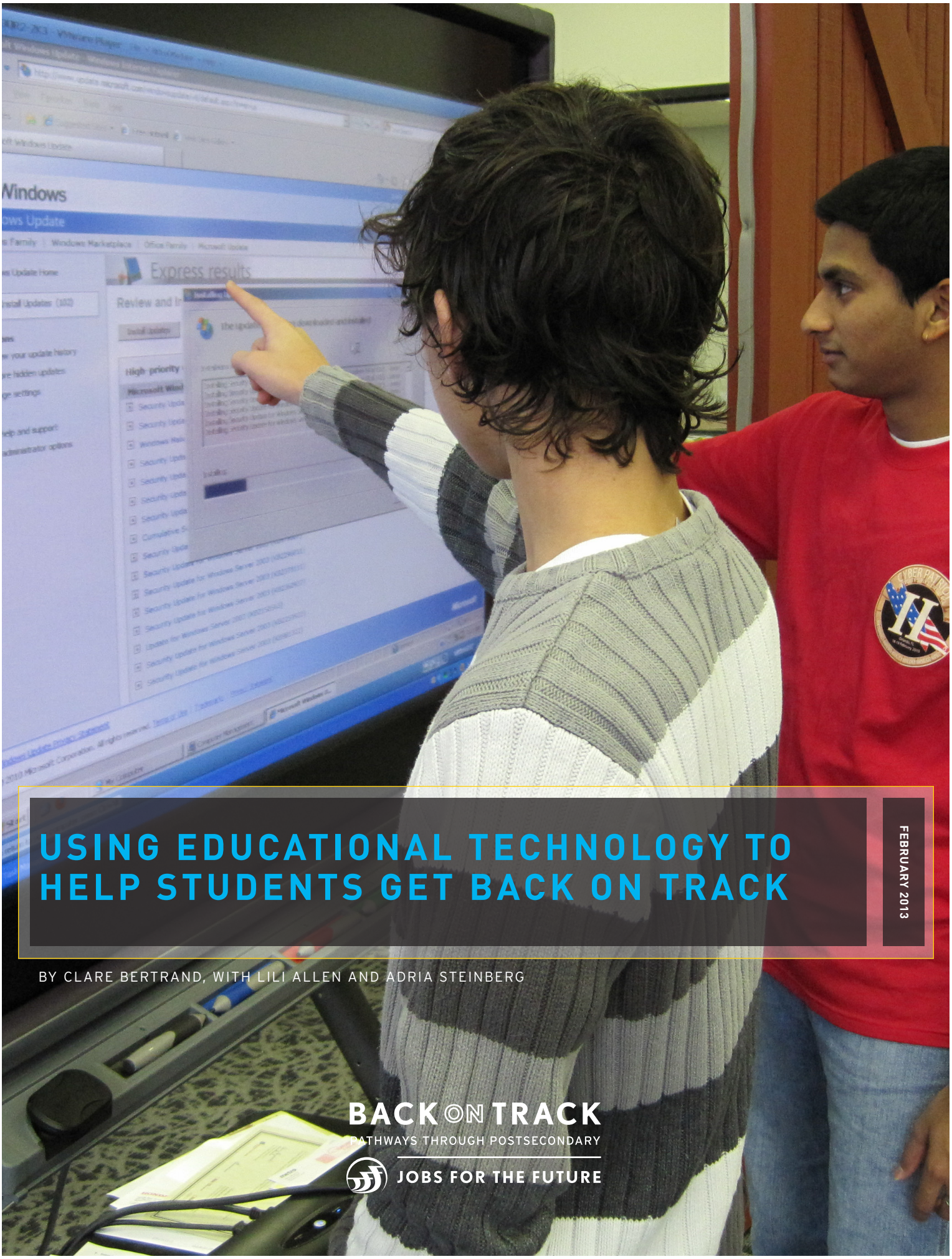

USING EDUCATIONAL TECHNOLOGY TO HELP STUDENTS GET BACK ON TRACK

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BY CLARE BERTRAND, WITH LILI ALLEN AND ADRIA STEINBERG

BACK ON TRACK
PATHWAYS THROUGH POSTSECONDARY
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Jobs for the Future's **Back on Track Through College Designs** represent the next generation of schools, programs, and pathways that reengage youth and young adults who are off track to graduation or disconnected from school and work. The three-phase Back on Track model—Enriched Preparation, Postsecondary Bridging, and First-year Support—puts youth and young adults on a path to achieving their postsecondary and career aspirations. The Back on Track model is one of JFF's Early College Designs, which blend high school and college in a rigorous and supportive program.

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ABOUT THE AUTHORS

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PHOTOGRAPHY courtesy Metro Early College High School

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INTRODUCTION

Increasingly, school districts, schools, and their partners are incorporating technology into strategies that help engage young people who have fallen off track to on-time graduation get back on track and move into effective educational pathways. This is especially true in light of the continuing pressure to raise high school graduation rates and the growth of community-wide efforts to improve outcomes for disconnected youth.

JFF's interest in technology is grounded in our Back on Track Through College model, which delineates three overlapping pathway phases: Enriched Preparation; Postsecondary Bridging; and First-year Support. For each phase, we see a range of emerging possibilities for using technology to improve student outcomes and enhance partnerships with schools, youth programs, and colleges as they implement Back on Track Through College models. In the past year, in particular, we have visited and collaborated with schools and programs that are piloting the use of educational technology not only to help students earn credits and graduate from high school but also to help them develop the 21st-century skills and academic behaviors necessary for success in college or other postsecondary education.

Using Educational Technology to Help Students Get Back on Track explores the potential to combine face-to-face instructional strategies with a whole spectrum of educational technologies. At one end of this spectrum, technology-enriched classrooms integrate technology into the classroom, but no instruction is delivered in a virtual learning environment. Much more ambitious, blended learning classrooms potentially incorporate the best elements of both face-to-face classrooms and virtual learning environments, enabling acceleration, flexibility, competency-based learning, customization, instructor interaction, and supportive tutoring.[1]

Designed for leaders in schools, community-based organizations, and community colleges, this brief addresses three critical processes that we find in schools at the cutting-edge of this work:

- Enhancing off-the-shelf platforms with teacher-authored curricula;
- Using technology to facilitate competency-based learning strategies; and
- Redesigning intake and orientation to prepare students to use technology for learning.

For each of these areas, this brief highlights a pioneering school that serves off-track and out-of-school youth and points to what that school's experience reveals about the process of transitioning to a more intentional and strategic integration of technology into educational designs.

In these and other schools that seek to get students back on track to postsecondary credentials, educators work with students who need rapid skill gains, accelerated opportunities to earn credits, and preparation to graduate from high school ready to succeed in college. It is not surprising that we are finding that technology can support those goals and potentially improve learning outcomes. Technology enables school leaders and teachers to move beyond textbooks with the development of dynamic, multi-sourced content, curated by instructors who understand the academic needs of off-track and formerly out-of-school youth. And technology empowers students to move beyond the curricula presented before them—to create their own content, conduct original research, and establish a foundation for lifelong learning.

A CURRICULUM OF ONE'S OWN: ENHANCING OFF-THE-SHELF PLATFORMS WITH TEACHER-DESIGNED CURRICULA

A common starting point in the use of educational technology in schools and programs serving off-track and out-of-school youth is the purchase of products or platforms designed by outside vendors, with the purpose of helping students gain the credits they need to graduate high school. Such products can be a useful addition to a teacher's toolbox, yet often they lack components designed to build the skills students need to acquire in order to succeed in postsecondary education. Thus, some schools have taken steps to rely less on these products and instead encourage a more school-based curriculum design process. Committed to providing a challenging, engaging, and student-centered learning environment, these schools combine elements of face-to-face and online learning. Teachers may still use some proprietary software and learning management systems provided by the district, but they also mix and match them with free, cloud-based tools and resources and even design their own lessons and, in some cases, their own learning applications.[2]

In the most promising examples, schools have phased in this process over the course of several semesters, allowing for a period of experimenting and systematizing a consistent approach to designing high-quality curricula across the school and defining structures and roles for teachers to support the use of technology. Those teachers who are most comfortable with technology may be the first ones to implement their own online curricula, modeling good practice for teachers who may need more learning and adjustment time. Phasing-in promotes peer learning, teacher buy-in, and the iteration of classroom strategies as students progress through a new curriculum and way of learning.

IN PRACTICE: CURRICULUM DESIGN

BRONX ARENA HIGH SCHOOL, NEW YORK CITY, NEW YORK

Bronx Arena High School, a New York City transfer school for over-aged and undercredited students, opened in September 2011 with a commitment to implementing blended, competency-based learning strategies.[3] From its inception, school founders and leaders have sought to develop a culture that would support teachers, engage students, and set high expectations for all in collaboration with the community-based organization partner, SCO Family of Services. They also have received support in achieving this aim from New Visions for Public Schools, Robin Hood Foundation, and iLearnNYC, an initiative within the New York City Department of Education that focuses on expanding the use of online and blended learning by empowering teachers, administrators, students, and parents with resources, online content, and a suite of data collection and educational tools.[4]

Bronx Arena opened with a very specific curricular approach. The school defines blended learning as "a sustainable (for teachers) and challenge-based approach that seamlessly integrates a range of technologies (including pencil and paper)." It uses a model of blended learning that depends on teachers as facilitators: They facilitate student learning as students use an online curriculum to complete projects and tasks and achieve competencies. Teachers use a range of academic support strategies, including one-on-one

support, and they also facilitate peer interactions and whole-class instruction. Social supports are also critical to this curricular approach: SCO student support staff run advisories, which are small student groups that tackle social and emotional issues.

Initially, staff used a learning management system (Desire 2 Learn—D2L) and a vendor-developed curriculum provided by iLearnNYC. Shortly after the school year began, teachers who were most comfortable with using technology to design curricula reordered some units of the iLearnNYC curriculum and started developing their own curricula. They also began scaffolding lessons and units in a way that they felt would enrich both the content and students' learning strategies and skills to better prepare their students for college and careers. In the process, the faculty reaffirmed that integrating skill building across disciplines was one of the most important aspects of Bronx Arena's instructional approach and a key part of what was missing from the vendor curricula. The school as a whole moved toward a process for designing a curriculum that combined college-ready content with skill building.

To begin developing a strategy for building curricula, the principal formed a committee that included both teaching staff and SCO student support staff during that first year. The members of this curriculum design team started thinking about how to develop content, both for specific courses and across disciplines. First, they drew from the Common Core State Standards to identify the five most critical competencies on which the school would focus. Now known as the "Arena High Five," the competencies are the ability to:

- Find relevant information and/or produce original questions;
- Process information and produce knowledge
- Demonstrate critical thinking;
- Demonstrate self-management; and
- Demonstrate reflection and/or knowledge transfer.

These competencies are "cross cutting" across the school, and all students must practice and master them before graduating.

Second, the team developed 53 foundational cross-discipline competencies to underpin all instruction. These, too, are based on the Common Core as well as on New York State standards.

Third, the team developed a strategy for incorporating challenge-based learning, or projects, into coursework to ensure that students develop their Arena High Five competencies and to reinforce the foundational cross-discipline competencies. Operationalized, a course consists of content plus three major "challenges" that grow in complexity and demonstrate students' mastery of concepts and connecting "big ideas" (*see box, "Three Student Challenges"*). Teachers facilitate students' construction of knowledge through a combination of online and face-to-face learning.

THREE STUDENT CHALLENGES

For a Bronx Arena student to pass a course, she or he must complete and pass three challenges:

- Show understanding at the "big idea" concept level and mastery of basic skills.
- "Go deep" into the content by completing a more detailed, topic-based, skill-rich challenge.
- Apply knowledge outside of the subject she or he is working in and display an ability to transfer knowledge.

The curriculum design team also developed a curriculum design guide to support teachers in creating their own online curricula. By spring 2012, English and science classes were completely teacher-authored. A goal for the school in 2013 and looking ahead is that the curriculum design team will develop all courses in partnership with content-area experts (i.e., teachers).[5]

An important reason why the time-intensive process of developing teacher-authored curricula worked is because of teacher buy-in—first via peer learning and "seeing" what other teachers were doing with support of the school leaders, and second, through teacher and school leader-led professional development (in addition to professional development provided by New Visions and the NYC Department of Education). During the first year (2011-12), professional development occurred twice a week during student advisory.[6]

Delivered in a blended learning format, the professional development workshops enable teachers to see blended learning approaches modeled, giving them a better understanding of why students would benefit from them and become more engaged. The curriculum development also took place after school, and the curriculum team and teachers planned throughout the summer, participating in a one-week, school-wide "curriculum camp."

EDUCATIONAL TECHNOLOGY AND COMPETENCY-BASED LEARNING STRATEGIES

A growing number of schools serving off-track and out-of-school youth have adopted, or are in the process of adopting, a competency-based approach.[7] Students proceed toward graduation by mastering content and skills according to specific learning objectives. This approach is appealing to many schools for this population because students who are far behind in credits (which are usually awarded based on "seat time" in required courses) can accelerate their learning, and because students learn to be more responsible for their own learning. In a competency-based learning environment, learners get a "road map" of what they need to do and a means for moving forward as expeditiously as possible.

Educational technology can be a powerful tool for implementing competency-based learning curricula. Traditionally, competency-based learning tools include large binders, portfolios, and a lot of paper, which can be unwieldy, inefficient, and hard for students to track. With new digital tools and resources, including cost-effective, cloud-based platforms, competency-based curricula can be organized to automatically map student progress, and they can enable each students to work at his or her own pace—and at times and on days outside the traditional school schedule.

IN PRACTICE: TECHNOLOGY AND COMPETENCY-BASED LEARNING

BOSTON DAY AND EVENING ACADEMY, BOSTON, MASSACHUSETTS

Boston Day and Evening Academy is a year-round alternative high school that serves students who are over-age for grade level and are either at high risk of dropping out or have already dropped out of high school. BDEA's learning environment blends strong academics and wraparound supports, including a competency-based curriculum. It opened as an in-district charter school in 1995 and now operates under a state charter as an independent public school.[8]

BDEA's curriculum is comprised of over 300 benchmarks—in humanities, math, science, and technology—that are used to measure the competence of each student and cumulatively represent the knowledge and skills that every graduate should possess. BDEA assesses all incoming students to determine which of these competencies they already have and what they will need to do before graduating.

In 2009, BDEA received a two-year grant from the Massachusetts Department of Elementary and Secondary Education to enhance its competency-based approach through the integration of technology. During the first year, BDEA teachers learned about how similar schools were integrating technology and how online learning could be adapted to support BDEA's student population. The school also used the funding to send a small group of teachers to a year-long instructional design course in education technology at Northeastern University, as well as to buy equipment and pay a lead technology teacher who drove the work. Teachers began to construct 11-week courses on Moodle (a free learning management system).[9] By the end of the year, they had piloted the courses in a few classes to see how students responded.

Building on the experience creating those courses, teachers piloted different scenarios of online learning in the second year. The school had identified its school-

based competencies, aligned with Massachusetts state standards and the Common Core, and it had developed a culture of utilizing teacher-authored curricula. As a result, when the teachers started transitioning the course content to Moodle, they could concentrate on instructional design. The school's leaders gave teachers the flexibility to pilot new courses and experiment when creating competency-based online environments. At the same time, the leaders promoted peer learning among the teachers, who supported one another by sharing different strategies and approaches when building and implementing their courses. The school also used all-staff meetings as deliberate opportunities for professional development around online learning.

These courses, called Personalized Online Learning (POLL) courses, include math, science, history, and "undergrad tech" courses, as well as Beyond BDEA, the school's college and career exploration course. The POLL courses were developed as online alternatives to face-to-face courses and are used that way. Students can opt into a POLL course, as appropriate. Because each POLL course is both self-paced and blended, students who opt to take it have access to the instructor if they have questions or need help, and they are required to do "physical" labs and projects as assigned. Teachers also use POLL within their face-to-face courses to help students catch up.

The POLL course design empowers students to take their learning into their own hands. As a result of the POLL classes, some classrooms are set up as virtual labs, with a content expert/facilitator present, while other classrooms have face-to-face instruction happening simultaneously with a few students working on their POLL course.

Although teachers have flexibility around how to design their POLL course, staff have realized through scheduled peer-sharing sessions that consistent course introductions, policy, and guidelines were necessary if they were to establish the same high expectations students experienced in their face-to-face classrooms. They also have realized that embedding benchmark "checklists" and competencies into each course, and giving students the tools to note and follow their own progress as they move through the course, will help ensure the rigor and transparency that students at BDEA are used to.

As they have introduced the POLL courses, teachers have found that they need to iterate and adjust some aspects for students. For example, when some students found it difficult to manage their time, teachers created "pacing guides" that gave them an understanding of where they should be during a POLL course (e.g., "complete Unit Two by the week of October 8"). Although this is only a guide and students can work at their own pace, many students need that structure in the transition to online learning. Teachers also created a course module entitled Online Learning: How to Be Successful, and they use it in all POLL courses to walk students through how to complete assignments and communicate with teachers. This document also gives general "netiquette" tips and reviews how to take notes in a POLL course, reminding students of a skill they may not associate with online courses.

Teachers say the addition of POLL courses has benefited the school culture. An increase in one-on-one interactions with POLL students enables flexible, individualized learning. Also, teachers report that students are showing more responsibility for their learning. Additionally, teachers enjoy the peer-learning aspect of developing POLL courses.

To sustain the development and use of POLL courses as a learning option, the lead tech teacher has developed a professional development course (also in Moodle) that includes instructional design resources and BDEA best practices for POLL. The school's decision to use a free platform allows them to continue their integration and develop more courses online for students. This gives students more choices for completing their competencies and graduating high school ready for postsecondary education.

INTAKE AND ORIENTATION: PREPARING STUDENTS TO USE TECHNOLOGY FOR LEARNING

Students enrolling in Back on Track Through College schools are entering what may be their second or third high school, and they may be anxious or have fairly low expectations not only of the school but also of themselves as students. For these reasons, well-defined, affirming intake and orientation practices are critical. In the schools and programs we visited that had recently transitioned their classrooms into blended or technology-enriched classrooms, leaders and staff have found they need to adjust their intake and orientation processes to reflect the new instructional strategies and school culture. They can not assume that youth will "hit the ground running" on the use of technology just because they might have a smart phone or use Facebook. Many students have never used technology in a learning environment.

In a blended or technology-enriched school, the intake and orientation process can be critical in conveying academic and behavioral expectations and ensuring that the student understands the mode of instructional delivery. Students need to understand what is meant by success and what it entails, or they can feel overwhelmed and lost.

In blended classrooms that are also competency-based, students face a new learning environment—one in which they are more accountable for their own learning. In traditional schools, students can show up to class, do the minimum required, and pass with a C or D. A blended, competency-based learning environment challenges students to complete learning tasks to progress—in effect, the class does not continue unless they continue. This is a new expectation for students, especially those who have not been successful in school.

Comprehensive intake and orientation can help students make this transition to a new learning environment, giving the students a "test drive" of what happens in class, the tools and resources they will use, and what is expected of them. Great value can be found in comprehensive intake and orientation processes that:

- Include a focus on the behaviors required for success in technology-enriched or blended classrooms;
- Empower students to take control of their learning sooner; and
- Enable them to accelerate their learning because they understand how to navigate through a blended learning curriculum.

IN PRACTICE: INTAKE

BRADY EXPLORATION HIGH SCHOOL, JEFFCO SCHOOL DISTRICT, DENVER, COLORADO

Brady Exploration High School opened in 2008 as a fully online school and a mission to "find any student who has dropped out, been expelled, or is not attending school; get them a diploma and off to college." The average student entering Brady Exploration is 17 years old and has earned three credits toward the 23 they need to graduate in Jefferson County, Colorado.

At first, the staff was impressed with the all-online program's positive impact on discipline and attendance, but they were less pleased with the level of academic rigor and soon discovered that students could easily

access answers without actually learning the content. At the time, the curriculum package they were using was not flexible and could not be customized to meet the school's and its students' specific needs. The school leaders and staff decided to create teacher-designed courses and move from fully online to a blended approach. In 2009, Brady made the transition to a fully blended school that is also competency based.

The school day at Brady reflects its blended learning strategy. Students do all of their work while physically on the campus. The average scheduled block is divided into sections: 30 minutes for content delivery via computer; 30 minutes of face-to-face instruction; and 30 minutes of "lab" (small group work, projects, or labs if in science). Students spend eight hours a day at the school but choose from two staggered schedules to fit their work or home schedules.

To ensure that entering students understand the learning environment, Brady developed a two-day intake and orientation process called eSTART that introduces students to the school's academic, digital, and social culture. Through eSTART, students get a sense of the physical and virtual environment.

Even before students begin eSTART, they and their parents or guardians come in for an informational meeting. The principal goes over the expectations of students and school policies, and gives students and their families an opportunity to ask questions.

The next step is eSTART, offered every nine weeks. Over the course of two eight-hour days, students can determine if a blended environment is right for them, and Brady staff can see if the student are mature enough to be aware of and manage their own behavior. If students pass the orientation, they are accepted into the school and earn one-quarter credit toward a diploma.

The first day of eSTART includes a welcome from the administration, a review of Brady policies and procedures, eSTART policies and procedures, and "get to know you" activities. Students participate in a 4.5-hour blended learning course, Intro to Online Learning. This course introduces Brady's learning management system platform and the general layout of an online course as designed by the school's teachers. It gives them an opportunity to assess the student's digital literacy, reading skills, and classroom behavior.

eSTART introduces students to the notion that they will be responsible for their own learning and for completing their work. They lead themselves through the course and complete their assignments, with the support of a teacher/facilitator. Students actively participate in their own orientation, which is a powerful way to prepare them for blended learning.

The second day concludes Intro to an Online Learning, with questions about the course and feedback from students. It also includes assessments, meetings with a counselor, and a tour of the school and staff (library, office, security, cafeteria, custodial). A Completion Ceremony concludes the day and eSTART.

Students must actively participate in the two-day class, complete and pass the blended course, have perfect attendance (including showing up on time), and display excellent behavior. About 95 percent of the students meet all the standards for entering Brady. Those who do not are given a chance to take it again the next term, nine weeks later.

Although most schools for returning dropouts have an intake process, blended schools must pay special attention to orientation, ensuring that students know exactly what to expect and what is expected of them. Even with Brady's comprehensive orientation, teachers and administrators find that students still need about six months to adjust to the blended school environment fully and the concept that they can accelerate academically at their own pace.

CONCLUSION

Across the schools profiled here, we found a set of similar attributes and conditions that enable them to develop and implement a blended learning approach that integrates technology to deepen learning, provides opportunities for students to assume responsibility for learning at their own pace, and supports the role of the teacher as facilitator and guide for student learning. These attributes are:

- A professional culture of trust, creativity and experimentation, learning, and sharing is present (or being developed) and nurtured to scale up new instructional strategies across the school.
- Staff see integrating 21st-century and college-ready skills into the curriculum as essential to deepen student learning and ensure success in secondary and postsecondary settings.
- A foundation of consistent instructional strategies across classrooms enables the careful integration of technology into the classroom.
- Educators need time to participate in professional development and peer learning, as well as to plan and design technology-enhanced instructional approaches.
- Students are supported in the new learning environment. They receive guidance on how to navigate it and what it means to be responsible for their learning in a 21st-century classroom.

Making smart, strategic use of technology is essential to helping 16- to 24-year-olds who are off track or out of school prepare for the bright future that they deserve. Delivering instruction with technology is becoming more cost-effective and less exclusive. Access issues still prevail, but as technology becomes more mobile and broadband expands to more urban and rural settings, more teachers and students will be able to use 21st-century tools and resources to learn, curate, and create.[10]

The schools profiled here are innovating by integrating technology into academic programs for off-track and formerly out-of-school youth, but they also remind us that a learning environment that nurtures academic agency, acceleration, academic rigor, and college-ready skills does not automatically happen with technology alone. It is the thoughtful, deliberate way these educators are using technology in the classroom that has made the difference for their students, not the technology itself.

ENDNOTES

[1] See Innosight Institute's framework for a deeper look at types of blended learning, http://www.innosightinstitute.org/.

[2] iNACOL, the International Association for K-12 Online Learning, defines a learning management system as a set of tools that houses course content and provides a framework for communication among teachers, students, and parents. For more information on learning management systems, see: http://www.onlineprogramhowto.org/admin/learning-management-systems/.

[3] Transfer schools are small high schools designed to reengage students ages 16-21 who are over-age and undercredited. The schools are developed by the New York City Department of Education, often in partnership with community-based organizations. CBO staff provide comprehensive supports to students, internships, and assistance with postsecondary planning. Bronx Arena's partner is SCO Family of Services, http://www.stchristopher-ottilie.org/.

[4] Like all schools in New York City, Bronx Arena is part of a network of schools run by a partner support organization that, along with the city department of education, provides support to the networked schools. Bronx Arena's PSO is New Visions for Public Schools, http://www.newvisions.org/. To learn more about iLearnNYC, see: http://schools.nyc.gov/community/innovation/izone/Innovations/ilearnnyc.

[5] Over the summer of 2012, Bronx Arena collaborated with the Connected Foundations team (in the NYC Department of Education's Office of Postsecondary Readiness) to support the development of a dozen new courses by transfer school teachers in a blended, competency-based format. These courses are being tested and refined at Bronx Arena and other transfer schools across the city.

[6] Student advisory is facilitated by the SCO student support staff.

[7] For more information, see: Rebecca Wolfe. 2012. *Aligning Competencies to Rigorous Standards for Off-track Youth*: *A Case Study of Boston Day and Evening Academy*. Boston, MA: Jobs for the Future; and Chris Sturgis, Bob Rath, Ephraim Weisstein, & Susan Patrick. 2010. *Clearing the Path: Creating Innovation Space for Serving Over-Age, Under-Credited Students in Competency-Based Pathways*. Vienna, VA: iNACOL.

[8] BDEA is a Horace Mann Charter School, independent public schools that operate under five-year charters granted by the Massachusetts Board of Education. For more information on BDEA, see: http://www.bacademy.org/about/fast-facts and *Aligning Competencies to Rigorous Standards for Off-track Youth*.

[9] For more information on Moodle, see: https://moodle.org.

[10] See: John Wells & Laurie Lewis. 2006. *Internet Access in U.S. Public Schools and Classrooms: 1994-2005*. Washington, DC: National Center for Education Statistics; Pew Internet April 2012 study, http://pewinternet.org/Commentary/2012/February/Pew-Internet-Mobile.aspx; Home Broadband Report, 2010, http://pewinternet.org/Reports/2010/Home-Broadband-2010.aspx; and Pew Internet September 2010 Infographic, Updated: Change in Internet Access by Age Group, http://pewinternet.org/Infographics/2010/Internet-acess-by-age-group-over-time-Update.aspx.

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