

AN OPENNESS INITIATIVE STARTED BY BLACKBOARD

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Competency-based Education (CBE)

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Changing adult students' lives with Competency-based Education

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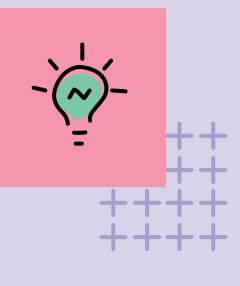
Change is the biggest difficulty for institutions when implementing a CBE program



### e-learn

is an openness initiative started by Blackboard.

Functioning as a teaching and learning community collaboration, E-Learn is a place for educators to share ideas, insights, perspectives, and practices for the purpose of improving student success.



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for further information.



## From the Editor Celebratin Change.

#### WELCOME TO OUR NEW APPROACH

to E-Learn Magazine. Going forward, we aim to partner with the global education community to provide a space for collaboration through a co-creation approach that shares meaningful dialogue, actions, and topics in education.

In this edition, we are delighted to present Competency-based Education (CBE) as our main topic. Have you ever thought about how to create a dynamic model of education by ensuring that students master different skills at their own pace in order to become better at others? In the next few pages, you will find a special infographic with tips and key points to effectively create a CBE program. There is also a comparison chart between traditional learning and CBE.

It is essential that we mention the participation of our external experts in this edition: Dr. Jon Scoresby, Program Dean of Competency-Based Education at University of Phoenix; and Cali Morrison, Director of Alternative Learning at American Public University System and consultant with the WICHE Cooperative for Educational Technologies (WCET).

We also would like to thank Blackboard customers who shared their valuable expertise, including Timothy Ponder and Dr. Jordan Tayce from the Texas A&M University College of Veterinary Medicine & Biomedical Sciences; Russ Lichterman from Wilmington University; Dr. Kulari Lokuge from Monash College; and Stuart Frankhauser from Nossal High School.

We would like to thank our Blackboard experts:
Dr. Van L. Davis, who contributed a column about how to change adult students' lives with CBE; Dr.
Andrew Ramsden, Dr. Karen Yoshino, and Dr.
Susan D'Aloia, who wrote valuable columns and articles that our community will find useful to support their CBE initiatives; and we also want to thank our Product Managers,
Pablo Borbon and Wade Weichel, for sharing their knowledge about the CBE features within each of the Blackboard platforms.

Finally, we want to pose the following question: If you have already started a CBE program, how are you working with faculty members? If not, what kind of initiatives does your institution have in mind to offer your students the opportunity to learn at their own pace?

Sincerely,

E-Learn team

## e-learn

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# How e-Learning is being used in veterinary training

Many subjects can be taught via
E-Learning through readings, video
assignments, and voice recordings
that students will remember and
practice on their own time. However,
veterinary medicine requires very
precise skills that require practical
application, so E-Learning is not used
as frequently as it is in other subjects.

BY: CHRISTINA GOMEZ ECHAVARRIA COLLEGE STATION, TEXAS, UNITED STATES



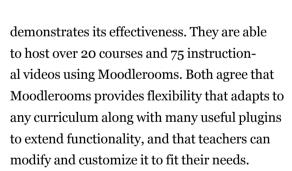
(CET) at the Texas A&M University College of Veterinary Medicine & Biomedical Sciences works with faculty to develop means of integrating E-Learning into their curriculum. Tim Ponder is an instructional technologist and Dr. Jordan Tayce is an instructional designer at the Center, and together with their team, they design and create E-Learning courses that faculty members can use to enhance their teaching.

They started by determining which courses could benefit from a blend between E-learning and on-campus learning. Each course is designed following the backwards design method – by starting with the goals, and determining what the students need to know or be able to do by the end of the course. Then the team works to determine which technologies might adequately augment the learning. As Dr. Tayce explains, "It is really important to

develop projects that use technology with a purpose in mind, not just for the sake of using technology."

One of the more popular E-Learning courses they have created is a course teaching core surgical skills. When one thinks of surgery, one typically thinks about fine movements and tactile sensations, which are difficult to present through an E-Learning environment. The CET designed this course using a blended learning strategy. Students first learn basic information, such as how to hold a scalpel blade, on their own time. Then the students can come to class and apply what they learned in a hands-on laboratory environment. Tim and Jordan agree that this approach is successful due to the blended element, where a faculty member can advise the students on their technique and correct it as needed.

Interestingly, ten other veterinary schools around the United States are now using this course, which



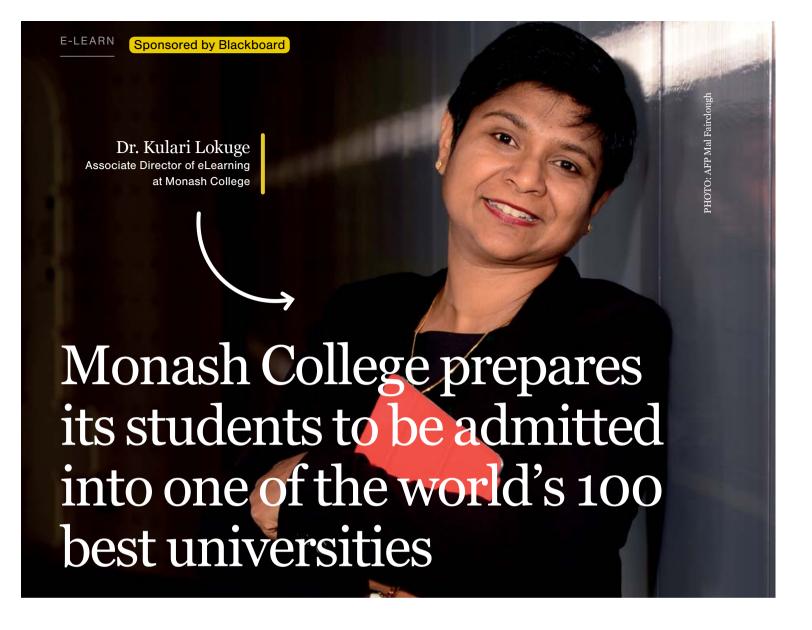
In fact, utilizing a Learning Management System has had a great impact on teaching and learning at the Texas A&M College of Veterinary Medicine. The CET designed a teaching approach that they call Collaborative Case Based teaching, which makes the classroom more student-centered. Using this method, the professor divides the class into groups and begins walking the class through a case study (for example, a dog comes into the clinic presenting with a cough). Each group is provided questions as the case unfolds, and submit their

answers via Moodle. The faculty member is able to see the class answers in real time, and can alter his/her lecture accordingly. If all of the groups get an answer correct, then the professor can move on to the next subject. However, if only a handful of the groups correctly answer a question, the professor spends more time discussing that topic. The team at the CET has worked with faculty to develop over 45 case studies to use in the curriculum.

Tim and Jordan hope to keep advancing the work of the Center for Educational Technologies, and help every faculty member dig deeper into what E-Learning is and how they can benefit from it. Tim emphasizes that the blend between E-Learning and face-to-face classes is vital because E-Learning is not a magic bullet. Their primary goal is to ensure that students are getting the best education in the best possible way.



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BY: NICOLÁS PEÑA MELBOURNE, AUSTRALIA

For Dr. Kulari Lokuge, Associate Director of eLearning at Monash College, the pedagogical approach taken by the Central eLearning Team (CeLT) has allowed them to support the delivery of high quality pre-university courses. The creation of professional development opportunities within the college has enabled staff to progress well with Technology Enhanced Learning and Teaching.

#### MONASH COLLEGE'S ACADEMIC AND ENGLISH

language programs are a very important step for many international students wanting to enter Monash University, one of the top 100 universities in the world.

Monash College's vision is: 'Student Centred, Quality Led Growth' and it is for this reason that online, flipped and blended learning play an essential role.

Dr. Lokuge explains that Monash College's model of education seeks to ensure that digital teaching tools are incorporated into all of its courses, and is inclusive of language and subject specific domains. However, she insists that pedagogy must precede technology and the starting point for any successful technology enhanced learning is a team that has clear goals and understands the objectives of the institution, and the impact that the technology will have on their students' lives. "Our eLearning team helps to resolve key issues of pedagogy that teachers face every day through educational technology."

When asked about the process of connecting teachers to digital tools, and adapting to new technology, Dr. Lokuge said: "There are those who want to try new things and do everything differently; these are the first ones who will try new ideas. The rest come on board when they see things done and understand the benefits."

#### Form and content changes

The team led by Dr. Lokuge prides itself on the progressive way in which the customization of Moodle themes has been implemented. "What once looked like a repository for information and documents now looks like a modern website, and that alone encourages students and teachers to use it." The new themes have a modern look and a mobile friendly interface which invites students to access Moodle frequently and easily. These changes in look and feel' sustain a positive cycle: when students find their courses more attractive, they use them more. This encourages teachers to continue developing and personalizing them.

Nonetheless, it is also important to emphasize that it is not just about making adjustments to the interface, but also about complementing actions with structured and conscious solutions that address the needs of the students. "It's not just about putting a nice theme and making everything look nice, it's about having all the pieces in the right place, training teachers to use them effectively, and constantly thinking about how things can be improved," says Dr. Lokuge.

#### Continuous evolution

Evolution and personalization is a key driver in Monash College's eLearning strategy. With avenues for continuous review and reflection, the eLearning team, along with the support of the teachers, constantly evaluate processes and decisions to deliver high quality educational standards, that engage and energize both their students and teachers.

Dr. Lokuge considers the learning experience as a journey, from the very first week to the last. "In this journey, the students' learning experiences are taken as one of the most important aspects, and the subject matter is in constant evaluation and transformation towards making the learning experience valuable."

Being a client of Blackboard allows Monash College to maintain open conversation with their technology partner, which is key to delivering on their commitment to continuous improvement and evolution. Dr. Lokuge says, "Feedback is very important; it is essential that we work together from beginning to end, because we are the ones that have the experiential role, while the technology partner can advance the technology. But if the conversation isn't continuous, we could be working in opposite directions. Together, we make it happen."

The community that promotes Moodlerooms Enterprise is advanced in the use of learning management systems, and this relationship and open channel of communication allows us to reach a higher level of personalization in its platforms.

For Dr. Lokuge, aligning the whole team with the same vision is the core of every successful process. In her opinion, it is about being able to change lives through education and all the tools that we have available today.



Most people in industries around the world will tell you that video is the present and the future. Industries like advertising, journalism, entertainment, and even education are embracing the video format to completely transform their industries.

Video has become so important because it stimulates all parts of the brain and allows for the person to feel like they were there to feel the experience as a whole.

Video in learning is especially important because most people will need to learn by seeing and by listening.

BY: CHRISTINA GOMEZ ECHAVARRIA
NEW CASTLE, DELAWARE, UNITED STATES

# Never miss a class again: Wilmington University is streaming classes in real-time

#### RUSS LICHTERMAN IS A FORMER TELEVISION

production professional who never thought he would end up working in education when he first started his career. While working in broadcast TV production, he started teaching a course in film history as an adjunct at Wilmington University. He loved it so much that he got a master's degree in education while still working in television. In that master's program, he met an instructor who would later become the dean of the College of Online and Experiential Learning. They eventually realized there was a need for someone to be dedicated to the multimedia and video aspect of online learning that was growing exponentially. After nearly 15 years in broadcast television he came to the university full time to help grow video and multimedia in e-learning. Today, he

realizes the importance of his job since there is increasing demand for video recorded classes, e-Learning support, and even requests to transmit live classes for students to attend remotely.

In January of 2017, there were two students who reached out to the university for help.

They needed two more courses each in order to graduate. The problem was that they were in another city and could not attend the class.

The university had to come out with a solution to offer synchronous learning via a digital option. They decided to build two video-enabled classrooms. Russ explains that there are low cost options to turn a classroom into a video-enabled environment that allows instructors to transmit the class to the students in real-time.

#### 8

#### Russ Lichterman suggests a few things to keep in mind when building a video-enabled classroom on a budget:

1



Any institution has to remember that the students who are fall away have paid the same amount of money as the students who are inside the classroom, and therefore deserve high quality video so that they do not miss anything.

2



You have to choose what conferencing platform the institutions want to use and what will be the form of delivery to the students who are connected remotely. Wilmington University decided it would be best to use Blackboard Collaborate, something that they already had implemented.

3

To equip the room, the institution has to think about how

it will be filmed and

about the audio



The classroom needs to have interactive projectors or smart boards. The reason for this is that, realistically, the students who are away will be able to see the teacher and their gestures, but probably won't be able to read what is written on the board. Since Blackboard Collaborate has a whiteboard option, students who are far away will have the text on their screens and the students in the class will see it like it was a normal whiteboard.



For video recording, Wilmington University has a 1080p camera, which generally is used for security purposes, because it does not record anything. It just transmits the signal to an IT computer via USB, that way it can be rerouted to the Blackboard Collaborate platform.



The microphones are USB tracking microphones that work really well in a medium sized classroom because it tracks where the teacher is moving and turns on as the teacher moves around the classroom to always get the best sound.



It is also important to implement speakers in the classroom. This way, the students who are far away can turn on their microphones via Blackboard Collaborate and participate if they have a question.

4



Russ is clear about having enough knowledge about the technology, the resources, and the streaming for it to be able to work. There are options of having an integration company install the software and the hardware, but those options are very expensive. The camera and microphone here come out to around \$1,000, including the means to get the video converted to a USB signal. It's much more cost effective for most schools that are looking to build a video-enabled classroom for the first time.

Since the implementation of these two classrooms has been going on for less than a whole semester and it was something that had to be done quickly, it was good for them to be able to do it in an inexpensive way that was also agile. But now they are seeing the interest of project leaders and deans of other faculties about using these classrooms, and the classrooms are already booked for classes during the summer and fall terms.

He knows that this accidental opportunity of having video-enabled classrooms that can transmit classes in real-time is a possibility to create a whole new learning environment. Of the approximately 20,000 students that are currently studying at Wilmington University, there are about 8,000 that take at least one online course within the university. There are many students that may also be interested in either going to the class on campus or attending remotely.

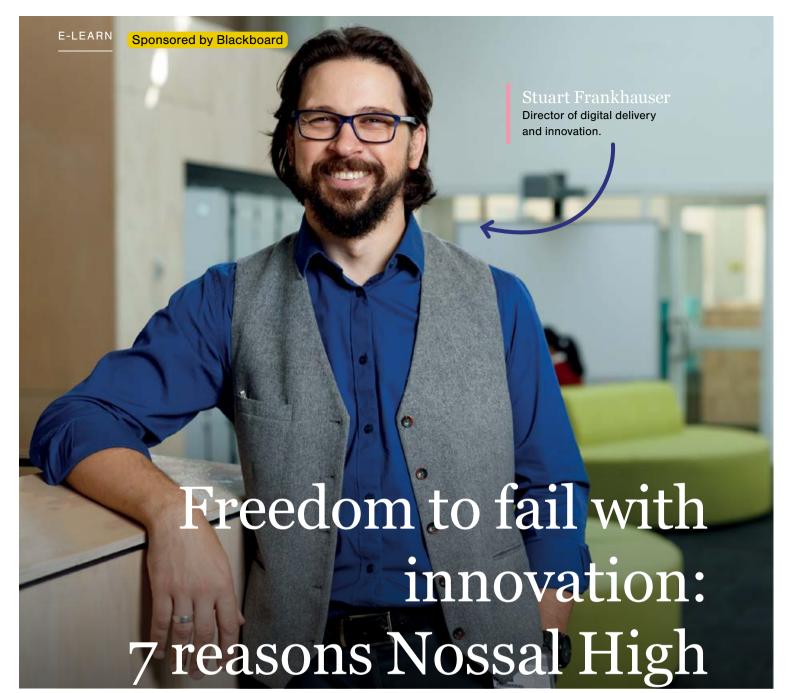
Though this is currently a small-scale pilot project, the live streaming classes added to the thousands of asynchronous e-learning classes offered by the university creates the potential for there to be a huge market. They do, however, want to keep several things in mind: not all classes are fit for a digitally transmitted synchronous learning environment. This can be a burden for the teacher because they have to cater to two types of students (in person and virtual). Russ says that classes that are more black and white, such as calculus, work very well with the classroom studio method. In contrast, classes like sculpture or even a humanities lesson that might stir up a debate can be much harder; it all depends on how the teacher is willing to handle it. The second thing to keep in mind is that even asynchronous learning needs lots of video material, and he encourages teachers to make video announcements, stream videos, video discussion groups, and also teach students to make videos as well.

The educational technology and multimedia teams have also put a lot of effort into the asynchronous part of the e-learning using lots of tools that integrate really well with Blackboard Learn, such as Kaltura. They use Kaltura for live video streaming, but that is only for one-way interaction They also use Kaltura for asynchronous participation and video discussion groups. Right now, Wilmington University has over 42,000 videos in their Kaltura library; faculty members and students create nearly all of the videos.

As Russ says, it's all about finding the tool that works. And for that reason, Wilmington University has started offering a certificate in E-Learning Design and Technology. Students learn how to handle the e-learning in various situations and environments and are prepared to utilize and assess what technology is best used and when. This shows that the students believe in the future of e-learning.

Russ says that as of right now, e-learning is still structured around traditional four year learning institutions, but we will start seeing a drastic change in the near future. A change where degrees are not what is most important (like today), but that with a mixture of certain certificates, a person can make their degree unique and have the same equivalent of a master's degree. It no longer makes sense that a university tells different students that they all have to take the same classes. One size does not fit all, so why should education be the same if the students are so different?

It is clear that video is the future of e-learning because there are so many ways to do it and engage learners in a different and better way. Wilmington University, through a series of unexpected events, has found the future of their university through synchronous and asynchronous digital video options.



School is different from the rest and leading the way for schools in the future Nossal High School in Victoria, Australia is determined to offer their students a different form of education that is far beyond memorizing facts and dozens of hours of homework. They seek to prepare students for their professional and personal lives, to enrich their knowledge, and to prepare them for an adult learning environment.

BY: CHRISTINA GÓMEZ ECHAVARRÍA VICTORIA, AUSTRALIA

#### STUART FRANKHAUSER IS THE DIRECTOR OF

Digital Development and Innovation, as well as a physics teacher at the high school and he explains why it has been challenging and rewarding to teach in a completely different way compared to the previous 20 years as an educator.

They are a select entry school.

What that means is that they offer the very best education to the best students. The reason why this is important is that Nossal High School is a mid-sized high school, so the teachers work very hard to ensure students are provided with as much one-on-one support as possible. All students have also gone through a series of math and English tests to evaluate their abilities. A majority of the students at Nossal have changed schools after being top of their class at their previous school. These students are highly motivated to learn and become better every day. Teachers make sure that they can make the most tools available to students to accelerate their learning.

2. They embrace what technology can do for education.

Stuart Frankhauser started as the

As director, he was in charge of managing new tools and planning what the expectations the school had in terms of technology. He first decided to implement Blackboard Learn as the main LMS of the school and then merged all of their pedagogical approaches through E-Learning. He realized that there was no reason to separate E-Learning from pedagogy and classical learning. This is a very big difference, because it doesn't mean that they are using E-Learning with no real purpose and they wanted to make sure that every class was as cutting edge as possible. Why can't every class be an incredible lesson? That can happen if the technology is implemented correctly and successfully merged with the pedagogical approach each teacher decides to give. All the classes, materials, and even the extracurricular activities are connected to Blackboard Learn in order to make them more dynamic. Teachers decided to embrace the change of a traditional education approach and wanted to know how they could move forward. For this reason, Stuart Frankhauser's job title changed to Director of

Director of E-Learning in the school.

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Digital Development and Innovation, a title that is very difficult to find in a traditional school.

#### Stuart made the school more progressive with Digital Delivery Days.

He was inspired by a case in Singapore where, after some sort of infectious disease breakout, schools and universities had to be cancelled. After that, educational institutions decided to implement an E-Learning strategy to remedy the incident if it occurred again, and they were prepared to teach the students. Stuart thought that it was an interesting approach and decided to try it out. After purchasing Blackboard Collaborate Ultra, they were able to do the first experiment. During the Digital Delivery Days (DDD), students stay home and connect to each of their classes through Blackboard Collaborate Ultra. Stuart explains that these days have three main advantages.

- For starters, students become accustomed to a learning environmen that is similar to a university, where they will have to manage their time an
- Stuart explains that students get used to the fact that when they are in a classroom and they don't understand the material, the teacher will sense that confusion and try to get them to understand. During the DDD, this is not the case; students have to be proactive in letting their teachers know what they don't understand, and therefore taking charge of their own learning.
- Some of the students at Nossal have up to a 3-hour commute to school and back each way. With the Digital Delivery Days, their routine dramatically changes and therefore the lessons are even more memorable. "It's nice to see that they are also creating memories through this," Stuart says. After three years of DDD being held approximately three times every school term per school year, that teachers no longer need any training in order to conduct their normal classes through Blackboard

After they realized that it was a good methodology, they also implemented a period of asynchronous learning at the end of the school year. When students are getting ready for their final exams, the school gives them a four-day weekend to prepare. This time provides them with more flexibility to study, hand in their work, and also have the opportunity to meet up with the teacher in a Blackboard Collaborate Room in order to ask questions and revise certain topics.

#### The Nossal High School motto is "Embrace the Challenge."

Stuart says that this has become a way of seeing life, for both students and teachers. Nossal is a relatively new school as it was founded just nine years ago. One of the challenges that the school has set is to make students become the best they can be for the future. For example, Stuart, as a physics teacher, knows that in the real world, 80% of his students won't apply the physics he teaches them in their lives, but he also knows that the collaborative work in the classroom and the critical thinking that he teaches will better equip them for university, their jobs, and in their lives in general. They also want to implement entrepreneurial skills that collaborative learning can bring to students. They want to teach all the 21st century essentials that the students will need. However, it has taken many teachers time to get used to the idea and the different teaching methods. Stuart confesses that this has been the most difficult and yet most rewarding job he has ever had.

Nossal decided to adopt the "Five Minds of the Future" model, based on a book by Howard Gardner, which states that all people should develop their five different minds:

The disciplined mind, the synthesizing mind, the creating mind, the respectful mind, and the ethical mind. All the curriculums of different classes at the high school aim to teach all the different minds and nurture each one. The Gus Nossal Medallion is an award that students are able to earn at the end of year twelve. The award is named in honour of Sir Gustav Nossal, a famous Australian scientist whom the school is also named after. Students have to complete certain activities throughout their academic careers to develop all five minds. If students have enough points at the end of grade twelve, they receive the medallion. It is not easy and it is very competitive. And yet, the students have embraced the challenge and work towards achieving the goal by understanding that it makes them more rounded and better-prepared people and professionals. Ultimately, the objective of high school is not to memorize formulas and capitals, but to prepare the students for the real world.

#### 6. The teacher's role has dramatically changed.

At Nossal, the teacher is not seen as the one with the last word or ultimate knowledge. Both the students and the teacher have something to bring to the table. For that reason they are doing an experiment with Blackboard Collaborate where, in each class, the students are divided into small groups and sent materials, whether it be talking points or diagrams, for example. The group discusses the materials and the teacher might lead the discussion, but the learning is in the student's hands. That way, the traditional model of a teacher standing in front of the class talking for hours is interrupted and the class is delivered using a very different method. The faculty role is well regarded, and allows students to reach conclusions on their own.

#### Liberty is given to the teachers at Nossal High School.

Stuart explains how the principal of the school has a very strong vision for what he wants the school to be like and lays a wonderful foundation for the leading teachers. The leading teachers are those that are given a lot of freedom and opportunity to explore new ideas in education and pedagogy. "We have permission to fail," Stuart says, and that is also the way the students are taught. As long as they have a reasonable reason for why they want to try something out (just like the Digital Delivery Days), they have an open mind to try it out and see if it works or if it doesn't. However, it's clear that this educational system is not for everyone and many teachers feel quite challenged by it. Trust is the ultimate power they have and allows for creativity and an opportunity to change something in the future of the students they are molding. As long as teachers have more liberty, they also feel more inspired by their work, they want to go the extra mile, they care about the student's well being, and they are willing to work for the future of these kids.

Nossal High School might be the future for schools and should be an inspiration. Stuart explains that his biggest reward is seeing the Nossal alumni, how they have applied every lesson they learned to their life, and keep coming back to the place that was not just a school, but a place of transformation, learning, and an embrace of education.



#### 0

SPECIAL TOPIC

# Competency-based Education







INFOGRAPHIC: TRiiBU Studio

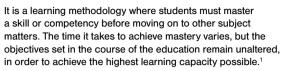
Traditional learning has always been a time-based industry. A student sits in a chair for hours listening to lectures in a "chalk and talk" approach.

#### THE CREDITS ARE NOT GIVEN BASED ON IF THE

student has learned, but if they have completed the required amount of time in the classroom.

If students barely pass an exam because they do not understand the material at hand, they still continue to the next grade or next subject matter. Likewise, if a student barely passes when learning how to add, they may never pass when they are taught to multiply. Competency-based education (CBE) is a dynamic kind of education based on making sure that students master different skills in order to become better at others. It seeks to set goals in the form of knowledge, skills, and behavioral features that the students should learn by the end of their studies.<sup>1</sup>

#### WHAT IS CBE?

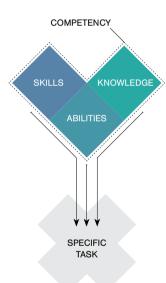


The initial idea for competency was born in the United States by Noam Chomsky in 1965. "It is the fundamental difference between the competence or knowledge of language and the application or actual use of language."

WHAT IS A COMPETENCY?

A competency is a "combination of skills, abilities, and knowledge needed to perform a specific task."

- The US Department of Education.3



The foundation of the learning model starts with the traits and characteristics of both the student and the task itself. After those traits and characteristics are defined, the learning process begins. This is where the skills, abilities, and knowledge come into play and must be mastered. The demonstration portion is the result of applying the competences and demonstrating how the student used them. The time it takes the student to master the competency ultimately varies on their learning and performance.<sup>3</sup>

A single competency can be used in many ways. For example, algebra is equally important for an engineer as much as it is for an architect. Even though they are used in different ways in both professions, the skill involved, regardless of the technique or method, should produce the same result if the skill is truly mastered.<sup>3</sup>





CBE is aimed to help learners achieve mastery of competencies by providing learners with different pedagogical instruments that ensures mastery of skills and competencies instead of memorizing them.<sup>1</sup>

Competency-based models ultimately rely on measurable assessments. If a competency is ambiguously described and does not have an objective method of measurement, it probably is not a true competency. All people involved in the learning process (faculty, administrators, and students), should be able to clearly understand the outcomes of the learning experience.<sup>3</sup>

The fact that competency-based education is founded on being able to measure the abilities and competencies is an advantage for the learner. This way, learners can go back to the competency that is lacking mastery, rather than having to repeat a traditional course where mastery won't be attained.

#### CBE IN HIGHER EDUCATION

It is implied that higher education should pursue a deeper objective other than simply allowing a student to graduate, but to be aware of the standards needed in the profession, and to be aware of the requirements put on students today. CBE tries to focus on the potential possibilities for the future activities of graduates.<sup>1</sup>

WHEN A COMPETENCY IS BEING DESIGNED, IT CAN FRAME OVER ONE OF THE FOLLOWING CATEGORIES:



#### DIFFERENT ROLE FOR THE TEACHERS IN A CBE MODEL

The risk of CBE: A decrease in the teacher's direction giving and an increase of the student's control.<sup>1</sup>

CBE programs look to change education in many ways and one of them is changing the role of the faculty. The new roles of teachers under the CBE program are:<sup>2</sup>

#### FACULTY INSTRUCTIONAL DESIGNERS

These faculty members define the learning outcomes, design the curriculum, develop the learning experience, and curate content.

#### ASSESSMENT EXPERTS

Oversee the design of scoring rubrics and may evaluate student learning.

#### ENROLLMENT COACHES

A student's initial program contact could be through an enrollment coach who assists with administrative-related enrollment tasks such as admissions, payment, financial aid, and credit transfer.

#### ACADEMIC SUCCESS COACHES AND MENTORS During the program,

a student's primary point of contact should be the coach or mentor, who helps plan, guide and monitor their academic process to ensure success.

#### LEARNING OUTCOMES ASSESSORS

Staff or faculty using scoring rubrics created by assessment experts may grade assessments. Some assessments are machine-scored.

#### **FACTS**

Everyone has different learning styles, strengths and weaknesses, and knowledge that they already know and some that they do not. Not fully understanding a skill can prevent growth in learning.

Each learner takes a different amount of time to grasp a concept or skill.

CBE leads to a reduction of negative psychological effects of the learning process such as stress, low self-esteem, and demotivation.'

#### **Potential Advantages & disadvantages**

POTENTIAL **ADVANTAGES** OF CBE:

The interest in measuring specific competencies is something that is becoming more and more popular around the world

Students are less likely to graduate with gaps in their apply their skills in different sectors, industries, and in their own lives. They are taught to utilize those skills and become potential experts and leaders.

CBE programs may lead to a higher retention rate, meaning that fewer people drop out of the program compared to traditional education, because the flexibility of CBE allows them to learn on their own time, at their own pace, and really see the future advantages of gaining a specific skill.2

CBE programs have a very defined map of what the student needs to learn and an objective to shorten the study time. which eliminates program redundancies and makes the learning process more efficient. Traditional education usually teaches the same thing in different classes because there is no structure and communication between the classes.2

Total CBE spending by institution was nearly 50% lower, on average, compared to other traditional delivery models.2

Due to CBE programs potentially saving time and money, they also give a great advantage to adults looking to capitalize on previous college or work experience, who otherwise would not have been able to enroll in a traditional university.2

**POTENTIAL** DISADVANTAGES OF CBE:

It is easy to identify clear competencies in technical areas (math, biology, chemistry, physics, etc.) but it is extremely difficult to do or creative disciplines.4

Since a student cannot move on from a certain subject to a higher one. until they have mastered it, there might be a certain task in which a student can possibly get stuck and there is no way to move on.4

Coming to terms on college graduates should have is subjective and can be problematic, given the diversity

#### How to implement a CBE teaching methodology in an institution? 4







- 1. First, there needs to be a senior administrator who is the public advocate, leader and facilitator for creating an institutional culture that is open to change and fosters innovation in order to guarantee the best learning model for students.3
- 2. It requires a new academic system and institutional processes - most likely new teachers with a different way of thinking, and a revision and creation of new examination techniques.
- 3. The institution must also revise their objectives, define what success means for them, and what are the tangible benefits for the students, teachers, and the institution

as a whole.

4. There should be a redesign of the curriculum and a prototype of the new curriculum for certain classes.













- 5. Competencies must be clearly defined, understood, and accepted by the school administration.3
- 6. They have to create new exams and assessments to thoroughly examine how much the student has mastered the skill and not simply memorized the contents of the class. Paper and pencil tests do not fully capture the complexity of performance in competences.
- 7. The assessments of competencies should be directly linked with the goals of the learning experience, and allow the assessment results to be used in making critical decision about strategies to improve the student's learning.3
- 8. The institution should implement learning technologies in order to:
- · Make the teacher's work more efficient.
- · Deliver information to the students to learn at their own pace.
- Individualize learning for each student.
- · Offer different ways of learning for different learning types.









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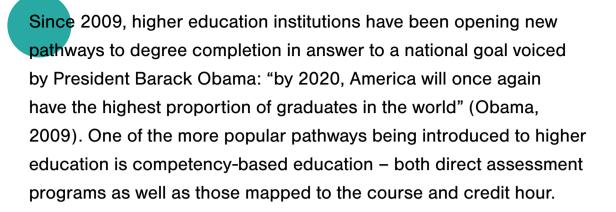
## Learning matters: enrollment motivators for Competency-based Education

#### Cali M.K. Morrison

is director of alternative learning at American Public University System and a consultant with the WICHE Cooperative for Educational Technologies (WCET). An Ed.D. candidate at Montana State University, her research has been funded by the National Research Center for Distance **Education and Technological** Advancements (DETA) at the University of Wisconsin - Milwaukee. She lives in Big Sky Country, with her husband, kids, and dogs where she relishes the alpenglow and fresh powder.



/calikoernermorrison



BY: CALI M.K. MORRISON

#### BY SOME ACCOUNTS, MORE THAN 500 INSTITU-

tions are investigating offering this modality of higher education (Fain, 2016; Fain, 2015ab; Fleming, 2015; Kelchen, 2016; Mitchell, 2015; Nodine, 2016; Public Agenda, 2015).

For all this program building, many in higher education are still asking the question, what brought these students into this type of learning? What motivated them to enroll in a competency-based education program? Proxies can be made to the adult learner population, but research on what motivates them to pursue postsecondary education is scant, and what there is tends to focus on community college learners. (Broekemier, 2002; Laanan, 2003; Morrison, 2016; Peek & Goldstein, 1991; Somers, et.al., 2006; Southerland, 2006) With the support of the National Research Center for Distance Education and Technological Advancements (DETA) at the University of Wisconsin – Milwaukee, I recently looked to answer just that question.

During the summer and fall of 2016, I distributed a survey, built from the UW-M DETA Research Toolkit, to 5,142 undergraduate enrollees at

four institutions offering competency-based education which was faculty-developed, mastery-based and self-paced. From this collection, there were 381 usable responses. The results of the analysis are somewhat counter to popular belief, as well as previous research (Morrison, 2016) about CBE enrollees impetus for enrolling. This analysis showed that learning goals were the highest ranked enrollment motivator, followed closely by academic goals. The primary difference between these two motivators is that learning goals focused on becoming a more knowledgeable person, whereas academic goals centered on degree attainment and continuing beyond the current degree program. Learners in this study ranked modality of learning, social goals, and professional goals with lower importance to their decision to enroll.

Additional analysis showed moderate correlations between learning and academic goals; learning goals and social goals; and academic goals and social goals. Learning goals and professional goals were a low correlation while all other learner motivation categories revealed either weak correlations or were statistically insignificant.

EXPERT ANALYSIS

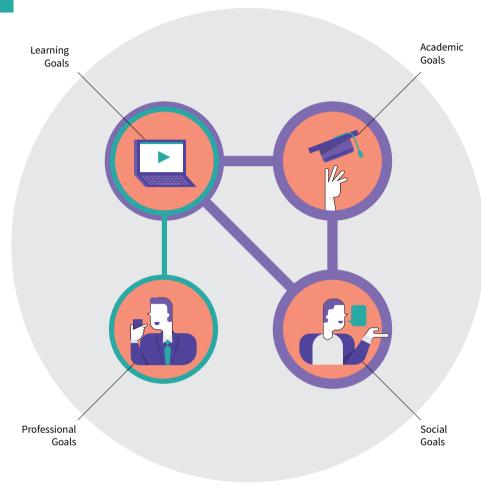
So, why does this matter? If you've seen a commercial on television or YouTube for any competency-based education program, you've probably heard phrases like, 'level up' or 'advance your career.'

Many CBE programs are marketed at the working learner looking to gain an edge in their career advancement opportunities. This research shows it's important to not lose sight of promoting the academic quality, the rigor, involved in pursuing a degree in a competency-based education modality.

While competency-based education has been around since the 1970s, for this generation of learners, it's a new concept. To attract the adult learners who would most benefit from the modality will first mean helping them understand what CBE is and conversely, what it isn't. Competency-based education, in any of its flavors, is not an easy out, it's not necessarily faster and it's not only about vocational preparation. Working together, the higher education community can promote this learning pathway to help the nation reach our lofty higher education goals.







LOW CORRELATION MODERATELY CORRELATED GRAPHIC: TRiiBU Studio

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COMPETENCY BASED EDUCATION



Why is a co-design curriculum model essential to developing Competency-based Education?



/andyramsden

Competency-based education
(CBE) is not a new concept. It
has been around for decades,
particularly in areas like
professional education. However,
in the last few years, we have
seen a new surge around this
approach, especially from
higher education institutions.

BY: ANDREW RAMSDEN

#### THE INTENTION OF THIS ARTICLE IS NOT TO

focus from a broad institutional perspective of implementing CBE (Ramsden 2016), but drawing on the emerging evidence base to position and explore the tangible need for the institution to deploy a co-design curriculum development model for the long term effective development of CBE.

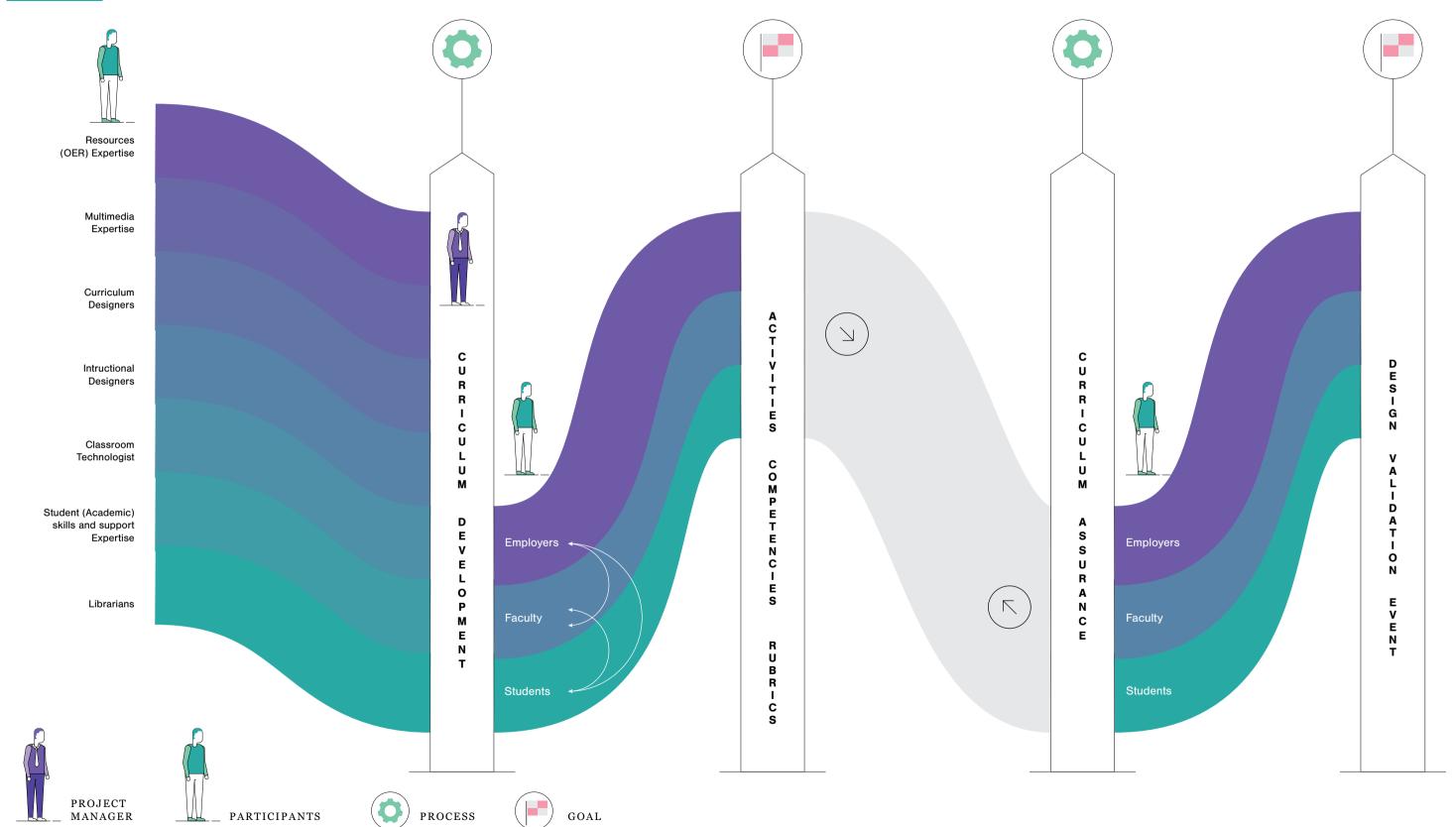
The take-away message is, "CBE is disruptive, and success is based on faculty members (academics) being central within a collaborative, cross institutional design and development process."

In comparision with traditional Higher Education models, competency-based education can be summarized as "transitioning away from seat time, in favor of a structure that creates flexibility, allows students to progress as they demonstrate mastery of academic content, regardless of time, place or pace of learning. It provides flexibility ... and ... personalized learning opportunities" (US Department of Education, 2016). An important consideration for CBE programs is to demonstrate competencies which are part informed by employer needs (Daugherty, Davis & Miller, 2015). The design principles for CBE include:

- Students advance upon demonstrated mastery.
- 2. Explicit and measurable learning objectives empower students.
- Assessment is meaningful and a positive learning experience for students.
- 4. Students receive rapid, differentiated support.
- Learning outcomes emphasize the application and creation of knowledge.

FIGURE 1

#### A CO-DESIGN APPROACH TO DEVELOPING CBE CURRICULAR



For some students, the CBE model is very effective, "the benefits of CBE were clear ... CBE allowed students to learn at their own pace. They were able to accelerate through information they had mastered and spend more time on information that was new" (Rainwater 2016: 45). As one student proposed; "when you go to an actual classroom, the professors have to assume you don't know anything yet. I already know about networking so it was helpful to be able to start a program that allowed me to use what I already know" (Howell, 2015 in Rainwater (2016:46)).

However, CBE innovations are often viewed as a disruptive innovation, as they tend to require a significant redesign of administration, introduction of new or adjusted financial models, academic systems, and embedding process for continuous improvement within an institution (Johnstone and Soares (2014), Public Agenda (2015). The changes in academic systems include changes around flexible staffing roles and structures, engaging faculty and external partners and creating a learner center culture (Public Agenda 2015).

Emerging evidence supports the view from a faculty (academic) perspective that CBE is a significant endeavor. One practitioner noted, "it takes time to develop a CBE course. I had about two months of mapping and rethinking to do for my courses to fit the CBE format. My assessments had to be rethought and redone" (Santioanni (2015) in Rainwater (2016:43). There is no straightforward transition from a traditional program to a CBE program. Cooper (2016) observes, "the curriculum design process was difficult for some faculty who were accustomed to starting with content and developing assessments later. The new

process requires faculty to first design assessments, then curate supporting learning resources" (Cooper (2016:34). Therefore, the curriculum design process requires deconstructing the current syllabus and reconstructing it as competencies and sub competencies aligned to a new assessment model. It requires ensuring the competency sets are complete, ensuring there is progression from lower to high order learning skills across the program, and once written the design is transparent to other faculty members, prospective students and employers. This raises many questions: Where should an institution begin? What is the best curriculum development model? Who is responsible for researching, defining, organizing, and stating the different level competencies? What are the assessment rubrics? What are the required course design services? What skill sets do Institutions need of succeed?

The rationale for the statement at the start is evident from reflecting on institutional stories. Cooper (2016) describes one approach which empowers faculty members to take ownership of CBE design and places them at the centre of the design and development process. This implies the principles of co-designing curriculum are developed through building partnerships to shape the educational experience between faculty members, students, employers, and other stakeholders where their views and needs are mediated and discussed.

Figure 1 visualizes a collaborative design and development process (adapted from Cooper (2016). The core team consists of a project manager, faculty members, students and employers. These draw on the expertise of a number of other roles within a formal design and development process. The alignment process includes a peer review stage with other CBE experienced faculty members, the program (course) lead, students and employers.

This co-design curriculum development model ensures a high-quality learning experience, alignment with principles of CBE and the effective transfer of good practice. To conclude, I'm often asked "Where to start?" A low-risk approach would be to a redesign a set of modules within a program to embed existing competencies, such as graduate attributes, or employability criteria. Therefore, pull the co-design team together and run a two-day CBE Design Workshop. This will involve discovey activities with employers, students, and creative activities around the curriculum, assessment and learning materials.

"CBE is disruptive, and success is based on faculty members (academics) being central within a collaborative, cross institutional design and development process".

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### Key points developing a successful CBE program

BY: LAURA DIAZ

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INFOGRAPHIC: TRiiBU Studio

**HIGHLIGHTS FOR A STRONG CBE DEGREE PROGRAM** TO DRIVE PROFICIENCY<sup>2</sup>

200

LEARNING PLANS

The student A CBE program allows the student to works at his/her demonstrate real world work experience. own pace.

Designed, programmatic, objective assessments.

planned CBE

delivery model

because it

helps to free up the faculty

member's time for development

of innovative curricular

strategies.

Students can progress toward course objectives by demonstrating the knowledge and skills required at each step (competency) along the way.

> A COMPETENCY-BASED PEDAGOGY

with a competencybased delivery model distributes the responsibilities for teaching and learning across the program instead of adding multiple responsibilities with

a faculty member.

**CBE (COMPETENCY-BASED EDUCATION) PROGRAM¹ SHOULD BE ABLE TO OFFER** STUDENTS:

A SUCCESSFUL

COACH, MENTOR, OR ADVISOR

This person checks in with the student while the student is enrolled and helps to guide, plan, and prioritize their academic learning process to ensure success.

Self-paced learning

Clear learning objectives

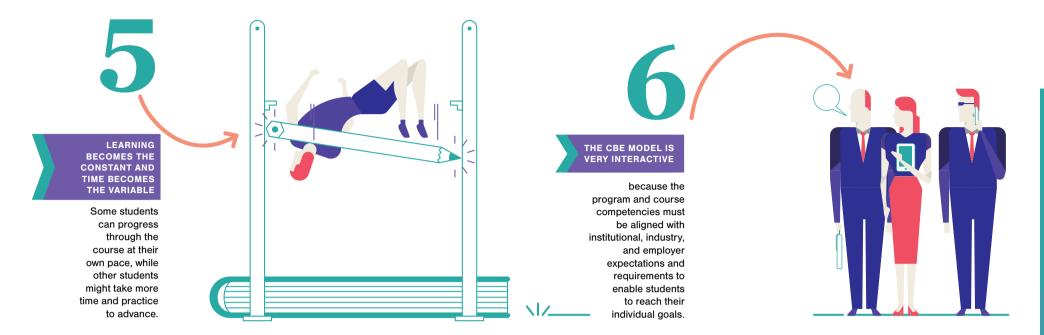
Effective, objective assessments and evidence-based activities to demonstrate mastery

Access to learning objects and resources anytime/anywhere

Personalized, adaptive and differentiated instruction and learning plans

Support through instructional advising or coaching

\/\_\_\_



#### 500 600 800 700 INSTITUTIONS IN ORDER TO BE **MUST CREATE A** SUCCESSFUL WELL-DEVELOPED faculties and institutions have to be careful about to help the programs they are students who offering in a CBE model. It get stuck at would be easy to identify one particular "competencies" in technical stage for a long areas such as math, time, without sciences, and physics, but completing their more difficult for subjects instruction in a like history or literature timely manner. which are more subjective. \/\_\_\_ SOURCES 2. Thankaberry, A. S. February 29th, 2016. 3. Chip Franklin, R. L. (2015, April). Employers per-1. Thankaberry, A. S. February 29th, 2016. A CBE Overview: The Recent History of A CBE Overview: The Recent History of spectives on Competency-Based Education. Center on Higher Education Reform - American Enterprise CBE. The Evolution. February 25th, 2017. CBE. The Evolution. February 25th, 2017. From: http://evolllution.com/program-From: http://evolllution.com/programming/ Institute. Retrieved February 21 2017 http://www. ming/applied-and-experiential-learning/aapplied-and-experiential-learning/a-cbeaei.org/wp-content/uploads/2015/04/Employer-Per-

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#### **CBE** in the workplace and steps businesses can take to implement CBE<sup>3</sup>

- As of right now, not many employers are aware of CBE. However, a Competency-based Education can boost a student's employability rate since the employer can know which skills and competences the student has mastered.
- For CBE to achieve its full potential as a disruptive force in higher education, employers must recognize the validity of specific competencies and the value of concrete skill bundles required for a targeted job opportunity.
- CBE efforts have focused more on the benefits for students and institutions and less on the perceptions of employers.
- Businesses that are interested in CBE programs must better understand how employers currently approach hiring and the strengths and weaknesses of a competency-based approach.
- Hiring managers who have a favorable view of the CBE model and its graduates constitute a small minority when looking at most businesses.
- Once familiar with the CBE model, employers are highly enthusiastic about the model itself and its potential yielding of prospective hires.
- CBE programs can continue to increase their relevance by partnering with employers (something most hiring organizations strongly desire) to determine the targeted competencies needed for specific jobs.
- Today, many hiring managers are more intrigued by potential employees that can prove they are capable of doing the job.

spectives-on-Competency-Based-Education.pdf



In the United States, there are an estimated 45 million adults who are 25 years old and older, that have some college credit but no degree. Many of these adults are like Patrick Crawford, a 55-year-old Dunkin' Donuts manager in Austin, Texas. Patrick went to community college when he was younger, but stalled out and assumed that college wasn't for him. As he puts it, "The dream of returning to school was always with me, but I felt it was truly a dream." But now, Patrick and thousands of adults like him are returning to finish what they started through online competency-based education programs.

BY: VAN L. DAVIS, PhD

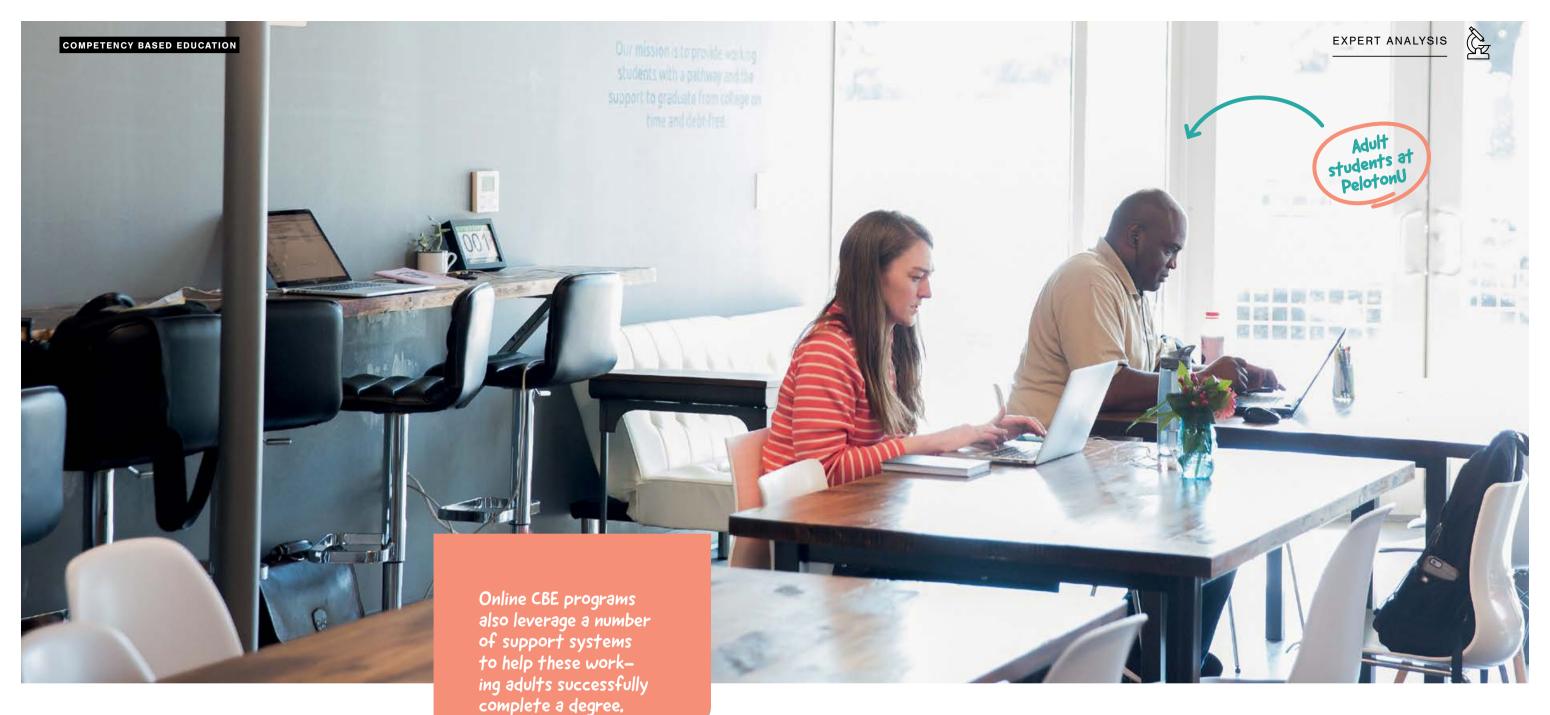
#### WHAT IS COMPETENCY-BASED EDUCATION

(CBE)? CBE is a unique educational modality that focuses on mastery rather than seat time. Unlike traditional programs that use fixed-time terms, in CBE programs students advance after they demonstrate mastery of a competency regardless of how long it takes. This makes CBE ideal for many adult students who cannot sit in a classroom for a variety of reasons, including a busy family life and/or work schedules. Additionally, with its focus on demonstrating mastery rather than sitting in a class, CBE allows working adults to leverage their existing knowledge and skills in order to more quickly complete their degree.

Instead of traditional coursework which is sometimes divorced from the daily lives of these adult students, CBE programs usually focus on real-world projects that allow students to apply their knowledge and skills. For working adults who have often gained considerable knowledge and skills through their employment, CBE allows them to leverage their existing knowledge to more quickly move through the material and graduate. Additionally, these sorts

of projects provide working adults with new knowledge and skills that they can immediately apply in their jobs. Online CBE programs also leverage a number of support systems to help these working adults successfully complete a degree. For example, programs like Southern New Hampshire University's College for America or Texas A&M University-Commerce's Texas Affordable Baccalaureate program use coaches that provide online students with advising and counseling support. These coaches work with students each week, providing them with encouragement while they shepherd students through the program and make sure they stay on track to graduate.

But sometimes adult CBE students need even more support as they try to navigate lives full of family, work, and school obligations. Enter boots-on-the-ground organizations like PelotonU, a nonprofit organization in Austin, Texas that helps local adults enrolled in online CBE programs. PelotonU's mission is "to provide working adults with a pathway and the support to graduate from college ontime and debt-free." PelotonU accomplishes



this goal by providing its students with an additional level of face-to-face support in the form of personal coaching and tutoring in its Austin office, along with the opportunity for additional scholarship money to help graduate with a college degree debt-free.

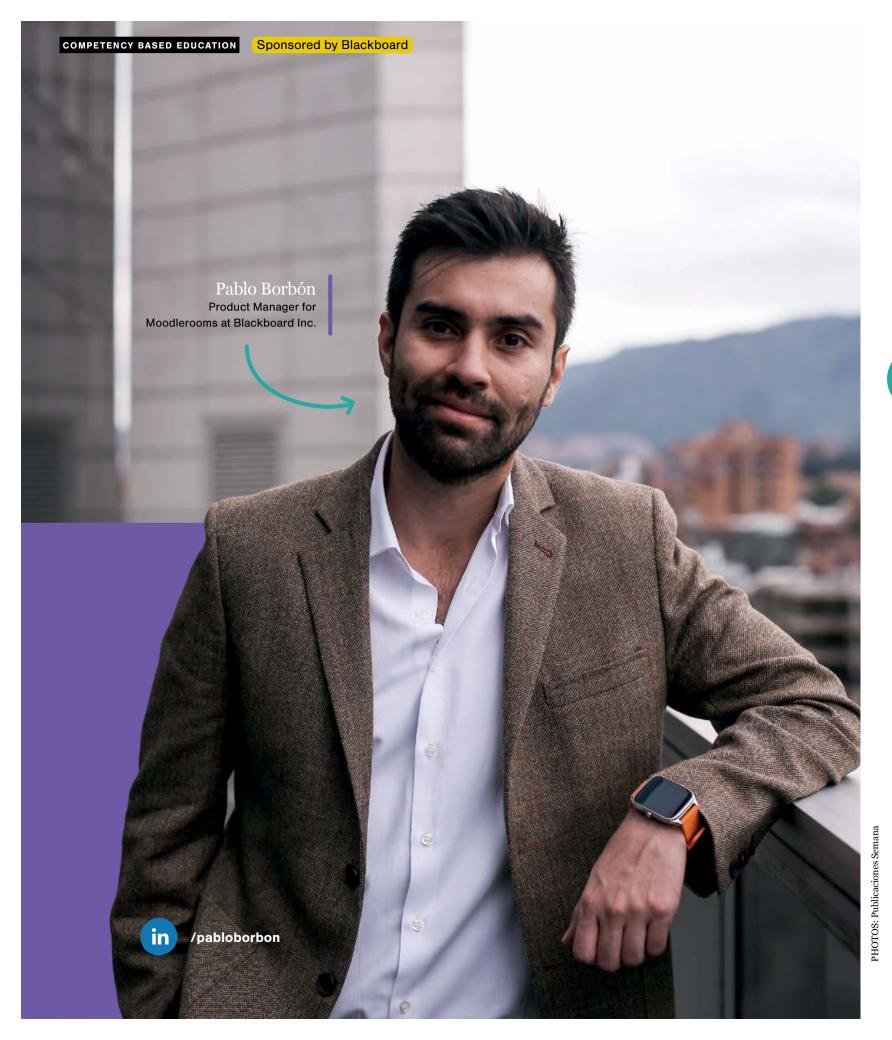
This extra personalized support is critical for many CBE students. 67% of PelotonU's students have previously attended college but, like Patrick, were unable to complete their degree. Once they are accepted into PelotonU,

students complete a trial period before they even begin their formal academic coursework through one of several online CBE programs. During the trial period, students complete a college preparatory curriculum as well as receive training on effective study skills, time management, and financial literacy. Once this period is complete, students begin their

formal studies in a regionally accredited online CBE program. During their academic program, PelotonU students continue to receive face-to-face academic and social support, spending twelve hours in the PelotonU office each week and meeting with their personal college completion coach. This support, along with the academic community that students are immersed in, has led to an 80% retention rate which is a full 20% higher than the average United States college retention rate. As a result, 90% of PelotonU students are on

track to graduate with a degree on-time. In comparison, only 15 out of every one hundred Texas college students complete a credential.

Online CBE programs are giving adult students like Patrick the opportunity to do what many have only dreamed of—complete a college degree. Because of these programs and support groups like PelotonU, these students are finishing what they started and earning a college degree that leads to a better life for them and their families.



## CBE tools to transform the way we learn

Competency-based education (CBE) offers learners a new choice and a new opportunity to participate in education.

The Blackboard Learn and Moodlerooms platforms provide a variety of tools and resources for institutions and organizations that wish to successfully deploy CBE programs

BY: PRISCILA ZIGUNOVAS

#### IMPLEMENTING A COMPETENCY-BASED EDU-

cation (CBE) program often requires major institutional, organizational, curricular, and operational changes. While some institutions have had tremendous success and have been able to scale their programs with high student satisfaction scores, others have had a somewhat modest success or ended up taking longer than expected to launch their first program.

"Even in these last cases, we have seen that the implementation of a CBE program really improved institutions by bringing the different members of the faculty together to think about the approaches that they're taking in teaching and learning, and it has had a profound impact on the improvement of even traditional programs," says Wade Weichel, Product Manager for Blackboard Learn.

There are many factors involved in deploying a successful CBE program: Understanding the value that the program will create for the community, collaborating between all the stakeholders, leveraging available resources at the institution or organization, and choosing the right technology to support the interactions between instructors and learners.

Both Moodlerooms and Blackboard Learn have been investing in useful tools and features designed to make CBE a reality. See next how these platforms can help generate value and facilitate the CBE programs implementation.





For a CBE program to succeed, there are specific attributes for each role involved in the process. "Instructors and learners have the main role because they are the ones that really take ownership of the CBE initiative in terms of learning," says Pablo Borbón.

#### INSTRUCTORS



To Borbón, instructors should provide the materials, offer feedback, and facilitate learning through courses, activities and contents. Weichel also points out that educators need to be more flexible to different places at different times. "The role of the educato can shift in terms of coaching individuals or smaller groups of students who are working on developing a particular competency, and assisting those students enhancing that mastery," he says.



#### LEARNERS

Learners should be able to identify their own gaps and needs so they can be successful with what they are trying to achieve. "We've seen that CBE is best suited for learners who are older, or more self-directed, or have some workplace experience, because their expectations for their learning experience are slightly different, whereas a more traditional student would perhaps desire more structure," says Weichel.

#### Pathways to success

Wade Weichel

Learn at Blackboard Inc.

Product Manager for Blackboard

To Pablo Borbón, Product Manager for Moodlerooms, a successful CBE program implementation usually involves these five components:

- I. Understanding and communicat—
  ing: the importance of CBE for
  the organization, and the value
  that it will create. e.g. how it is
  going to prepare better learn—
  ers, potentially save some costs,
  etc. This helps to get everybody
  onboard to support the initiative.
- Identifying the competencies to address, the elements to create, and the materials to support the learning progress.

- 3. Designing the elements, materials and processes to support the program.
- 4. Leveraging on technology as an enabler for the CBE program.
- 5. Reviewing the performance and progress of the initiative and adjust as needed.

To Wade Weichel, the key for developing a successful CBE program is to have a plan and for all the people involved to come together at the very beginning. "It is also important to meet early with the technologists, the IT team, and to think about leveraging the resources that the institution already have."

#### ORGANIZATIONS OR INSTITUTIONS



Regarding the organizations or institutions, according to Borbón, they are responsible for getting the project in place, identifying the right model, its importance and its impact, studying the expectations, communicating with all of the stakeholders, managing changes, and establishing the best practices to adopt.

#### SUPERVISORS AND ADMINISTRATORS

Supervisors act like facilitators in terms of providing feedback to all the instructors and learners, providing the right resources for them to be successful and reviewing how the learners are progressing. "Whereas administrators should be able to translate the needs of the institution regarding the CBE program into something that is doable in terms of technology, then properly configure the platform and prepare all that needs to be done in order to successfully achieve the plan of the strategy," states Borbón.

Lastly, it is essential to promote collaboration amongst all these roles. "A CBE program really does touch every single function within an institution," according to Weichel. With several CBE programs there is an important connection to the local and regional employer community. "In many cases, we have seen good success where the employers help design the competency model. Employers are quite pleased with the programs because of the results — it's not just a grade point average; it's a map of strengths of an individual that the employer is looking to potentially hire."

#### **Resources by Moodlerooms**

"The most important reason for using Moodlerooms as a CBE platform is that it simplifies and accelerates what institutions and organizations can do in the initiative," says Borbón. This open source platform allows a great deal of flexibility in how the program can be implemented, and enables organizations and institutions to fit or tailor the initiative and the platform to what they actually need.

"Moodlerooms presents a set of integrated features and tools that allow institutions and organizations to have information, and review and assess what is happening in terms of the competencies that are being addressed. This allows them to understand what needs to be created in terms of learning content and what will require additional attention from supervisors or instructors," says Borbón.

The competency frameworks are a way for an organization to create a set of competencies that they want to structure in the platform. "For example, competencies that their students or employees need to develop as part of their performance or their training programs. They can set these competencies there and create frameworks that can have different relationships between each of the competencies," explains Borbón.

Another interesting feature available in Moodlerooms enables the creation of learning plans. "It's a way of organizing a set of competencies that a specific audience needs to build up. For example, a training program for all of the medicine students with competencies that they should be



really proficient at," says Borbón. The learning plans can also be personalized.

Moodlerooms gives the options to create both structured and autonomous learning plans. In the last case, it is possible to provide a full portfolio of courses available for the student to choose from. "Autonomous learning plans create ownership in terms of the learner being the one in charge for how he or she develops the competencies," highlights Borbón.

#### Features available in Blackboard Learn

Using Blackboard Learn as a platform for CBE offers many advantages, according to Weichel. "There is a maturity in the product and its extensibility in the choice that



provides numerous integrations with other sorts of solutions and content providers, and give the curriculum designer the option to develop the best possible CBE program."

In order to manage the curriculum model and make alignments, there is a feature called Goal Manager. "The institution can define the structure for the competency model and include a hierarchy. They can be aligned to the criteria for evaluation, and the curriculum designer can manage those alignments over time when there is a curriculum change," explains Weichel.

The ability to understand students' performance and mastery for individual competencies and the combination of sub-competencies to higher-level competencies is vital to a

CBE program. "Blackboard Learn supports that through a feature we call the Goal Performance Dashboard. Students can see their performance on each of the competencies being measured with an individual course or module," explains Wade. Additionally, there is an aggregation of the higher-level competencies, so students can see those across the program as a whole, as well as coaches and advisors, so they can support students in their learning.

There are ways for the program to identify learning milestones that students have mastered and present those as displayed badges or achievement levels, so the students can track their progress. There are also tools for educators to identify students that are at-risk and those who are far behind or are not engaging regularly, so that they can intervene.

"We're really excited by the promise that CBE holds about impacting and improving the experience for learners and helping them understand what they have learned through their educational process and be able to articulate that as they go out into the workplace," summarizes Weichel. "Institutions are using the lessons learned with CBE to improve all of the programs that they deliver. We think that's really exciting and incredible."

Rather than offering just one way to partake in a program, CBE expands the choices available for learners and assures that the students are engaged in an approach that is the best match for them. It is up to the institutions to develop a consistent, supporting program, and to make the necessary changes to truly transform the way learning happens.



## Time in the classroom VS learning on your own time

Comparing traditional education to

Competency-based Education (CBE)

BY: TYLER STIKE

#### IN THE PAST, CREDIT

hours and education have been largely determined by how much time is spent in the classroom<sup>1</sup>. Traditional education ties learners to a strict schedule in the classroom. However, learners and education are evolving and a main focus today is providing a flexible schedule to accommodate the learners' busy lives. Competency-based education (CBE) focuses on providing flexible schedules that allows students to progress at their own pace with tailored learning plans to demonstrate mastery of competencies. We have provided a side-by-side comparison of traditional education and competency-based education:

TRADITIONAL EDUCATION

A more subjective and abstract teaching and learning method.2

Learning is generic with a "one size fits all" approach.

> Focuses on what students should learn.

Students are expected to sit in a classroom for a determined number of hours.

The course starts and progresses at the same pace for all students, regardless if the information is something the student already knows.

The teacher is considered as the person with the most knowledge in the classroom, and their main job is imparting that job onto the students.

> Virtually the same model of learning and facilitating for many years.

The objectives and pace of learning in the class are set and measured by the teacher.

> There is a fixed price for the amount of obligatory hours the student must attend class, which can make it more expensive.2

COMPETENCY-BASED EDUCATION

An objective method of teaching and learning that is used to learn specific skills, known as competencies.2

Learning plans are tailored to the students' needs.

Focuses on what the learners must learn to do.

Students are expected to take the time they need in order to fully understand and master the subject matter.

Every student is different and brings different backgrounds they can use to move faster through the course.

Both students and teachers are competent, and the learning process is in both hands.

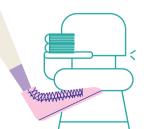
Adapts itself to the evolving needs of students, teachers. industries, and environment.

The objectives of the class are aimed at the student's self-motivation to learn each competency.3

Self-paced which allows the student to move at their own pace, being able to skips certain classes if they have already mastered that skill, or move quicker through it if they have an ease for the material at hand.2

ILLUSTRATION: TRiiBU Studio

Competency-based education provides a clear alternative to traditional education but challenges still exist to implement a CBE program, such as training instructors to create effective learning plans for students and other internal challenges such as rolling admissions, enrollment, and support.2 – It is an investment in time in an industry that can be resistant to change.3 However, many institutions are looking past the initial investment and realizing the long-term payoff of student retention and engagement along with significant financial benefits.2

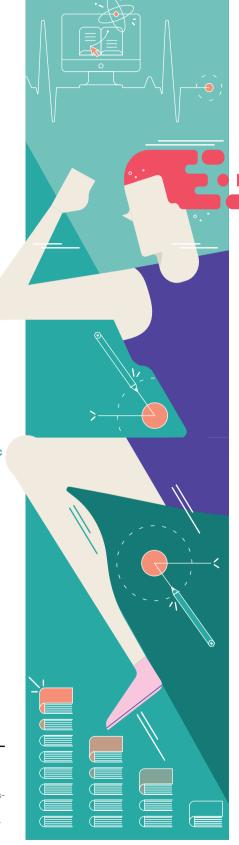


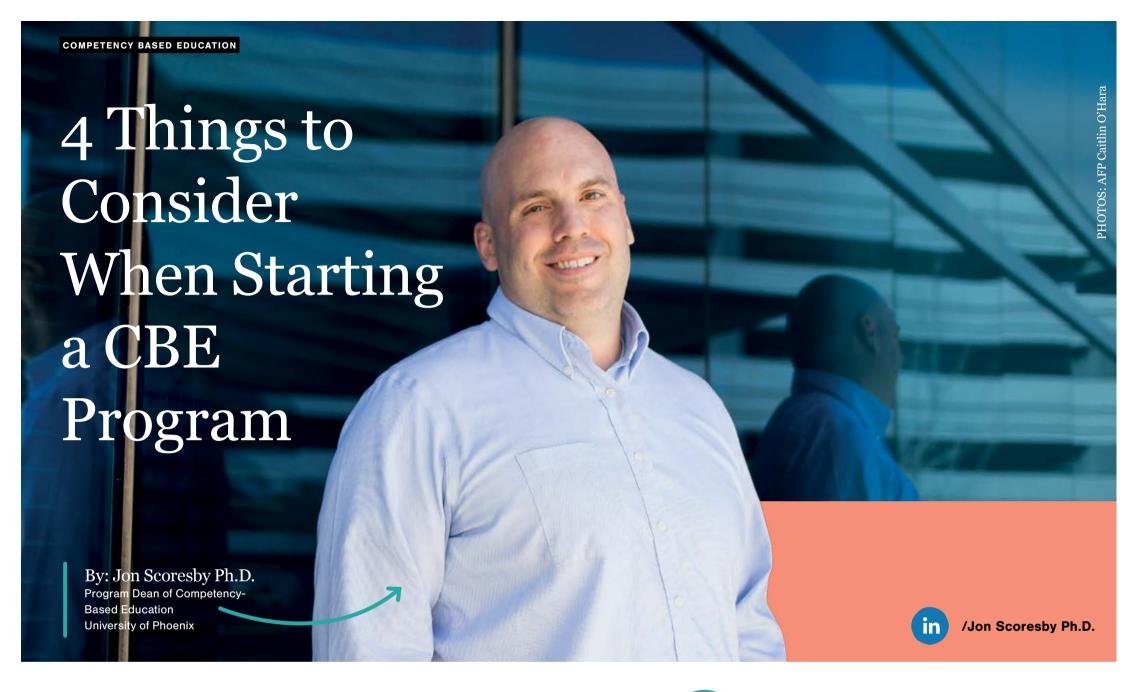
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If you pay attention to educational development, you may have heard of Competency-based Education (CBE). In 2015, Inside Higher Education<sup>1</sup> reported that approximately 600 institutions have some form of a CBE program in the design and development phase, and that number was up from around 50 from the previous year. As CBE continues to grow, it may seem like the sparkly new toy that everyone wants and are trying to learn more about.

#### ORGANIZATIONS LIKE C-BEN<sup>2</sup> (COMPETEN-

cy-Based Education Network) are focused on creating principles and standards<sup>3</sup> that can be used to help guide the development of a CBE program. C-BEN has also created the CBE Design Planner<sup>4</sup> to help guide development. It is true that CBE provides a lot of opportunities for prospective students, such as working as fast or slow as one wants, flexibility, and focusing on mastery of learning. To build and launch a full program, however, institutions have a lot of work in front of them.

There is no one right way to develop a CBE program. Every CBE program (e.g., WGU, CfA, Brandman, SLCC) is different. These programs are different because of the types of students they serve, the technology systems that are implemented, the faculty model that is used and so on. Even though the end product will be unique, those who develop a CBE program can implement similar best practices to develop their ideal CBE program. CBE is not just a new way of learning or a new modality to deliver a course or curriculum to students. A full CBE program is a system of moving parts, and those parts touch almost every facet of a higher educational institution (e.g., Bursar's Office, Faculty, Financial Aid, Registrar's office, Curriculum Development, etc.). It is somewhat similar to starting a whole new college. See Figure 1. Because there are so many parts to the development of a CBE program, it is a good idea to have a plan in place before development starts. Here are four essential practices to consider when building a CBE program and the enveloping infrastructure.



#### FIGURE 1

#### THE FACETS OF A HIGHER EDUCATIONAL INSTITUTION THAT ARE AFFECTED BY A CBE PROGRAM

Focus Visit
PLA qualifications? ADMISSIONS/ ENROLLMENT CURRICULUM DEVELOPMENT Tracking system Faculty interaction w/students Program requirements PR publications about CBE
Visit to employers
Ads (radio, direct mail, online) FINANCIAL AID Define Academic Related Activities Scholarship Disbursement terms Define terms (nonstandard/standard) Subscription model BUDGET Faculty & Staff Training PRIOR LEARNING ASSESMENT Staffing & Administrative overhead Finalcial Aid Military Credit Materials-Instructional supplies **Document Management CLEP** exams AP exams Faculty Load/Release time Transfer credit STUDENT SUCCESS Competencies Team Cross-training Terms (nonstandard/standard) Rubrics Advisor Subscriptions model Tracking System Assesment Grades Faculty Journals
Academic Related Activities
Student Program Progress Transcripts Faculty Advising **Program Progress** Enrollment Management Dashboards CRM Dashboard Articulation agreements

#### 1. Program **Development Plan**

Creating a Program Development Plan up front is worth taking the time, and in the end, it will help the work move forward more efficiently. It is important to define roles and responsibilities early in the planning process, especially who is driving the effort. In the case of a higher educational institution, where does ownership of the CBE program lie? Does ownership lie with the college, a centralized CBE unit, the whole institution, or some other option? The goal of the plan is to direct those involved to the answers when questions arise. Some guiding questions to ask when building the plan might include:

- · Who is involved, and what will they do?
- What needs to be done, and how does it get done?
- What technology is needed? Can we use existing technology?
- What institutional resources are impacted?

#### 2. CBE Model **Strategy and Vision**

The model strategy is the way the students will experience CBE and complete their programs. A model strategy needs to be in place in order to direct the development of curriculum. There are a few choices that will need to be made when choosing a CBE model strategy. Each one is different and has its own characteristics. The aspects of model strategies include:

- Credit hour aligned or direct assessment
- Non-term or term-based
- Classroom-based, online/ self-paced. or hybrid\*
- \* Here is a link to help learn more about these CBE models strategies and their definitions.

Once a CBE model strategy has been decided upon, plans can be made for what programs to build. It should be noted that not all programs are suited for this type of learning. Programs should be chosen based on trends in the job market. A CBE program in skydiving may be exciting, but is there really a market demand for such a program? A source like the O\*NET Database5 can be used to identify the trends.



https://ifap.ed.gov/ dpcletters/GEN1423.html

GRAPHIC: TRiiBU Studio



#### 3. Define Processes and Procedures

One of the most essential features in CBE program development is defining the processes and procedures that will be followed during development within all areas within a CBE program. These may include curriculum design, assessment development, faculty and staff training, student experience, accreditation, etc. When processes and procedures are defined, they become the instructions for what is trying to be accomplished. For example, a course developer, when trying to develop a course without instructions, is simply playing a guessing game. A crucial element of the process and procedure defining effort is to create a definition of what is good. For example, what makes a good competency statement? Why is this assessment better than that one? Why is this faculty model good? When good is defined, the resulting effort can be measured against that definition and then that definition can be used to train others on how to work within the defined processes and procedures.

#### 4. Test Everything

Finally, test everything. When finished with a course or program, how do you know if it is good or complete? It is the same with your development process and final products (course, programs, competencies, learning activities, assessments). Design a plan to test your development model. Ask yourself, did we achieve our definition of good? Can we be more efficient?

Work with all involved teams (curriculum, IT, bursar's office, registrar, etc.), to test the whole system. This means finding out if students can register, get financial aid, contact advisors, access the content within the learning management system, etc. After you have tested everything, review, revise, implement, and do it all again. CBE program development requires an integrated continuous review process as programs expand and improve.

### CBE provides a lot of opportunities for prospective students, such as working as fast or slow as one wants, flexibility, and focusing on mastery of learning. west fountainhead parkway University of Phoenix John Sperling Center for Educational Innovation

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## Change is the biggest difficulty for institutions when implementing a CBE program

This is the first part of the interview. To read the rest follow the QR code at the end.

Traditional education has been screaming for a change. Technology has changed society, people, and industries - including higher education. People have realized that there are new and better ways to learn. Companies want people who are good at what they do. CBE may be a way to achieve both.

BY: CHRISTINA GÓMEZ ECHAVARRÍA PASADENA, CALIFORNIA, UNITED STATES

#### BLACKBOARD'S MAIN PURPOSE IS TO HELP

institutions teach better and to enable students to learn better while integrating technology into education. Ten years ago, they brought Dr. Karen Yoshino onboard. Dr. Yoshino is a principal strategist and an expert of Competency-based Education (CBE). CBE refers to "systems of instruction, assessment, grading, and academic reporting that are based on learners

demonstrating that they have learned the knowledge and skills they are expected to learn as they progress through their education"\*. Dr. Yoshino helps guide institutions toward implementing CBE through a process of deconstructing an existing curriculum and reconstructing it into a CBE framework. She also works to align assessments and develop effective rubrics that help prepare the school for delivering CBE.



E-LEARN: How did you get started working on and promoting the CBE methodology and what exactly do you do currently?

when I was first exposed to the concept of educational outcomes. It was when accrediting commissions started putting criteria around defining what students know, think, or are able to do resulting from their educational program. They also expected institutions to measure how well the programs performed against those outcomes and then use the results to improve the programs. I worked at a couple of institutions where I helped them

develop systematic ways to define outcomes and ways to measure them. I also worked at the College Board on the SAT program where I learned that large scale testing was not my cup of tea. Good fortune and an article in Inside Higher Education led me to Blackboard where I started working as an expert on outcome assessments. That was ten years ago. When CBE started emerging, I was fascinated by the relationship between outcomes assessment and competency-based education. The thing that was fascinating for me was that CBE used the same outcomes-based concept to measure student performances, rather than program performance.

NON-STUDENT FACING INSTITUTIONAL SERVICES IMPACTED BY CBE

STUDENT FACING INSTITUTIONAL SERVICES IMPACTED BY CBE

STUDENT FACING INSTITUTIONAL SERVICES IMPACTED BY CBE

STUDENT FACING INSTITUTIONAL SERVICES IMPACTED BY CBE

GRAPHIC: TRiiBU Studio

When CBE conversations grew, I began studying it. A Blackboard colleague and I started collaborating with the American Council on Education to develop a lexicon for CBE, because people were still forming their ideas of what CBE is and how it works. That was my first introduction to CBE; it was more on the research side.

After noticing how CBE was taking off in colleges and universities in the US, I suggested that Blackboard develop a set of solutions. We wanted to construct a portfolio of solutions because it's very complex. CBE touches more than just the academic side of the institution if you are going to do a full-blown competency based program. It can change the practices across the institution. It's a game changer.

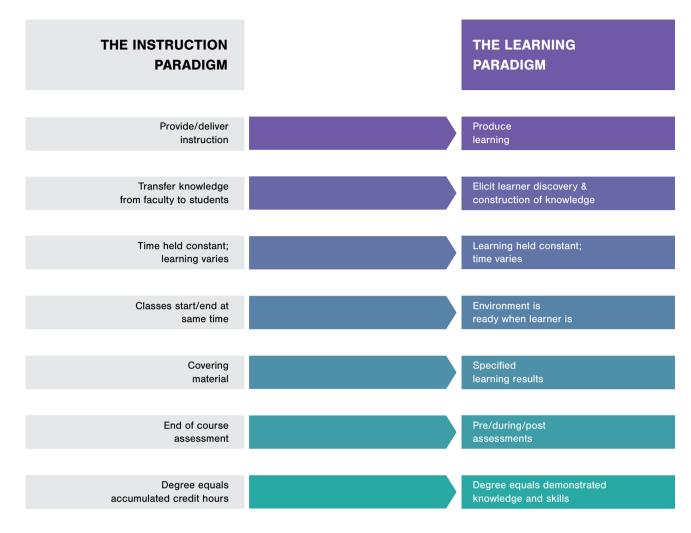
We now have a CBE team who can help institutions from planning through delivery and from defining competencies to developing courses or modules in Blackboard - or for that matter, whatever LMS the institution is using. Competency definitions and assessment alignment are my area of expertise. I help my clients create a CBE framework. Working with academic leaders, faculty, program leads, instructional designers and academic support staff, we go through a process of deconstructing syllabi and reconstructing them into a CBE framework - providing a logic model to connect competencies with content and assessments. Through this process, clients now have a replicable methodology for scaling CBE to other programs. I also help them align existing tests with competencies as well as creating effective rubrics to measure their competencies. The whole idea of CBE is to give students a clear learning target and a path to get there.

E.L: So really, the decision of a school to implement a CBE program is a really a big decision and it takes a lot of hard work. Why do you think CBE programs are the way to go?

K.Y: First, it makes the task of learning and

achievement really clear to students. They have a solid understanding of what they will need to master in order to achieve credit for the lesson. As I said earlier, if students have a learning target, and delivery (including content, assessments, and workflows in the technology) are focused on that target, together with the learner's ability to see where they are as they make their way through the various competencies in a program, they are much more likely to succeed than if there is a more broadly defined list of goals, objectives, and outcomes. Secondly, it provides a way for higher education to reach new populations of learners – like working adults – to advance in their professions or develop a whole new set of skills but can't afford the time to attend class three times a week and all that entails. Finally, it provides an alternative approach to the traditional model of higher education (which has been under fire in terms of accountability, affordability, and the need for an educated workforce.) I use Barr & Tagg's 1995 article from Change Magazine to illustrate this alternative approach. In this forward-thinking article, the authors talk about a new paradigm focused on producing learning, designing powerful environments for students' construction of knowledge. Where the environment is ready when the learner is ready, that specifies learning results, and where formative and summative assessments are, by design, used to help learners progress. I think that it's this changing paradigm that's the biggest barrier that people have to overcome.





GRAPHIC: TRiiBU Studio

#### E.L: Do schools always have to begin from scratch to create the assessments that line up with the competencies?

K.Y: Typically, no. Most assessments from existing courses can be repurposed and used within the CBE framework. They just need to be aligned with the competencies, and in many cases, need rubrics developed to evaluate performance on the competencies. But in some cases, yes, they might have to do brand new assessments. For example, if the existing assessments are measuring at a low level of mastery, they may need to be redesigned to reflect higher order thinking.

#### E.L: Do all assessments have to be objective assessments? What happens when an assessment needs to be an open ended question or an investigation?

K.Y: We use both "objective" and "open-ended" questions in CBE. Objective test items (multiple choice, true/false, fill in the blanks, matching, ordering, etc.) have a "correct" answer, which makes them very amenable to formative assessments because they can be machine scored so students get quick feedback on their performance. The intent of formative assessments is to prepare the student for tackling the summative assessments. Typically, problem-based, research-based, analysis-based, etc. assessments are what we use for summative assessments. They require more complex performance on the part of the student but don't have a "correct answer" in the sense of an objective test answer. In these cases, we use rubrics to evaluate the student's performance. In my mind, rubrics are a proxy for the "correct answer" in multiple-choice-world because they utilize specific criteria for demonstrating mastery of the competency associated with the assessment.

E.L: I read that the disadvantages of a CBE program are that there are certain things that can't be competencies. Like literature or history. You can't measure that as a competency because it's not objective. From what you just told me, is that false?

K.Y: That is not true. Any discipline can be expressed in a competency-based framework. You just have to understand how to express that discipline in terms of knowledge, skills, and abilities that the student will have as a result of engaging in that discipline.

#### E.L: Can you explain the importance technology has in this case that is so useful for CBE programs?

**K.Y:** The best way is to think about how many Word docs, spreadsheets, emails messages, time and effort it would take to organize and deliver content, track each competency by student by assessment score (for both formative and summative), score rubrics, transfer those scores to a master list before you can issue grades. It would be a nightmare. Technology allows you to set up the system to do all of those things. I think the biggest factor is that you're able to leverage technology to associate competencies and subcompetencies with content, assessments and feedback to learners.

One quick example is when students engage with formative assessments, such as multiple choice questions. Multiple-choice assessments can be machine-scored and give immediate feedback so the learner knows what to go back and review or move forward with demonstrating mastery at the summative assessment level.

Next, when you get into authentic assessments, you are likely going to need rubrics to evaluate each of the competencies and subcompetencies involved. Technology allows you to read that paper online, score it using the online rubric, and quickly get rubric scores This saves instructor time in processing scores and providing feedback to learners.

\*CBE definition according to the The Glossary of Education Reform.

\*\*A rubric is a guide listing specific criteria for grading or scoring academic papers, projects, or tests according to Merriam-Webster online dictionary.



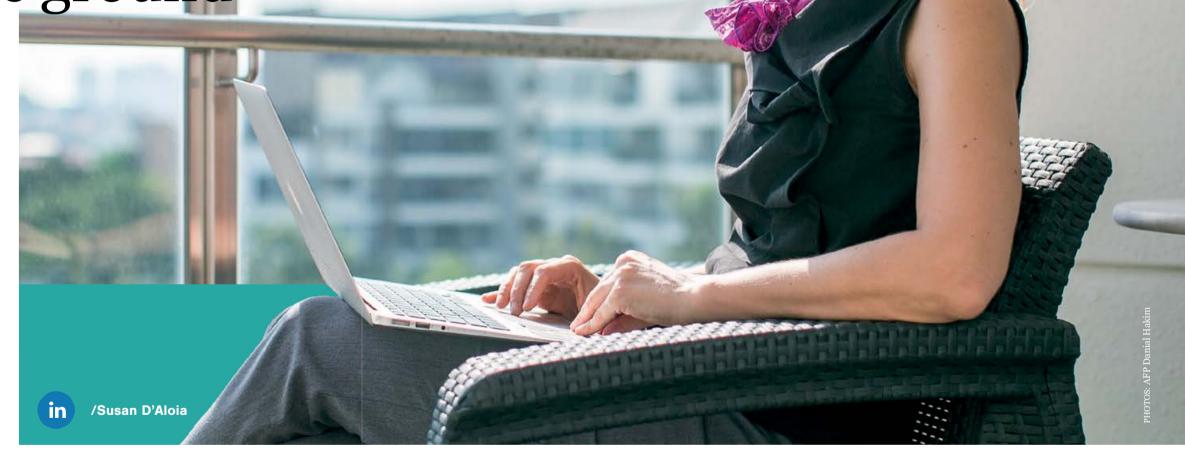




## The substance behind Outcomes Based Education: Lessons from on the ground

BY: DR. SUSAN D'ALOIA

In Asia's current era of education reform, institutions increasingly pilot Outcomes-Based or Competencybased Education models. The LMS plays a critical role in this pivot as today's digital systems have the capacity to provide tools to activate pedagogy; organize assessment and feedback at multiple levels, and calibrate results that include measured predictions. Behind such sophisticated systems remain the instructors and administrators who serve on the pedagogical frontlines.



#### PROVIDING WORKSHOPS AS PART OF PROCESS OF IMPLE-

menting Outcomes-Based Education and Competency-Based Education has given me to the opportunity to more deeply consider the perspective of a myriad of stakeholders throughout Asia. Such lessons that surface from sessions can create more authentic

communication with practitioners, and impact larger research projects that support teaching and learning in relevant ways. Today's reflection shares insights from the field of a recent engagement at Lyceum of the Philippines University.

On the morning of the OBE workshop I give, Mrs. Rose Alday, the Dean at the Center of Computer Studies at the Batangas campus of Lyceum of the Philippines University, begins the session with the institution's ambitious fiveyear agenda. This academic roll out includes

**EXPERT ANALYSIS** 

Dr. Susan D'Aloia Customer Success Advocate in Asia at Blackboard Inc.



benchmarks for comprehensive blended learning across every college in the university over the next two years and select fully online course building within five. Implicitly, such execution depends on the will and follow through of the academic deans and instructors sitting in the room. Mrs. Rose concludes her short overview with the following statement of purpose visible on a power point slide:

"We are not the first university to use an LMS. If we cannot take the lead, then don't let us be left behind."

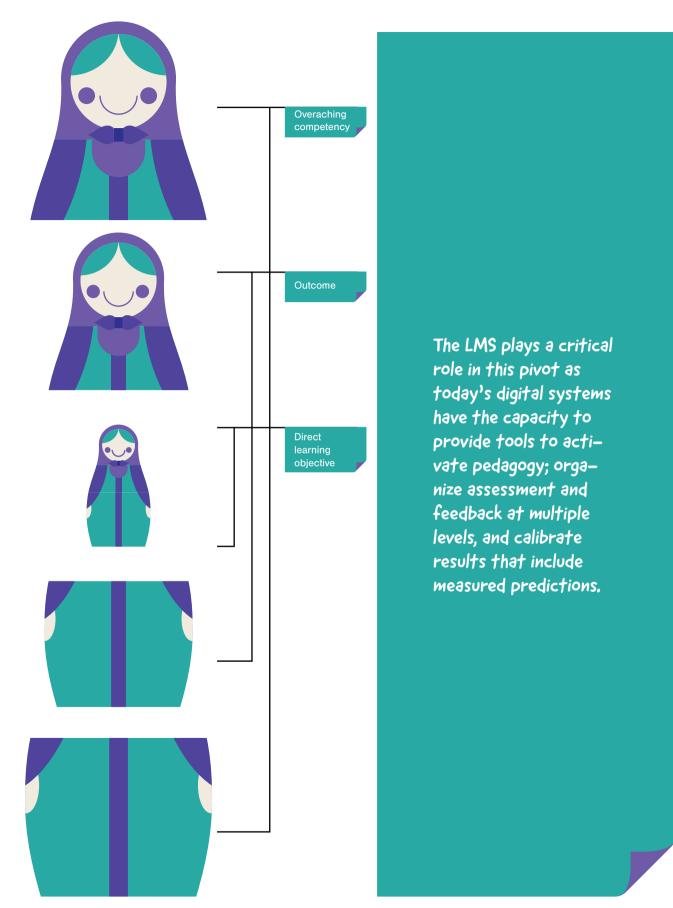
Mrs. Rose's assertion encapsulates the ambivalence and excitement around adopting an LMS, and then spins the tension into a plea towards the positive in the interest of the evolution and development of the institution. As the morning's workshop leader, I assume a few intertwining realities. The academic leadership and instructors rescheduled their workload to make time for this training, so therefore must attend to their other responsibilities at another time. And perhaps more immediately pertinent, undoubtedly this group has questions and concerns, and yet everyone in the room wants to create practical value from this process.

Conceived in the United States in the early nineties, OBE and CBE emerged out of the notion that actual learning should not be the variable to the constant of time. Early proponents of this framework desired to break from "tradition" by inciting curriculum overhaul with programmatic goals that better prepare and train students. Recognizing that every learner does not thrive with the same linear process towards competency challenges the bell curve, or at least the notion that a bell curve should function as a static conclusion relating to the bounds of mastery. For such a framework to lead to meaningful decision making and practices, as opposed to merely bureaucratic framing, a negotiation between outcomes, competencies and learning objectives needs to be resolved.

I liken the juxtaposition of outcomes, competencies, and learning objectives to that of a Russian doll. Let's say the largest doll is the overarching competency. The medium doll that fits most snuggly is the outcome, while a smaller doll functions as the direct learning objective; and even a smaller one, that can't be opened, could potentially serve as a remediated learning objective to break through misunderstanding. The dolls can be hidden within one another; unpacked, lined up, and ranked by size; or taken apart by halves into a disordered pattern of sorts. This metaphor alone does not automatically provide clarity of how each concept informs one another, let alone translates into conducive practices. It only serves to communicate dimensions of the puzzle many practitioners and learners experience as they engage in the learning experience.

In the interest of further demystification, the workshop includes an examination of a four-minute scene from the Karate Kid (the original) to further illustrate the interplay in action. The scene depicts the teenager, Danny, as the bullied student of Mr. Miyagi, the Japanese-American karate teacher. Exasperated by the regimen of assigned chores that include waxing his car, painting his house and sanding the floors, the exhausted student confronts his teacher and accuses him of reneging on his agreement to teach him to fight. What Danny can't fathom is that Mr. Miyagi is not merely an expert at karate, but one with a consciousness of his student's incompetence, and therefore privy to the learning objectives his student must master so to grow his competence.

At the start of the scene, Danny can only fixate on the outcome of him becoming a fierce competitor and remains



directionless on his own course of mastery.

Mr. Miyagi subsequently intervenes, calls for him to fight by yelling out the physical moves, "Wax on, wax off," and "sand the floor." He coaches him to apply the building blocks from the learning objectives and corrects his application. By the end of the meta-cognitive experience, Danny has shifted from being unconscious to conscious of his incompetence. Only now does he fully realize what his body and mind will need to do so to achieve mastery.

Using such a touchstone in the workshop to distinguish the interplay largely garners a positive response from participants as demonstrated in poll responses and informal feedback. However, the momentary euphoria that unifying film experiences can provide proves to be ephemeral. When asked to participate in a sorting process of the connectedness of outcomes, competencies and learning objectives in a subsequent activity, Mrs. Rose becomes vocal:

"We need to tell you that we use different terminology that we adopted from the United States. We frame these differently."

Mrs. Rose quickly interprets the working negotiation of competency as a student outcome, an outcome as a performance indicator and a learning objective as a CILO, or course instruction learning objective. True to duty, she writes with a black marker on the white board. This

decoding adds another step to the sorting process as participants make sense of how each tenet informs one another.

Instructor PJ Minoza, a philosopher and educator participating, has spent the last five years teaching subjects related to philosophy, sociology, cultural & religious studies, and international relations. During the sorting exercise, he chooses empathy as a competency of focus. He selects the outcome, or performance indicator: Develop a capacity of self-awareness and social insights into South East Asia and the learning objective, or CILO: Develop an understanding of group dynamics by playing a specific role in this week's group project and then report back on the experience.

"I emphasize empathy in all my classes, as we need to understand the cultural dimension of human relations. Students needs to comprehend the complexities of doing business. In most Eastern countries... Well you know how westerners say, it's nothing personal, it's just business. But in the Philippine's culture, doing business involves third party intermediaries where trust is everything."

Mr. Minoza mentions how his method of teaching is more in line with the concept of andragogy, or adult education. He shares how he teaches Beauvoir's, "The Second Sex", by introducing the ideas through videos before encouraging them to relate it to social realities in the local context before applying it to other parts of the world.

"Only after doing this will I give them the primary text and assign them independent reading. I see this as providing a variety of ways for students to internalize theory and then we can have even more avenues for feedback."

Along with his colleagues, Mr. Minoza continues to hone in on a specific learning objective, frame it with learning events as he selects Moodlerooms tools he anticipates uploading under the guidance of my colleague Nick Benwell, who will guide the group during their hands-on session in the afternoon.

SUMMARY OF REFLECTIVE LESSONS FROM THIS WORKSHOP:

Not so unlike Mr. Miyagi, from the karate kid, many faculty still identify as

being a mentor.

However, with the responsibility of serving up to two or three hundred students per term, they cannot possibly provide personalized feedback for That's the gift of creating adaptive learning processes within the LMS, in this case, Moodlerooms. Such technology can configure and differentiate activities and assessments in response to the actual student performance. Faculty and staff need time to situate these learning processes. The written feedback they send anonymously confirms this. As faculty and staff "adopt" the language of an LMS, they might have to reinterpret a framework they have already had to learn from yet another outside entity.

Often such frameworks and terminology originate out of the US, Europe or Australia. Some impatience or even mistrust would be normal, and even a healthy part of the process of change, though the participants from today's session respond with nothing but grace.

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Witnessing the vibrancy of the "voice" of faculty as they assimilate to new digital processes renders inspiration, as in the case of Mr. Minoza.

When a faculty member shares an aspect of their method and philosophy with confidence, they are more apt to experience how the features of Moodlerooms that support OBE/CBE programming do so not at the expense of their unique curation of learning, but in full support of it.

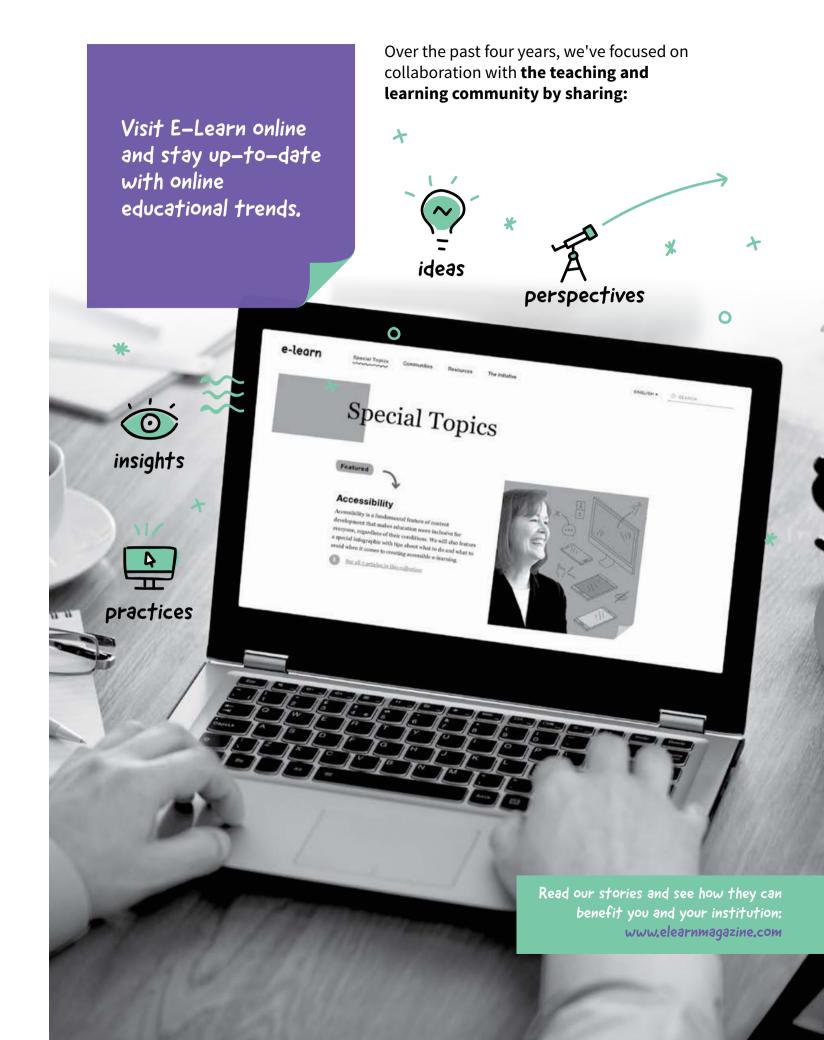
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"One of the challenges that the school has set is to make students become the best they can be for the future"

Stuart Frankhauser
Director of digital delivery and innovation at Nossal High School.





"Online CBE programs are giving adult students like Patrick the opportunity to do what many have only dreamed of—complete a college degree"

Van L. Davis
PhD. Associate Vice President,
Higher Education Research
& Policy at Blackboard Inc.

"To attract the adult learners who would most benefit from the modality will first mean helping them understand what CBE is and conversely, what it isn't"





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