then President Box — can enable a project to persevere against policy and process barriers and transitions of other key personnel. Second, transitions of the project champion can have a deleterious effect on a project. Starting with Cook, and transitioning to Selbe, Ryan and Tracy, each new leader introduced new perspectives and influences to a project. Cook focused on building a diverse team to address the broad spectrum of policy issues the program would trigger and addressed the instructional model. Selbe addressed the financial aid issues at both system and national levels as he worked on getting the program launched. Ryan, whose responsibility was to manage the much altered program, focused primarily on the logistics and implementation of the pilot.

While shifts in emphasis are to be expected at various stages in a project's evolution — particularly one that is expected to create disruptions, each project champion maintained the continuity of the program. It is to the credit of KCTCS and the D2D team that, in each instance, the transitions resulted in renewed energy and focused attention that adapted and refined the D2D program.

- **Other lessons**

Differing faculty and student impressions on Communications

While faculty felt the frequency and sufficiency of their interactions were about right, D2D students felt more like Lone Ranger learners. Interactions with faculty, according to students, needed to be more frequent and response times needed to be much shorter — with real-time responses preferable.

Self-pacing needs to be paced

Good competency-based education can significantly reduce both instructional barriers and wait times — and thereby enable students to accelerate their progress through a learning path. Even so, students and instructors need a timeline with target dates, albeit personalized to each student, to ensure students make satisfactory academic progress. Instructors need frequent contact with each student to ensure students stay engaged and on track. The potential short pace of D2D courses — possibly three- to five-weeks — presents a particular challenge for instructor engagement. D2D students need to become involved in their coursework quickly and be engaged in their work frequently if they are to make progress. Students consistently reported that when they were academically ready for a course, it was often related to having had the essential technology skills to engage the online environment. They also noted the significance of having good time-management skills, which allowed them to move at a faster pace and pushed the D2D instructional team to keep ahead of them.

The serial, "one-course-at-a-time" model is positive

Students were positive about taking a single course as a full time student for a short period of time. They reported they got as much or more from the course in this format as otherwise. Some did report that they had to adjust to the schedule of completing a full body of work in five weeks: it meant getting started immediately and not taking any time off. Some noted they needed to be ready to begin the course as soon as it began, and they had to keep a steady pace. Unexpected interruptions became a big problem. Using student services, such as tutoring, to help them overcome deficiencies they might have with course content, was less successful in this format, because it slowed them down. All in all, however, if they were ready, it worked for them. This fact makes this style of course taking a significant benefit for some students under some circumstances; it may well become a promising practice to increase college completion rates as the model is scaled out.

The CBE business model: watch this space

The KCTCS program did not provide a definitive lesson on the cost of CBE. Like the Kentucky CBE pioneers, others are working on new business models for CBE programs. These efforts suggest that CBE models could be less costly to manage than traditional education models; yet few programs are operating at a scale to prove these assertions. As financial aid policy barriers are addressed and reduced, the financial assumptions related to CBE will ultimately be tested by others.

Bonding with your success coach

When D2D students turned to their success coaches for help with registration and program navigation, they found more than program planners had anticipated they would find. While no one intended for coaches to provide instructional assistance, students soon turned to them when they needed help with coursework. In reaching out for help, students preferred the face (or voice) of the individual who first reached out to them — not the faculty member who had often left an impersonal note to them to "contact me if you need me." Faculty expressed some exasperation that students turned to their coaches for instructional support without considering the shifting nature of relationships in the online learning environment. It is important for program planners to consider how to ensure that coaches and faculty are working together so students get the help they need from the right individuals. Even if students contact coaches for help, coaches can be trained to refer students to the appropriate college faculty and staff who can meet their needs better.

Signing up students for success

Well-admitted students can definitely accelerate the pace of their studies in a CBE program. For returning adults with complicated lives who are motivated, facile with technology and able to manage their time effectively, the D2D pilot showed they could flex their studies around other commitments and complete their coursework faster than they could have in a traditionally designed course. However, the line between success and failure has — finally — been defined as an individual's ability to commit to a course of study for about five weeks. For adults with more optimism than self-control, the CBE model is an attractive offering — but not likely the magic bullet they are seeking. For those with very complicated lives — children, aging parents, jobs, illness — the CBE model asks for control these students may not have. Not much attention was given to these factors in the admission process. A few thought it should be a focus of future programs. And the focus should be not only on who *can* do the work, but also on who is able to do the work *under the circumstances*.

Technology platforms and programs are not CBE ready

From enterprise resource planning (ERP) to student information systems (SIS) to learning management systems (LMS), no vendor has designed its product to manage students making instructional progress at different rates, registering into courses at different times, crossing terms with incomplete courses, needing financial aid at non-standard intervals and measuring satisfactory academic progress in terms of competencies instead of contact and credit hours. Such changes envision a new approach to higher education. Some would argue that this approach is entirely different, although each of the elements, taken separately, does not seem so radical. Surely, developing the necessary technical platform to accomplish these tasks — and ensuring their integration with other systems — should be possible. Yet, to date, no one has presented a successful one. Maybe that would require starting from scratch with new support technologies rather than beginning with legacy programs.

In summary, the D2D grant proved a tall order for KCTCS. The system worked hard to make the most of an idea that unfortunate circumstances kept from realizing its full potential. The financial aid models, for one, never worked out. Yet, it is clear that the grant led to important lessons learned — ones that other systems and institutions embarking on a similar journey need to know.

8. Lessons Learned Turned into Actions

Innovative programs challenge the boundaries of existing education systems, policies and practices. KCTCS met these challenges by creating a Distance Learning Work Group to review the lessons learned by the D2D pilot and recommend changes to accommodate more innovative distance programs. This cross functional team of staff from several KCTCS colleges and the system office are charged with several objectives, to be reported to the system president in January 2016. The group is to analyze existing distance programs over the past five years, research CBE programs, develop metrics for effectiveness, and develop a business plan for distance learning that contains strategies to address marketing, market and competitive analysis, operations, management, development, financial structure, and sustainability. The instructional underpinnings of current programs, the wrap-around support services for students, as well as the current technology infrastructure will be evaluated.

Great successes require overcoming struggles along the way; KCTCS wants to overcome the challenges posed by D2D as quickly as possible so that it can create a successful online, linear, self-paced, competency-based program to help students achieve their academic goals.

Appendix

		Interviewees	
Names	**Interview Date[1]**	**Category**	**Title**
Sandy Cook	4/20/15	Administrator	(Ret.) KCTCS System Director for Distance Learning
Bill Ryan	4/23/15	Administrator	KCTCS Executive Director for LoD
Jim Selbe	4/23/15	Administrator	Former KCTCS Administrator
Lisa Jackson	4/22/15	Success Coach	LoD Operations Manager (primarily recruitment), Success Coach
Francine Gilmer	4/22/15	Success Coach	D2D Success Coach
Michael Krause	4/22/15	Success Coach	Assistant Director of Student Engagement Success (supervises Success Coaches)
Ella Strong	4/23/15	College Dean	Hazard Community College Dean, Distance Learning
Patrick Kelly	5/29/15	Consultant	Director, NCHEMS Information Center for State Higher Education Policy Making and Analysis
Jeff Perkins	4/21/15	Faculty	Project and Course Leader for LoD's English and Communications courses
Ghenniday Chernavski	4/21/15	Faculty	Mathematics Instructor
Christine Douglas	4/22/15	Faculty	Communications Instructor
Doug Roberts	4/23/15	Financial Director	KCTCS Director for Budget and Financial Planning
Elizabeth Dalton	4/24/15	Instructional Designer	Former KCTCS Instructional Designer
Debbie Childress	4/20/15	Student	Student
W. Neil Boggs	4/21/15	Student	Student
Nicole Sauer	4/21/15	Student	Student
Kristi Hamilton	4/24/15	Student	Student
Note: KCTCS means the Kentucky Community and Technical College System; LoD means the Learn on Demand distance learning program. D2D means the Direct2Degree distance learning program; it was the focus of the grant program. NCHEMS is the National Center for Higher Education Management Systems. [1]All interviews were conducted by telephone, except for the one with Kristi Hamilton. She completed answers to the same questions posed to other students by email.			

Technical Note: SREB recorded the telephone interviews and had transcripts prepared of the interviews. The quotations used in this report were taken from the transcripts. Quotes represent the words of the interviewee, although segments relevant to the topics were shortened for readability. Ellipses and brackets were used to indicate when words of a relevant segment were omitted or added for readability. In a very few cases, long passages covering several topics were reduced so as to capture the speaker's thinking on one of the topics, but the quotes reflect the words of the speaker.

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