TEACHING SYSTEMS LAB

MOOC In-Review Reports

2017 - 2019

by Justin Reich and the MIT Teaching Systems Lab

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LAUNCHING INNOVATION IN SCHOOLS

DESIGN THINKING FOR LEADING AND LEARNING

LAUNCHING INNOVATION IN SCHOOLS: XQ EDITION

ENVISIONING THE GRADUATE OF THE FUTURE 2018

COMPETENCY-BASED EDUCATION: THE WHY, WHAT, AND HOW

ENVISIONING THE GRADUATE OF THE FUTURE 2019

LAUNCHING INNOVATION IN SCHOOLS IN REVIEW

TEACHING
SYSTEMS LAB

“Change is only meaningful if it affects the day-to-day lives of students.”

— Justin Reich

We are pleased to present findings from the first run of 11.154x: Launching Innovation in Schools (January 17-March 8, 2017), which was created with **the generous support of Microsoft as part of the Microsoft in Education Series on edX**. On the following pages, we provide an overview of the course content, consider the impact of the course, and share insights into the learner experience.

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EXECUTIVE SUMMARY

All around the world, school systems are working towards more ambitious teaching and learning in classrooms—moving away from passive lecture, worksheets, and recitation and towards innovations in active, student-centered, technology-mediated learning. Better student learning depends on better teacher learning; school systems need to dramatically increase the quantity and quality of learning opportunities for educators within the system. Online and blended courses and experiences will play a crucial role in making this dramatic increase possible. The Microsoft in Education MOOCs represent an important experiment in using online resources to create new learning opportunities for school leaders looking to take the helm of transformational change in schools.

Created by Justin Reich, Peter Senge, and a team of instructional designers from the MIT Teaching Systems Lab, Launching Innovation in Schools prepares leaders at all levels—teacher-leaders, principals, superintendents, and public officials—for the challenging and rewarding work of innovation. Innovation takes many forms in different cultures and schools, so rather than focusing on any particular instructional approach, Launching Innovation in Schools helps leaders develop the conditions that make any kind of innovation possible. The course helps educators to create healthy soils for innovation in schools and then to think carefully about what to cultivate there. Through expert instruction from Reich and Senge, case studies from seven innovative schools and educational stakeholders, online peer interaction, and activities that get learners back in their schools to make change right away, participants develop a new perspective on leadership through example, practice, and discussion with peers.

The central design challenge of Launching Innovation in Schools is that MOOCs are primarily individual, asynchronous, and online, while school leadership is collaborative, real-time, and situated in specific contexts. For our design team, it's not enough if participants come to Launching Innovation in Schools, watch videos alone at night, and nod along while feeling inspired. We defined success as participants' taking their insights directly back into their communities to start processes of leading change in a single department, an entire school, or across a whole district or system.

Our strategy for tackling the design challenge in Launching Innovation in Schools was to develop new learning techniques that transferred learning in the online setting to action in real contexts. These techniques included anchoring leadership principles in *specific practices*, encouraging the formation of collaborative *learning circles*, providing a *facilitator's guide* for learning circles to use, creating *takeout packages* that walk leaders through new practices, modeling the process of change in compelling *case studies* of schools, and offering *calls to action* that get participants putting their new learning to work right away in their schools. Throughout our design process, we reminded ourselves that the learning that truly mattered was that which transformed participant behavior and changed conditions in their schools.

Measuring the impact of this particular kind of learning is more challenging than tallying correct multiple choice questions or counting the number of discussion posts. We need to

gather evidence about how over 7,000 educators in 160 countries are implementing ideas from the course in their local context. Our early investigations of surveys and content analysis of student work are very encouraging. The core ideas of the course—encouraging a bias to action, embracing innovation through iteration, building collaborative teams by engaging people around their interests—are reflected throughout student’s observations about their learning in student assignments and discussions:

“ I used to think that I had to have everything figured out before I start a new initiative, but now I think that it’s important to start and iterate to innovate. ”

“ I used to think that leadership was top down but it’s clearly not; it’s about having team members that share a common vision and values. Also enabling them to have the confidence, opportunity and room to take their own risks, make and learn from their own mistakes and to grow themselves as teachers. ”

“ A group of colleagues from my school all took this course at the same time. While each person followed the course in her/his own way, it has provided us with fodder for productive, generative discussions as well as a group to act as a sounding board for any of our ideas, goals, etc. ”

“ I have an opportunity to launch innovation in my school, probably as a solo effort at first, but I’m already working with a few teachers who are excited about redefining their teaching and collaborating on ways we can improve student learning. I will have to focus on what I can control, but I have collected all of the course materials, and have already started using them in my teaching, as well as sharing them with my colleagues. ”

As we read these kinds of comments, look at participant work describing their interventions in schools, and continue the process of participant interviews and surveys, it’s clear that Launching Innovation in Schools made a substantial impact in the lives of educators around the globe.

The first public run of Launching Innovation in Schools was only the beginning. We plan to revise the course based on participant feedback and run it again in the 2017-2018 and 2018-2019 schools years. We also have proposals to create custom modifications of the course that we will run with particular populations through partnerships with professional development organizations, graduate schools of education, or other entities that can support and scale blended learning, such as the Ministry of Education in Kuwait. We look forward to continuing our work with Microsoft, exploring how our existing courses can be retooled, and how we can develop more courses to advance our shared goals of preparing educators for a more ambitious future of teaching and learning.

COURSE OVERVIEW

We invited learners to complete cycles of study, experimentation, and reflection to gain the confidence and skills to lead instructional improvement efforts in their schools. Based on the work of Justin Reich and Peter Senge, *Launching Innovation in Schools* focused on visioning and capacity-building, with an emphasis on building partnerships with stakeholders at multiple levels.

OBJECTIVES

LEARNERS WILL:

- Develop a vision and strategy for change that takes into account change leadership frameworks, local context, and the perspectives of major stakeholders in the educational environment.
- Begin taking steps in their school or learning environment towards launching an instructional improvement initiative.
- Connect, collaborate, and learn with colleagues and peers, both within the course and in their school or organization.
- Understand that different types of school leaders—from teachers to superintendents—have different roles for launching change, but the change that matters most is the innovation that directly changes how students learn in classrooms.
- Develop confidence that they have the ability to adopt and apply new leadership practices and act as change agents.
- Explore how technology can transform learning for adults and students.

BY THE NUMBERS

INITIAL COURSE RUN (JANUARY 17-MARCH 8, 2017)

7352*

ENROLLMENT

161

TOTAL COUNTRIES

Learners came from around world. Top countries were US, India, and Brazil.

76%

LEARNERS CURRENTLY EMPLOYED AS AN INSTRUCTOR/TEACHER

60%

LEARNERS WHO HAD RECEIVED AN ADVANCED DEGREE

38

MEDIAN AGE OF LEARNERS

Participants submitted assignments and interacted with other learners in our specially designed **discussion forums**, which are separate from the edX platform.

1680

ACTIVE MEMBERS

2510

TOTAL TOPICS

3011

TOTAL REPLIES

*Enrollment as of end of course: 3/8/17

COURSE ELEMENTS

In every design decision, our central goal was to introduce participants to frameworks for change leadership through a set of practices that they could implement in their own settings.

INSTRUCTOR PRESENTATION

The core ideas and frameworks for innovation are presented through expert presentations from Justin Reich and Peter Senge. These lectures are illustrated with animations and instructor sketches on our Lightboard and reinforced by educator voices.

VOICES IN PRACTICE

We visited and interviewed educators from 7 schools and institutions so our learners could see innovation in practice, and be inspired by the stories and the perspective of a diverse range of educators, contexts, and programs.

ASSIGNMENTS & CALLS TO ACTION

Assignments were designed to encourage exploration and reflection, and to promote learner activity outside of the course. Throughout the course, students envision their own change initiative, take steps to gather resources and engage colleagues, and get to work making change in their schools.

FORUMS

Our community forums are a central place for connecting educators from across the world. Participants discuss course content, submit their assignments, exchange peer feedback, and engage with the course team. The forums serve as an interactive feature that took the course from a “textbook” to a learning experience.

LEARNING CIRCLES

A learning circle is a facilitated, in-person group of learners who are all registered in the course. To provide support for learning circles, we developed a Facilitator’s Guide and invited participants to create and join learning circles. In learning circles, students could work together to bring practices from the online course to life in their schools.

WEEKLY UPDATES

Every week, instructor Justin Reich provided an overview of conversations in the course and reacted to student work from the forums. The updates create a sense of ongoing community and connection to the instructors, and give us a chance to showcase exciting work.

LIVE VIRTUAL EVENTS

We hosted three live events throughout the course that regularly drew together participants from dozens of countries around the world, with some participants waking up early (in Australia) and others staying up late (in Europe) to participate. These events allow the course team and participants to connect in real-time and foster relationships among participants.

UNIT 1:

Launching Innovation in Schools

This course begins by introducing the Cycle of Launching Innovation, a four-phase framework for leading change initiatives. Our instructors introduce key leadership tools, and learners see what the Cycle of Launching Innovation looks like in a real school district.

UNIT 2:

Bringing People Together Around Ideas They Care About

This unit explores how to gain the support and investment needed from others to enact change by tapping into what the community cares about. Learners hear directly from educators who have been effective in engaging with multiple stakeholders.

UNIT 3:

Refining a Vision and Getting to Work

Learners discover how necessary it is that a school or school system have a coherent vision. Using the Cycle of Experiment and Experience, a framework for understanding change in schools, teachers can get to work by experimenting in their classrooms, and administrators can get to work by facilitating teacher experimentation. Learners visit two schools where educators have worked collaboratively to define and shift their visions.

UNIT 4:

Working Together Through Ups & Downs

This unit provides tools for understanding how to work through difficulties and for promoting productive team conversations. Learners reflect on challenges they face and are facing when working with others. Educators and education advocates reflect on the importance of communication and collaboration and the fear that often accompanies change.

UNIT 5:

Measuring Progress and Adjusting

Our instructors explain why it is important to measure progress for an initiative and gives suggestions for how to do it. Learners hear from educators about assessing pilots in schools and collecting and analyzing data to improve instruction.

UNIT 6:

Sustaining Innovation in Schools

Learners consider the importance of continual reflection to sustain innovation. Learners hear from a school featured in Units 1 and 4 about lessons learned and future plans. Our instructors discuss the role of a leader and looking at schools as learning organizations.

DESIGNING FOR IMPACT

The primary goal of our course is for participants to take what they have learned about change leadership and put it directly to work in schools. Instead of the usual MOOC practice of studying individually, asynchronously, and online, we encourage our participants to work in collaborative, real-time, face-to-face settings through the following design strategies.

LEARNING CIRCLES

ENCOURAGING STUDENTS TO TAKE THE COURSE TOGETHER

Even before the course officially launched, we encouraged registrants to join with their colleagues and carve out some time each week to work together, discuss and reflect. At times, these learning circles naturally transitioned into teams leading change.

A learning circle gathers to watch the Welcome Live Event.
Image Credit: Megan Haddadi, Head of Technology, Park School

FACILITATOR'S GUIDE

SCAFFOLDING COLLABORATION

We produced a 30-page guide for facilitators of learning circles that offered video discussion questions, group exercises, and other suggestions for how to learn as a group alongside the online course.

TEACHING THEORY THROUGH PRACTICE

The course introduced each key leadership theory or framework through concrete practices that school leaders can do with their colleagues. For example, when we described the importance of soliciting stakeholder feedback on vision, we showed how to do that through an activity called Four Corners. When we emphasized the importance of reflecting on collaborative conversation, we showed how the Left-Hand Column Case can help people debug tough conversations.

TAKEOUT PACKAGES

SUPPORTING PRACTICES

To help participants go from engaging in online practices to leading them in-person with colleagues, we provided Takeout Packages that function as scripts for leading practices like the Rightboro or Evaluation Scenarios. These scripts give new leaders the confidence to try new practices with their colleagues.

CASE STUDIES

SEEING CHANGE IN ACTION

We visited a diverse set of public, private, and charter schools where outstanding educators illustrate the hard work of making change happen. These case studies helped participants see how innovative change looks in real settings.

7

SCHOOLS

57

INTERVIEWS

68

VIDEOS

GETTING TO WORK

ASSIGNMENTS AND CALLS TO ACTION

The course emphasized a “bias to action,” the belief that learning and growth happens through action and reflection. Participants learned theory, saw it in action through case studies, and then got to work themselves through assignments. Each assignment is accompanied by a Call to Action video, which helped participants see how the assignment can be part of a change process in their schools and organizations.

BUILDING FOR EDUCATORS' BUSY LIVES

Our courses are designed to fit into our participants' busy schedules. We tried to keep course content at 1-2 hours per week to fit within a teacher's prep period or a weekend afternoon. We also designed the course knowing that many students won't complete the course. For instance, our first unit summarizes the key ideas from the entire course, rather than providing just the first content area, so that when people leave the course early, they leave having been introduced to the key concepts.

MEASURING IMPACT

Given the ambition of our goals to help educators make real change in their schools, measuring impact is both incredibly important and challenging. Our courseware analytics gives us some sense of participation: over 7,000 registrants from 160 countries, over 3,000 forum posts, and over 19,000 video views. Hundreds of people around the world were actively engaged in the course, and those who participated in surveys reported high levels of satisfaction:

95%

RESPONDENTS WOULD
RECOMMEND COURSE
TO ANOTHER STUDENT

73%

THOUGHT COURSE
EXCEEDED
EXPECTATIONS

93%

TEACHERS AGREED THEY
WOULD USE MATERIAL
AND/OR IDEAS FROM THIS
COURSE

Aside from analysis of survey data, we also see evidence of impact from student work and reflection. Participants show their understanding and application of the core ideas of the course in observations about their own learning and discussions with peers.

“ This course has left me with two major take-aways. The first is the reminder that “leadership” is an action, not a title. This prods me to focus my energies on how I can effect positive change by leading with my actions and interactions regardless of my title or position within the school and by encouraging others to do the same. The second is the encouragement to use systematic, structured activities to reflect, plan, and assess. ”

“ Today was a good day and I’m feeling really positive! I attended a secondary department meeting to share information and gather opinions. I worked with three staff members to ensure our technology was meeting their teaching and learning needs. I co-planned a year 4 geography unit that integrates tech in a creative way and the year 4 teacher was excited about co-teaching the lessons. We discussed the fact we had attempted something similar last year and were pleased to be refining the lessons. We discussed the cycle of experiment and experience. ”

“ I am a STEM teacher at a small, private K-8 school of varied level learners from diverse backgrounds. I wanted to create a program to teach them code that goes beyond the hour of code, that is more engaging and that would allow them to move to the next level. So far so good! I designed it and began it this last semester and have had enough success that my principal is happy and wants it to continue next year! Yay! ”

“ The course definitely developed my self esteem related with initiating something within school. Knowing that as a teacher part of my job is to be a leader, made me motivated to fulfill that role. ”

Given that our course is intentionally designed to support learners participating to different degrees, course completion should be considered carefully. Like most MOOCs, the numbers of participants who completed the course was small in percentage terms: there were 125 students who earned certificates in the course and 81 students who completed the final project.

Each learner comes to the course with his or her own set of goals, resources, circumstances, and commitments. Not every learner intends or desires to watch all video content or complete every assignment. From surveys, interviews, and analysis of course content, we know that partial participation is highly valued.

“ The learning circle we formed to take the course has been able to establish a real purpose, and the process we learned from the course gave us clear direction on how to proceed. Although none of us completed the course, it gave us the impetus to identify an innovation to improve learning at our institution (delay the start of lessons to 09:40) and strive to work through the launching innovation steps. We created an asset map, and have met with a number of the key stakeholders. We are now getting input from our teaching colleagues, and have also surveyed the students. The next step is to work with our administration to get their support to take the innovation on board. ” — 11.154x Learner

As we continue to explore the impact of Launching Innovation in Schools through surveys, interviews, and other regular communications with our learners, we find more and more indications that Launching Innovation in Schools has been a catalyst for teachers and school leaders to begin leading ambitious change initiatives around the world.

We invited regional participants to a leadership, innovation and design Edcamp on August 9, 2017. We'd be delighted to have anyone from Microsoft join us! We see this Edcamp as an opportunity to continue engaging with our learners and to learn more about the different initiatives sparked and accelerated by Launching Innovation in Schools.

TRANSFORMING LEARNING WITH TECHNOLOGY

One objective for this course was to have our learners explore how technology can transform learning for adults and students. Below we share examples of how learners used the concepts and tools of our course to launch technology initiatives in their schools.

“With a new competences-based curriculum in the pipe-line and the provision of 1:1 digital devices for every student it is a good time for our school to reflect our teaching practices and develop new forms of learning scenarios for our students in all classes.”

“I have been thinking of ways to start using iPads more effectively at my school. After taking this course, I feel I have the tools necessary to start my project! I thank Justin and Peter for that!”

“I used to think that devices would be the saviour of teaching in the classroom, and that devices mattered.

I now think that it's not the power of the device, it's the power of the teacher and what they can do.”

“One of the readings in Unit 3 jumped out at me (Daccord, Tom and Justin Reich. 2015. “How to Transform Teaching with Tablets.” Educational Leadership 72 (8): 18-23.) and one of the

main points I took from this reading (amongst other great info) was the fact that we are probably a school that has invested in technology and not had a vision for how this is going to improve our teaching. It is only now, 5 years into the

intro of technology and about 3 years into a BYOD program in the high school that we have the time and human resources to begin to build our vision and change the way we teach with technology.”

“Our district too is moving forward with OneNote and the Office 365 platform. Microsoft has made some amazing advancements with Classroom – Data Sync – MIE for teachers. I agree with you 110% and love the ability for face to face collaboration is a must but now can be achieved with Sykpe.”

STUDENT WORK

Our assignments were created to help learners to reflect and act. We encouraged our participants to apply what they learned from the course in their own settings.

ASSIGNMENT 1.1

POWERFUL LEARNING ENVIRONMENT

Learners begin to shape what good teaching and learning looks like for them by describing their vision of a powerful learning environment.

ASSIGNMENT 1.2

PROBLEM OF PRACTICE

Though our learners came from all over the world, the challenges they face in schools and classrooms were very similar. We asked participants to pick a *problem of practice* to work on throughout the course. A problem of practice is a challenge in the learning environment that impedes student learning. Our students chose to work on a wide variety of topics including:

ASSIGNMENT 2

ASSET MAP AND REFLECTION

To identify useful resources to help tackle their problem of practice, participants create an asset map

This asset map emphasizes the important role of students as well as a variety of ways to collaborate.

“ My support network and ‘assets’ are far greater than I had anticipated. With time, respect, encouragement and motivation people really will gather together and work towards creating and achieving a shared vision. ”

INITIAL ACTION PLAN PART 1 WHAT DOES AWESOME LOOK LIKE?

This assignment guided learners toward reflecting on their personal vision of what would make a positive outcome for fixing their problem of practice.

INITIAL ACTION PLAN PART 2 FIRST CONCRETE STEPS

This course emphasizes a bias to action. With the Initial Action Plan assignment we challenged participants to not only create a plan for action, but to take action.

This particular learner implemented the first steps of his Initial Action Plan during the course. He posted photos of introducing his problem of practice solution to his colleagues.

“Very soon, ... we will have some discussions forums with school leaders in order to assess the implementation of a project in Portuguese schools and discuss with them ways of trying and implementing project-based learning activities related to entrepreneurial challenges in the curriculum.”

edX Launching Innovation in Schools.

Initial Action Plan Part 1.

What does Awesome look like.

POP: Developing creative design skills for future success.

“I managed to organize a day session with 40 physics teachers from secondary schools in my district and they really appreciate it. Now we are working on a long term project in launching innovations in classrooms: a physics approach.”

“The concepts and understandings gained will directly inform my approaches to leading a group of faculty to create and implement a technology integration framework at our K-12 school. It may also inform the way our school approaches innovation in general, since I work closely with some members of the senior leadership team.”

INITIAL ACTION PLAN PART 3 ASSESSMENT PLAN

If anything is worth doing, it's worth figuring out if you've done it right. For the last part of the Initial Action Plan, participants created an assessment plan that described how they will measure the progress for their initiative.

REFLECTION & RECOMMENDATIONS

The first run of Launching Innovation in Schools was a great success, and we have exciting plans for how to continue to serve educators with these materials. We have a few recommendations to make for future runs.

- **Diversity of voices.** While we were excited to be able to feature many different voices from different types of schools, the course team values diversity and would appreciate the opportunity to interview educational leaders, and others, out of the New England area. We believe this would expand the appeal of the course even further and also allow learners to gain valuable perspective.
- **Adjusting Pacing.** We designed the course to take 1-2 hours per week, but many participants reported spending four or more hours per week. In subsequent runs, we plan to streamline the content to emphasize the most valuable elements, consider some content restructuring, as well as adjusting the pacing to allow learners to have more time for viewing content and completing assignment work.
- **Support for collaboration.** Recognizing that change in schools can't happen in isolation, we encouraged learners to find colleagues to also take the course. However, many learners were in circumstances that prevented them from taking the course with colleagues. In our next run of the course, we would like to provide a support guide to encourage and help learners to leverage our forums' virtual groups feature. For those learners who are able to facilitate learning circles, we would like to provide additional guidance and support.
- **Partnering for Delivery and Impact.** We're exploring several different potential partnerships to identify specific cohorts of educators to participate in the program. The XQ Super Schools are interested in taking advantage of these resources, and we're working with them to figure out how to serve the 40,000 educators who participated in the contest. We're also pursuing work with the Ministry of Education of Kuwait to create opportunities for 2,000 school leaders in that country to participate. We think there might be other exciting opportunities to partner with Microsoft networks to offer a similar high-touch, high-value program.

GOING FORWARD

The future of Launching Innovation in Schools and the Microsoft in Education MOOC series is bright. Between Launching Innovation in Schools and Design Thinking for Leading and Learning, we have already engaged thousands of educators around the world and helped prepare them for the challenges of the next decade of educational reform. We are developing new partnerships with additional organizations. We are enormously grateful to Microsoft for supporting this work, and we'd be excited to engage in further conversations about how we can partner around developing more courses or finding new ways to deploy these existing materials in ways that advance powerful uses of technology in education.

ACKNOWLEDGEMENTS

This course could not have happened without the collaborative efforts of staff across MIT, edX, and our freelancers.

We would like to thank the following people who contributed to the creation, development, delivery and marketing of this course.

Course Instructors:

Justin Reich
Peter Senge

Course Staff:

Elizabeth Huttner-Loan
Alyssa Napier
Vladena Baetge Jahn
Garrett Beazley
Rachel Grubb

Engineer for Forums:

Kevin Robinson
Paul Medlock-Walton

Key Team Members at MITx:

Brad Kay.Goodman
Colleen Cressman
Shelly Upton

Special thanks to FreshCognate

for additional video production
work and assistance:

Aimee Corrigan
Doug Pietrzak
Denez McAdoo
Daymian Mejia

And Patrick Yurick, for help
in the early phases of course
development.

11.155X: DESIGN THINKING FOR LEADING AND LEARNING

REVIEW | 2017

TEACHING SYSTEMS LAB

Design thinking is an approach to problem solving when we don't fully understand what the problem is and we can't anticipate what solutions might look like in advance.

— Justin Reich

On the following pages, we provide an overview of the first run of the course 11.155x: Design Thinking for Leading and Learning (March 21 - May 3, 2017). We consider the impact of the course content and share insights into the learner experience.

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EXECUTIVE SUMMARY

Created by Justin Reich and a team of instructional designers from the MIT Teaching Systems Lab, Design Thinking for Leading and Learning asks school leaders at all levels-- teacher-leaders, principals, superintendents, and public officials-- the following key questions:

- Future jobs will require creativity, problem-solving and communication. How do we use design thinking to teach these skills to PK-12 students in meaningful ways?
- How do we bring together passionate school leaders to use design thinking to create systemic solutions to educational challenges?

Organized into three units (one instructor-paced and two self-paced), this course combines the vocabulary and concepts of design thinking with real-world design and educational examples. A core goal of the course is to empower teachers to use design thinking with students and leaders to use DT in their communities by showing that design thinking is anchored in the real work of innovators at MIT. We challenge our learners to apply the concepts in their own setting, first in a small, low-stakes design challenge, then in their own educational context. Through presentations by Justin Reich and subject matter expert Blake Sims, case studies from three schools at varying stages of incorporating design thinking in the classroom, and online peer interaction and support, our learners begin to see how a schools can be transformed through the skills and mindsets of design thinking: empathy, bias to action, trying things out, getting feedback, and a commitment to iterative improvement.

We developed Design Thinking for Leading and Learning to enable and encourage learners to go out and try design thinking in their educational context, whether that be to use design thinking in their classrooms or to use it as a tool for making change. As a course team, we believe that the impact that mattered most was empowering participants with design thinking skills, mindsets and practices that will allow them to make positive changes in schools. To accomplish this goal, we applied to following design strategies:

- The design process used in this course was developed to reflect the way designers at MIT actually work.
- The first assignment was a low-stakes design exercise so that learners could gain familiarity with and ownership of the process before tackling more complex challenges in their contexts. Both the Unit 2 and Unit 3 assignments encouraged learners to immediately apply design thinking concepts into their practice.

EXECUTIVE SUMMARY

- The last two units of the course were released simultaneously so that learners could self-pace. Learners engaged with content in the way that was most relevant for them and in the way that provided them with enough time to try design thinking in their learning communities. To help them to plan their path through the course, we created course capsules, meaning videos that provide a content overview for each unit.
- We included case studies of schools at various levels of incorporating design thinking, from a school at the earliest stages to a school built around design. These case study videos were interspersed with the assignment steps to inspire learners as they got to work.

We measure the impact of this particular kind of learning by our participants' enthusiasm as they reflect on the work they've done in the course and how they have grown as a designer and an educator. Our evidence comes from discussion forums, survey data, and student work. The core ideas of the course are reflected throughout students observations about their learning in assignments and discussions.

“ I used to think that I needed to find the solutions of everything myself. Now I think that I need to get input from the users so that I can seek solutions that will work for the users. Feedback and empathy will help to come to a better solution. The design thinking process allows for error and reflection so that the end result is beneficial to all and works! ”

“ I used to think the design thinking process could only be used in Design based areas such as Product design - Interior design - Architecture etc. but now I am happy to have figured out how to solve all real life problems with this procedure! ”

COURSE OBJECTIVES

LEARNERS WILL:

- Gain familiarity with the design thinking process and vocabulary
- Understand why design thinking is useful for both teachers and students to learn and use
- Understand how leaders can use design thinking to tackle sticky educational problems in complex systems
- Adopt a designer mindset and apply design thinking to a problem in their own educational context
- Consider how the thoughtful use of technology can support learning

COURSE UNITS

Each unit of the course was structured around the steps of the design process. Learners watched videos interspersed between the steps of each unit's assignment.

01

MEET DESIGN THINKING

Designers at MIT introduce learners to the concepts and vocabulary of design thinking. Each designer provides advice to help learners with a specific stage of the design process for their assignment.

02

DESIGN THINKING FOR STUDENTS

Learners see how design thinking can be applied in a classroom context by hearing from schools at various stages of presenting design thinking to students. While Benjamin Banneker Charter Public School is just starting to share design activities with students, the Meadowbrook School has incorporated design thinking into entire content units, and NuVu Studio's entire curriculum is framed around two-week design projects.

03

DESIGN THINKING FOR SCHOOLS

How can design thinking be applied to large systemic educational challenges? Learners hear from designers who work with a large urban school district. School leaders from NuVu, Benjamin Banneker Charter Public Schools, and Meadowbrook talk about how they view design thinking in their schools and beyond the classroom.

COURSE ELEMENTS

INSTRUCTOR VIDEOS: Instructor Justin Reich, as well as subject matter expert Blake Sims, provide conceptual framing through presentations and conversations.

DESIGNER VIDEOS: Designers from MIT and around the country contribute their design expertise and perspectives to introduce participants to the basic vocabulary and concepts of design thinking. Each designer also provides advice to guide learners on particular design stages in the assignment.

SCHOOL VIDEOS: To give learners a glimpse into the range of school experimentation around design thinking, we feature voices from three inspirational schools at various levels of implementing design thinking in their curriculum and leadership practices. Watching these videos, participants can see both the challenges and rewards of using design thinking in an educational environment.

ASSIGNMENTS: Each unit contains a seven-step assignment that takes learners through one complete cycle of the design process. The assignment steps are interspersed with supporting videos from designers and schools.

FORUMS: Design thinking is best learned by doing, iterating, and collaborating with others. The community forums are essential as participants give and receive feedback on work and explore course concepts through conversations with their classmates.

WEEKLY UPDATES: Our forums contain so many excellent posts that we have found it is helpful to have an instructor curate. Every week, Justin Reich features student work and thoughtful learner interactions so that students can feel connected, especially throughout the four weeks of self-paced content.

LIVE VIRTUAL EVENTS: Participants from a variety of countries and time zones tuned into the three live events that we hosted throughout the course. These live events allowed participants to interact in real-time and to ask questions of course staff.

BY THE NUMBERS

INITIAL COURSE RUN: 6 WEEKS (MARCH 21 -MAY 3, 2017)

156

TOTAL COUNTRIES

Learners enrolled from around the world. Top countries were US, India, and Brazil.

12,005

LEARNERS ENROLLED

* AS OF MAY 18, 2017

1,419

ACTIVE FORUM MEMBERS

2,079

TOTAL FORUM TOPICS

49.6%

LEARNERS WITH
ADVANCED DEGREES

34

MEDIAN AGE OF LEARNERS

DESIGNING FOR IMPACT

The crucial marker of success in our courses is that participants are able to take their learning out of the online course and apply new ideas in their own learning communities. This engagement could look like an elementary school teacher introducing prototyping in his second grade classroom, or it might look like a high school principal using Discover stage techniques to find out what key problems her school will focus on in the coming year. We designed our course to encourage this real-world engagement using the strategies of self-pacing, inspiring case studies and multi-step assignments interspersed with video.

DESIGN PROCESS

The design process we developed for the course reflects the work of the Teaching Systems Lab and the engineering-related processes used by professors and others also at MIT. The language **Discover**, **Focus**, **Imagine**, **Prototype**, **Try**, and **Reflect & Share** was chosen to be accessible and understandable by course participants and the colleagues and students they might share the course with. One example is our decision to use the term “try” instead of “test.” While “test” is a common word in the field of design, it has decidedly different (and unfortunately more negative) connotations among students.

Course Flow and Self-Pacing: Our course welcomed school leaders of all kinds, including teacher leaders, department heads, coaches, librarians, principals, superintendents, and others. We designed the course so that each learner could engage with the material in the way that makes the most sense for their time and context. All participants spent the first two weeks of the course working on the assignment in Unit 1. After the first two weeks, participants were invited to engage with Units 2 and 3 at their own pace. To help learners approach the course, we identified specific pathways and made recommendations about which might be most appropriate and relevant:

Pathway 1: Participants who wanted an equal balance of design thinking for learning and design thinking for leading could spend two weeks on Unit 2 and then the next two weeks on Unit 3. They could then put an equal amount of effort into both assignments.

Pathway 2: Participants who were eager to learn more about sharing design thinking with students, could focus on Unit 2, both the video content and the assignment, but still spend some time exploring Unit 3. This pathway could be especially relevant for classroom teachers.

Pathway 3: Participants who felt most excited about using design thinking for systemic change, could peruse Unit 2 and engage with parts of the assignment, but spend most of the time on the content and assignment in Unit 3. This pathway could be particularly exciting for teacher leaders and administrators who already have some familiarity with with design thinking practices.

Assignments: Each assignment was designed so that learners could experience the various stages of the design cycle. We wanted learners to gain skills and confidence, and take on the designer mindset. After a practice project in Unit 1, participants began to make change within their school organization with the assignments in Unit 2 and Unit 3.

Designer Videos: We realize that educators may have questions about this way of thinking, of its value for both adults and students, and we thought that hearing from these designers would be both effective and useful for conveying both authenticity and the benefits of considering this approach.

Case Studies: It was important for us to help learners see what experimentation around design thinking looks like in schools. We interviewed educators, administrators, and students from three schools, each at a different stage of implementing design thinking, to help participants envision the possibilities.

MEASURING IMPACT

We know this course was captivating and timely for many; around 12,000 registrants joined us from over 150 countries. However, measuring impact is still complicated when considering diversity of participant goals. From edX analytics and hearing from the learners who participated in the surveys, we know that learners were engaged with the content and eager to share what they learned:

95% of survey respondents described the quality of instruction as good to excellent

97% agree "I will use material and/or ideas from this course in my future teaching efforts"

93% agree "perspective gained in this course will adjust how I teach future courses"

Responding to our survey, learners confirmed that they enjoyed the flexibility and independence of the course's innovative hybrid approach to self-pacing:

“ I liked it because it allowed us to work at our own pace, with our team, and truly personalize our learning.”

“ Self pacing actually help me to learn more about leading which was my preferred option.”

“ I was less stressed because I could fit it into my own schedule—I didn't have to worry about falling behind everyone else.”

Core to the design process is an emphasis on reflection. In the final step of each assignment, participants shared observations about their own learning.

I used another real-world project in my school as the subject of some activities in the recent MITx course Launching Innovation In Schools. I find that using real, actionable projects with real people to be an optimal way to engage with the content of these online courses, despite the fact that work time constraints have limited my participation in the online course discussion forums. ... The timing of these courses being offered has made a powerful impact on my ability to demonstrate leadership in my role at work; and -- even more importantly -- has improved the richness and quality of my contributions to the mission of the school. This was unexpected, and very much appreciated!"

Once again, I think the design process is a really great tool to address challenges to ill-structured, complex problems. While for this particular solution, we are just beginning, I am still hopeful that we will achieve amazing results. Plus, the beauty of design thinking is that is the first solution doesn't work, we can try again until we find something that does work.

We know that not all registrants intend to complete the MOOCs they register for. People register for a myriad of reasons: to explore content produced by a certain school or institution, to get a cursory overview of topics, and sometimes to get an idea of how a certain subject could be presented online.

In this course, as in others, we had some learners who joined us only briefly and others who stayed to complete assignment work and interact with their classmates. 302 participants passed the course (completed more than 60% of the work), and 169 of those participants received certificates. When the course launched, we were upfront about the content in all units and assignments. Some participants used this information to customize their experience. For example, we had participants that already had familiarity with design thinking basics and they decided to only engage with Unit 2 and Unit 3.

The course forums provide many examples of how design thinking has influenced participants' practice. We have seen sample lesson plans for implementing design thinking in the classroom and even examples of student work. These artifacts have helped us gain more insight into impact.

UNIT 1 ASSIGNMENT

BE A DESIGNER

User Problem: User worries when he wakes in the morning. Instead of lying in bed when tired, he gets up and distracts himself with technology.

Interview Questions:

Q: Tell me what you are thinking about when you're awake? Can you describe how you feel?

A: "Tired and scared of the day in school." (He began fidgeting at this stage.)

Key Takeaways:

- He gets up to distract himself from negative thoughts.
- He places a high value on "doing stuff he wants," meaning watching YouTube and using Tech.

PROTOTYPE

"I was hoping that he would rotate the window to find an emotion to describe his feelings and then rotate the next circle to think of an action to deal with

the emotion. Because he currently chooses to get out of bed and watch YouTube to distract himself from worries I hoped that choosing a more appropriate action and also importantly an appropriate time to do it on the wheel will reassure him that the worry can be dealt with later and he will be less tired and moody during the day."

IMAGINE

TRY

REFLECT & SHARE

"I was happy with how the user engaged with the solution. I really think the more cycles of iteration, tries, and reflections the more the solution will become useful."

UNIT 2 ASSIGNMENT

DESIGN WITH STUDENTS

User Problem: How might I teach Explain Everything [an app] to 6th grade students by using the Imagine and Prototype stage of design thinking in an engaging way?

Interview Questions:

Q: What limitations do you have when learning a new complicated app?

A: Time, troubleshooting if technology doesn't work. Some student's prior experience may vary and lessons are too hard or easy.

Key Takeaways:

- Students like to jump right in to exploring an app with support but without a lot of directions
- Not all users are coming with the same experience

Prototype Overview:

Students will be working in partners to imagine and quickly prototype the other student's dream vehicle (land or space). This is designed to be done as quick sketches/recordings. It is more about the process and the app than the success of their drawings.

At first Unit Two was very hard for me to initiate. . . . I felt that I understood the process from unit one but was struggling to see how this would work in my classroom. Once I finally dove in, I really enjoyed it, students were very engaged, and it was fun. It surprised me that the students easily took to the plan, they did not hesitate. ”

UNIT 3 ASSIGNMENT

DESIGN FOR CHANGE

User Problem: How might we help teachers to implement changes in the management and practical use of devices in the classroom so that meaningful learning takes place in given time frames?

Interview Questions:

Q: Why do you not use tablet technology in your classroom?

A1: Getting them out takes time, the ways they are stored does not work for me. I teach from concrete to abstract and the [tablet] don't really work for this. There are not enough devices for all to use at once so they don't work at stage 1 or introductory learning

A2: The time it takes to set up and pack away; issues with tablets that need support input; not enough tablets to do individual work; challenges with charging for use the whole day / Issues with connectivity i.e. Wi-Fi; issues with knowing what apps / programs to choose for a specific activity.

Key Takeaways:

The teachers are keen to use the technology but have several problems in the implementation. The teachers are frustrated by the devices and new ways to use and administrate the devices needs to be found.

"My colleague was very excited about the prospect. She thought that going into the classroom and helping/guiding the teacher to use the technology was a good way to encourage the use of devices and to make the teachers grow in confidence so that they can ultimately work on their own."

"The design process certainly gives me a tool to use when approaching problems that I encounter both inside and outside

the classroom. The empathetic approach is new to me and I think will help me to find more creative solutions... and also will get much more buy-in as the users feel that their needs are taken into account and they are part of the solution. I am happy with my solution now and look forward to the next step"

Action Steps:

- 1: Discuss proposed plan with the head and get approval
- 2: Teachers who show a desire to use technology are interviewed, and three finalists are chosen to participate in a pilot.
- 3: The teachers all submit ten plans to ICT teacher with weekly sub-plans. ICT looks for possible ways to implement technology into the planned lessons.
- 4: ICT teacher and class teachers discuss the solutions and choose the most appropriate to use in the pilot...

Steps Continue

DESIGN THINKING & TECHNOLOGY

Design thinking is a powerful tool for helping educators leverage technology with students in more effective ways. Here we show examples of participants applying the design process to challenges around technology from assignments from Units 2 and 3.

I am a Technology Integration Specialist at the 6th grade level and am in charge of training students and staff on new tools/apps. ... In applying the design thinking stages imagine and prototype to learning an app, the training was engaging and fun for the students. I saw students who were highly engaged and interacting with their partners in an inquiring empathetic way.

This participant represented her Unit 3 action plan prototype in the form of a flow diagram.

CHALLENGE & USER NEED

Our current integration of computing skills and digital citizenship into the K-12 curriculum is incomplete, loosely structured, undocumented and not vertically aligned beyond grade 6.

Students need a comprehensive program if they are to graduate as responsible, confident and safe digital citizens. Teachers need to know what skills and understandings students have acquired in previous or concurrent classes in order to design lessons that incorporate technology in effective and appropriate ways.

I am happy with my solution now and look forward to the next step. The issue of not using devices for meaningful learning in the classroom has been a concern of mine for a while as I feel our learners deserve the best methods for the job. I am also aware that the tool must fit the job but I am convinced that the learners will show more interest in learning if we make it more fun to learn. I am certain that this is the start of change in my school. I also look forward to sharing the design process with my fellow teachers as I know that they will come on board.

GOING FORWARD

Design Thinking for Leading and Learning built upon the success of Launching Innovation in Schools. In both courses, we engaged over 20,000 registrants from nearly every country around the world. Participants who dropped in for a few videos or spent dozens of hours working through assignments told us that the learning experiences were powerful and had a direct impact on their practice. We are excited to continue to explore how these course can support the communities of Microsoft educators around the world. We hope to be able to develop more courses that help school leaders, broadly defined, engage in the transformative work required to ready schools to serve future generations

REFLECTIONS AND RECOMMENDATIONS FOR FUTURE RUNS

- **Diversifying Voices:** We know that outstanding work is happening in design thinking around the world. Our course would be strengthened if participants were able to hear a wider diversity of perspectives of designers and educators than those we were able to feature in the first run of this course.
- **Diving Deeper into Certain Phases:** The process of launching change in schools is difficult and requires a sensitivity to stakeholders' needs and deep understanding of the problem at hand. For the next run of the course, we would like to have the Unit 3 assignment focus mainly on the problem-finding parts of the design process.
- **Supporting Self-Pacing:** Many learners valued the flexibility of self-pacing; however, a few learners expressed a desire for more structure. Providing more explicit suggestions for pathways through the course will support time management and allow learners to remain more connected with each other, even as they engage in different paths. We also want to support participants by increasing interaction between participants and the course staff.
- **Connecting to Blended Experiences:** We're interested in finding partners who are teaching design thinking in person. Our online course could extend on-site learning experiences by providing opportunities for practicing design skills and examples of design thinking implementation.

ACKNOWLEDGEMENTS

TEACHING
SYSTEMS LAB

This course could not have happened without the collaborative efforts of staff across MIT, edX, and our freelancers.

We would like to thank the following people who contributed to the creation, development, delivery and marketing of this course.

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Justin Reich

Engineer for Forums:

Kevin Robinson

Subject Matter Expert:

Blake Sims

Video Producers:**FreshCognate**

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Launching Innovation in Schools

SMALL, PRIVATE ONLINE COURSE (SPOC)

IN REVIEW

TEACHING SYSTEMS LAB

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Executive Summary

XQ prompted people across the country to think differently about what high school could be and to team up to make those bold visions a reality. Those who answered the call gained access to a variety of resources to assist them in rethinking high school. We were very excited to adapt our massive open online course (MOOC) Launching Innovation in Schools to be one of those resources. Launching Innovation in Schools, which showcases the work of Justin Reich and Peter Senge at MIT, empowers and inspires educators and others as they start new efforts and collaborate to improve teaching and learning

Whether someone is designing a new school or looking to improve a current school, it's important for them to develop the skills of change leadership. We felt that XQ program participants would benefit from Launching Innovation in School's focus on encouraging a bias toward action, embracing innovation through iteration, and working collaboratively toward ideas that everyone, not just the leader, cares about. The MOOC version of Launching Innovation in Schools has involved over 10,000 learners from over 160 countries. To tailor the experience to XQ program participants, we adapted the MOOC into a small, private, online course (SPOC). From October 12 to December 4, 2017, Launching Innovation in Schools: XQ Edition brought 660+ learners leadership tools and frameworks, case studies from innovative schools and education experts, online peer interaction, and activities and assessments that encourage learners to reflect on and take action in their own context. We also encouraged learners to invite their colleagues to join them in taking the course in a learning circle, where registered learners from the same context meet in person to discuss course content.

To make the course material especially relevant to XQ participants, we emphasized important XQ themes such as student agency, building community partnerships, and equity, and incorporated XQ resources throughout the course. We also created new assignments, such as the graduate profile assignment in Unit 1. We were thrilled to create helpful new videos featuring Michele Cahill (Chief Education Content & Practice Officer), Anne Mackinnon (Senior Advisor, Education Content Strategy), and Monica Martinez (Senior School Support Strategist).

Our learners found immense value in engaging with the course material and applying the material to their context.

"Many of the things I have read/watched have already impacted how I think about teaching and learning and how others are using systems already."

"I am working on a revamp model design of a school transformation project. I took some of the concepts that I have been working on in this course back to the discussions with my team."

Learners appreciated interacting with each other, both in the forums and in learning circles. It was great to see connections being made around similar interests and work.

We are encouraged by the success of this first course, and we look forward to the next course in this collaboration, Envisioning the Graduate of the Future (launching March 8, 2018).

Unit Overview

XQ RESOURCES

KM = XQ Knowledge Module ES = Expert Series

UNIT 0	Learners hear about this special XQ Edition of Launching Innovation in Schools and get an introduction to the Cycle of Launching Innovation.	KM #1: Students in the 21st Century KM #6: Student Agency & Engagement ES: Equity & 21st Century Learning ES: Student Agency & Engagement
UNIT 1	Learners see what the Cycle of Launching Innovation looks like in a real school district and discover some key leadership tools.	XQ Learner Goals KM #2: Youth Experience & Aspirations KM #5: Teaching & Learning ES: Teaching & Learning
UNIT 2	The nature of leadership is explored as a balance between discovering what people care about and guiding them in a productive direction.	KM #4: School Mission & Culture KM #7: Networks & Partnerships KM #8: Talent & Training ES: School Mission & Culture ES: Networks & Partnerships
UNIT 3a & 3b	In Unit 3a, learners see how important it is that a school or school system have a coherent vision for any change initiative. In Unit 3b, Justin explains how the inner and outer loops of the Cycle of Experiment and Experience reveal what the work of change actually looks like in schools.	KM #3: The Science of Adolescent Learning KM #13: Putting Ideas into Action
UNIT 4	Peter shares tools for promoting productive team conversations and for understanding how to work through challenges that arise when working with others.	
UNIT 5	Justin discusses why it's important to measure progress for initiatives and ideas for how to do that.	KM #9: Performance Management & Evaluation ES: Measuring Progress Towards College & Career Readiness
UNIT 6	This final unit is focused on sustaining innovation in schools. Justin and Peter talk about how schools can function as learning organizations.	

Course Themes

To aid XQ program participants in their journey of rethinking the complex system of high school, we invited learners to explore and experiment around six main themes. These themes reflect an effort to incorporate and emphasize conceptual threads from XQ's values and design principles into the course. We shared the following with course participants:

A learner from Círculos, an XQ-affiliated school, drew an overview map of Unit 1

Graduate Profile:

Your vision for the capabilities and characteristics of your high school graduate, this profile will be your first assignment and the touchstone for your work in this course.

Cycle of Experiment and Experience:

This cycle helps you to answer the questions: How does innovation actually happen in schools? What roles do teachers and administrators play?

Porous Community Partnerships:

Your vision of change should involve the community both in the process of shaping that vision and when implementing it. Throughout the course, we will encourage you to reach out to multiple and diverse stakeholders.

Student Agency:

How can you empower students to take charge of their own learning? When building something for students, it is important not only to listen to their perspective, but also to consider the value of engaging them directly in the work.

Equity:

Students' lives are still shaped by inequality. It's imperative that changes made in schools are done so to make schools more equitable.

Reflection and Iteration:

It's important to take time to reflect on what has happened and to make necessary improvements before continuing forward. Throughout the course, we will be asking you to reflect both personally and with others.

By the Numbers

665

PARTICIPANTS

PARTICIPANTS FROM

8

XQ SCHOOLS

- Bartleby Program - Elizabethton High School
- Círculos
- DaVinci Rise High
- Delaware Design Lab High School
- Grand Rapids Public Museum High School
- Iowa BIG
- New Harmony High
- PSI High

ACROSS 30+ STATES

190

FORUM USERS

1175

FORUM REPLIES

561

FORUM TOPICS

6

SCHOOLS VISITED

55

VIDEOS

Demographics

Median Age: 43

60.5% Male

39.1% Female

00.4% Other

Adapting the MOOC

The MOOC Launching Innovation in Schools ran successfully in January and September of 2017. In recognition of XQ's focus on rethinking high school, we tailored Launching Innovation in Schools: XQ Edition to make it especially relevant to the core audience who raised their hands for the XQ Super School Project.

Graduate Profile

For this course, we were inspired by XQ's design process and developed an entirely new assignment, Assignment 1.1: Graduate Profile. For this assignment, we asked learners to reflect on what characteristics, capabilities, and knowledge they wanted graduates of their high school to have. They answered prompts and reflected on the XQ learner goals. This assignment served as a touchstone for future work. A video featuring a dialogue between instructor Justin Reich and Michele Cahill (Chief Education Content & Practice Officer at XQ) was provided for inspiration and support.

Key Threads: Student Agency, Equity, and Community Partnerships

To provide additional insights into the threads of student agency and community partnerships, we filmed new "In Conversation" videos showcasing dialogue between instructor Justin Reich and XQ representatives Anne Mackinnon (Senior Advisor, Education Content Strategy) and Monica Martinez (Senior School Support Strategist). These videos added fresh perspectives on key XQ values.

We also adapted some of our own school videos to better emphasize these threads. For example, the video "Shrewsbury Public Schools: Collaborating Across the District" was re-cut to emphasize the thread of student agency. The video "Benjamin Banneker Charter Public School: Cohesive Around STEM" was re-edited for relevance and to include quotes about equity and community partnerships.

Integrating Resources

We were happy to link to resources from XQ, integrating select content from the knowledge modules, the expert series, and other materials. These resources supported a contiguous learning experience for participants as their XQ design journey extended into an MIT-produced online course.

Measuring Impact

To earn a Launching Innovation in Schools: XQ Edition certificate from XQ, a learner had to report completing at least 60% of the work. 30 learners earned certificates. However, given the typically high attrition rate for most online courses, course completion is not the only way to consider impact. One of our goals for this course was for participants to take what they learned about change leadership and apply it directly to their practice, whether that be in the school they currently work in or the development of a new school. Determining the impact of this course requires us to look at qualitative data which includes excerpts from participant work and surveys.

"This course definitely gives me hope. I feel that real change will actually happen! Interfacing with dynamic educators is inspiring. There are people that are willing to change, not be the expert, and let students lead."

"Working on the last assignment allowed me to prepare to pitch, if you will, to stakeholders. Prior to that I had already begun our work in our schools. Now I had more of a clear action, research to back it, and an understanding of our rationale that connected to my problem of practice."

"Though it is a collective of educators, I've felt like I've been in a class as a student the whole time. Learning from all of these different brilliant people from all over...is very refreshing, because it lets me know I'm not alone in improving education in our communities."

"As part of the non-profit sector, I learned to understand the problem of bringing change through a new lens. The course materials will impact my future since I will have a better understanding of the process of bringing change into a school system."

"We were already discussing ways to improve our community outreach work, especially when it came to providing students with more opportunities for job shadowing, workplace visits, and internships. The course helped me refine this process to something we can take immediate action on."

Participant Work

Assignment work for the course asked learners to define a problem of practice (a challenge in the learning environment that impedes student learning), identify assets and resources in their context, develop an action plan toward addressing their problem of practice, and then begin executing on that plan and measuring progress.

Assignment 1.1 Graduate Profile: Learners reflect on the characteristics, capabilities, and knowledge they expect for high school graduates.

Assignment 1.2 Problem of Practice: Learners identify a challenge in the learning environment that prevents students from achieving part of their graduate profile.

Examples

- Replacing grade levels with content mastery
- Cross-disciplinary STEM activities
- Building empathy in the classroom
- Motivating students to learn
- Trauma-informed schooling
- Encouraging group work among students

Assignment 2 Asset Map: To identify useful resources to help tackle their problem of practice, participants create an asset map.

CHEIRONEUM Graduates have experience with...	CHEIRONEUM Graduates view themselves as...
Exploring the unfamiliar, embracing challenges, managing risk, overcoming adversity, learning from setbacks, building on progress, reflecting on experience, accepting responsibility for self and others	HEROES of their own life stories
Being open to wonder and responding with curiosity and questions about the world around them;	Curious, disciplined, independent THINKERS
Self-government and direct participation in local, state, national, and international issues	Responsible CITIZENS of an increasingly global society
Direct exploration of the natural world from micro- to macro scale	Thoughtful STEWARDS of a complex global ecosystem
Asking: Why? Why not? What if? What next?	Innovative ENTREPRENEURS in an emerging global culture
Developing social capital; building equity in their community	Effective COLLABORATORS contributing to the credit, resources, and reputation of their community

High-Leverage Initiative

Part 1: "Someday" - What Does Awesome Look Like?

Learners reflect on their personal vision of what would make a positive outcome for addressing their problem of practice.

Part 2: "Monday" - Concrete Steps

Learners create a plan for first steps to take toward launching change.

Part 3: Assessment Plan

Learners create an assessment plan that describes how they will measure the progress for their initiative.

"As this program grows and expands I see that it will really bring all of the subjects together with real world situations. Everyone tackles a project in groups so there is very rarely a solo project, which is great for communication. I can't wait to see how this will turn out in the future, and I am excited to be a part of its growing process. I believe that this program can really bring a lot of good into our community, and students like me will benefit more from this than a lot of the tactics our school uses right now."

- Student working with the Bartleby Program at Elizabethton High School

Assignment 6: Final Deliverable

Learners create an artifact, targeted toward a specific stakeholder, to communicate their problem of practice and their plan for addressing it.

Tri-County Early College High School Community Partnership Program

Our vision is that every student leaves TCEC with direct, real-world experience from one or more business, nonprofit, or government organizations in our local community.

Program Goals:

- Strengthen career and survival skill awareness among TCEC students,
- Increase TCEC's community impact in our region,
- Engage with local employers to promote the work they do,
- Open doors to more students looking for formal job shadowing and internship programs.

Site Visits

Job Shadowing

Internships

"Tell me and I forget. Teach me and I remember. Involve me and I learn."

"This is an overview document that my principal and I will present to our Business Advisory Council on December 6th and along with updated survey data, we hope to be able to formally initiate this program in the second half of this school year."

Learning Circles

Before the course started, we invited learners to ask colleagues in their school, school system, or organization to take the course with them in a learning circle. A **learning circle** is a facilitated group of registered learners who meet in person during the course. By working on the course with colleagues, learners are able to ground course content in their specific context. We provided learners with a Facilitator's Guide that included resources and suggestions for organizing and managing a learning circle, such as sample emails to recruit colleagues, sample agendas for each unit of the course, video discussion questions, and suggestions for making activities and assignments more collaborative.

It's difficult to know exactly how many learners were involved in learning circles or how many learning circles there were. However, during the third week of the course, we asked learners to report if they were a member or a facilitator of a learning circle.

- **27** learners responded **YES** to **"Are you a member of a learning circle?"**
- **14** learners responded **YES** to **"Are you a facilitator of a learning circle?"**

Course Team Reflections

This was our course team's first experience adapting a MOOC into a small, private online course, and we are grateful for the learning opportunity. Here, we offer our course team's reflections on our experience as well as recommendations for future courses.

- One of the strengths of learning online is that **course participants connect with and learn from each other**. Our learners' shared a commitment to rethinking high school which allowed them to offer each other support and guidance that in some cases may continue after the course ends! Within a conversation about distributed leadership, a learner responded, "Let's stay in touch after this course ends. When innovative educators are able to make and sustain best practices that are truly benefiting the students more than the adults, then we are onto something. My commitment is to continue to find and work with such kindred spirits so we can scale those pockets of excellence to hopefully reach the tipping point our students deserve."
- According to our post-course survey, at least **3 high school students** took the course with us. A first year from Elizabethton High School was an avid contributor, frequently adding a unique perspective in the forums. Her participation and success in the course was inspiring, especially considering our plans to create an intentionally multi-generational MOOC in the future. She reflects on how she can apply what she's learned in this course given her role as a student:

"As a student, these resources help me in a slightly different way. While I may not be able to apply some of the teaching strategies in my work, I can look at them and apply them to what my teachers are teaching me, to better understand what they are hoping to achieve which will make me work harder to assure they achieve it."

- Given the typically high attrition rate of online courses as well as the intentionally small number of learners invited to this course, there were a relatively small number of people active in the forums. We are very grateful to the active learners who were dedicated to providing encouragement and feedback, generating thoughtful discussion, and sharing resources. We look forward to exploring additional ways of engaging learner groups of all sizes in the forums and continuing to foster interactions between learners.
- We ended the course with a wonderful live event featuring two outstanding learners: Anneke Emerson from Viewpoint School and Alex Campbell from the Bartleby Program, an XQ-affiliated school. Alex spoke about the synergy between Launching Innovation in Schools: XQ Edition and the XQ contest's design process:

"We did all this work to kind of plan a school and we used a lot of overarching philosophy and design things, but this project for me made me think more about the nuts and bolts. Exactly how the leadership of the school looks, how the teachers look, what do we have to consider as far as the teaching of the students... So I thought it complemented it well and it really helped continue our work that we started with the XQ Super School Project."

On March 8, 2018 we will launch the next course in our collaboration with XQ, titled Envisioning the Graduate of the Future. This course will be a MOOC, meaning it will be open to anyone around the world. However it will be targeted toward learners interested in secondary schooling. In this course, learners will embark on a collaborative and exploratory design process to reflect on the purpose of secondary school. To ensure our schools are effective, we need to routinely reimagine what the high school graduate of the future will need to know and be able to do. The artifact that communicates these ideas is called a graduate profile. Making explicit the capabilities, competencies, knowledge, and attitudes for secondary school graduates and inviting key stakeholders like students and community members to be engaged in the process, can help educators and others focus their vision of success and drive school innovation efforts.

Over four weeks, participants will learn from instructors, MIT affiliates, XQ representatives, and educators. At the end of the course, they will have created a draft of a graduate profile. We are incredibly excited about the work to come, and look forward to sharing future successes.

Acknowledgements

This course could not have happened without the collaborative efforts of staff across MIT, XQ, edX, and our freelancers.

We would like to thank the following people who contributed to the creation, development, delivery and marketing of this course.

Course Instructors:

Justin Reich
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Course Staff:

Elizabeth Huttner-Loan
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Key Team Members at MITx:

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From XQ:

Monica Martinez
Michele Cahill
Anne Mackinnon

Special thanks to FreshCognate
for additional video production
work and assistance:

Aimee Corrigan
Doug Pietrzak
Denez McAdoo
Daymian Mejia

Envisioning the Graduate of the Future

IN REVIEW 2018

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Executive Summary

In 2015, the XQ Super School Project* challenged people across the country to join together to reimagine high school education. Nearly 700 teams of educators, students, and community members drafted ideas for innovative public high schools, with the opportunity to receive a \$10 million grant that would help their vision become a reality.

Inspired by the XQ design competition, **Envisioning the Graduate of the Future** (March 8 to April 5, 2018) was an experiment in rapidly producing a compelling, open, online learning experience. This massive open online course (MOOC) featured schools at various stages of developing their vision of a high school graduate, including Washington Leadership Academy (a member of the cohort of XQ schools), Shrewsbury Public Schools (a suburban public school district), and Community Charter School of

Cambridge (an urban charter school). Over 2,000 educators and others from across the United States and 100+ countries registered for a collaborative and exploratory design process to develop a **graduate profile**, a shareable document that conveys what a community and/or school believes a high school graduate should know and be able to do.

Around 400 participants engaged in our community forums, and we're pleased that 95 learners met the requirements to earn a verified certificate (reporting completion of 60% or more of the coursework and verifying their identity). This is approximately 5% of all registrants, higher than our typical percentage. The people directly enrolled in the course are only a fraction of the educators and community members engaged by this work; our most dedicated learners take new skills and practices directly back into their community to inspire others to participate in the process of envisioning the graduate of the future.

Our course emphasized the importance of engaging a diversity of perspectives, and our activities and assignments asked learners to reflect with their colleagues, students and members of their community about key characteristics high school graduates will need to face our rapidly changing world. Learners heard from educators, students, community members, MIT professors, and each other about the ways the world is changing and how schools could adapt to meet those changes.

“This course was exactly what our school needed to reinforce our desire to create a new and relevant graduation profile.”

“I learned that as advocates in the evolution of education, I am not alone. That is a huge impact. This course has shown me not only am I not alone in my thoughts but others are fighting just as hard to fix the system.”

*Visit <https://xqsuperschool.org> to learn more.

This course was designed for broader impact beyond just those who enrolled. We know that our audience of educators is extremely busy. Many people visit our courses for a quick hit of inspiration, while some dig deeper to find materials to use and share within their communities, and a dedicated few complete our entire course and earn certificates. Our courses are built with this funnel in mind, so we ensure that people who just visit early course content have an immersion in the key ideas of the course.

We provided support for learners to take the class in learning circles, where registered learners from the same context meet in person to discuss course content. At least one of these learning circles acted as a launching pad for a school-wide graduate profile process:

“Moving forward, my colleagues that have also participated in this course and I are hopeful that we can bring aspects of this process to the school’s administration, and ultimately to our full faculty and staff. We plan to meet with members of the senior administration this spring in order to put together a presentation or workshop to share our work from this course in a faculty meeting.”

In another example of in-person collaboration, Alex Campbell from the Bartleby Program at Elizabethton High School, a member of the cohort of XQ schools, invited his high school sociology class to take the course with him. His students watched videos and worked collaboratively on activities and assignments. The class also worked with adults in the community to refine the graduate profile, including the president of a credit union, a college student, and a school board member.

The life cycle of these learning materials is only just beginning. We have started to experiment with some of the course material in face-to-face workshops; instructor Justin Reich piloted materials at conferences and workshops with educators in California, school leaders in Vermont, and academic technologists in Massachusetts. In the months ahead, we’ll generate additional learning experiences based on these Creative Commons materials. The process of developing graduate profiles can be a powerful step in helping schools on a path towards innovation, and we’re excited to make these ideas more widely accessible.

A GRADUATE PROFILE HELPS ANSWER...

By the Numbers

2,155

PARTICIPANTS
ENROLLED

40

MEDIAN AGE

406

FORUM USERS

1,983

TOTAL POSTS

Location of US participants working in K-12 Schools

**This map is based on course entrance survey submissions from 247 participants*

Educators came from
117 unique schools in
39 countries

47% participants in
K-12 School

7% in College or
University

7% in Non-profit or NGO

26% in Other

Note: The numbers above reflect data gathered from survey respondents

Representation from at least 4 schools from the cohort of XQ Schools

- Bartleby Program at Elizabethton High School
- Brooklyn Lab Charter School
- Crosstown High
- Washington Leadership Academy

GENDER BREAKDOWN

51.8% Male

47.5% Female

0.7% Other

Course Overview

Welcome and Course Overview

Learners are introduced to the concept of a graduate profile through video and the course's instructional comic: "[What is a Graduate Profile?](#)" They introduce themselves in the course forums and learn about course logistics.

Part 1: Reflecting on the Purpose of High School

Learners hear multiple perspectives on the purpose of high school. Educators from Washington Leadership Academy (Washington D.C.), an XQ School, share how they leverage conversations about expectations for high school graduates. People from across the Shrewsbury Public Schools (Shrewsbury, MA) community share how they engaged multiple perspectives during their process of developing a graduate profile.

Part 2: Focusing on the Graduate Profile Process

Learners dive into developing the first drafts of their graduate profile and iterating based on feedback. Educators at the Community Charter School of Cambridge (Cambridge, MA) share how they use their vision of a graduate to make changes in the classroom. They also learn more about Shrewsbury Public School's graduate profile process.

Research and Measuring Impact

The goal of our research was to better understand our learners' motivations, backgrounds, and experiences in the course, as well as the impact our course may have had on their mindsets and practice.s. We used a variety of methods to collect data on participants including pre- and post-course surveys and interviews with a sample of 10 participants who completed the pre-survey. d We plan to interview the same group learners six weeks after the course has ended and will administer a e a follow-up survey to learners who completed the course in the fall.

At the beginning of the course, we asked participants to assess their ability to perform a variety of tasks involved in creating a graduate profile such as "organize colleagues to create a shared vision of high school graduates" and to "engage stakeholders, like students and community members, in thinking about what high school graduates should know and be able to do." We found that participants significantly improved in their self-assessed ability to conduct tasks related to creating and implementing a graduate profile.

"I will be requesting that [my] school allow me to set-up study groups and discussion groups with current students, alumni, staff, administration, and members of the community... I am very motivated by this course to try and change the atmosphere and expectations at my school."

Actions participants reported taking as a result of the course

Learner Stories

From our interviews, we have compiled three case stories of educators who completed Envisioning the Graduate of the Future. Each case tells a unique story about the potential for educators to use the course and the graduate profile concept to transform their school. One unifying theme for all three learners was their desire to reimagine the high school experience and create change in their local school environment. They saw the graduate profile process as a way to push for broader school-wide changes such as rethinking how to integrate technology or pushing for more student-centered instruction. Two learners even took action within their schools, encouraging others to make immediate changes that will benefit students. These learners also found that other course participants were a valuable resource to help them brainstorm ideas and expand their thinking. Although these learners still face obstacles in creating long-term change, they are hopeful that their graduate profiles will aid them as they start making school-wide change

Disrupting a Stagnant School Culture

Through XQ and Envisioning the Graduate of the Future, this learner was able to connect with educators beyond her school, inspiring her to reimagine what high school might look like beyond just “going through the motions.”

“Danielle” is a high school English teacher at a large, ethnically diverse public school in the southern United States. Danielle describes her school as a traditional high school where administrators place a heavy emphasis on performance on standardized tests. Teachers, she says, have limited autonomy, especially in tested grades where teachers are often required to use scripted lessons.

Danielle has a very different image of what high school should be like for students than what she sees in her school. She observes, **“In my experience, we view students as test scores and demographics but rarely consider their social and emotional needs.”** Her passion for thinking about different ways to support students in high school led her to watch XQ Super School Live and sign up for text alerts from XQ. It was from those text-alerts that she found out about Envisioning the Graduate of the Future.

Danielle felt that the course would help her organize her thinking about how her school could better support students make the transition from high school to college and career and inspire her to stay in teaching. In her introductory post in the forums, she wrote, “We are all simply going through the motions to the detriment of the young adults entering college and the workforce. I often consider leaving the area and the profession altogether. Rather than offering an exit plan, however, **this course seems to offer solutions.**”

In Envisioning the Graduate of the Future, Danielle was able to connect with and learn from the experiences of educators in other schools. She found that many other teachers were facing similar challenges in their schools. “It makes me feel better that we’re not the only district bogged down by testing and district guidelines, state guidelines, and things like that.”

Danielle also found inspiration from and made personal connections with other course participants. In one instance, she reached out to a fellow course participant, an administrator at a charter school, for advice on how to work with school administrators. The course participant “was kind of able to give me some ideas about how to work with administrators, rather than work against them.”

Danielle has already shared her graduate profile draft that she created for the course with the administrators at her school, and is planning a new course to assist students with transitioning from high school to college and career. She also convinced school administrators to let her teach one less course next year so she can spend more time providing extra support to students to make sure they stay on track.

Teachers Organizing for School Improvement

For this learner, the course was a way to help bring together teachers from across her school to create a school-wide graduate profile.

"Amy" is a technology integration specialist at a large independently-run school in New England. The school is trying to move toward more student-centered instruction, and teachers are encouraged by the administration to integrate competency-based education and performance assessments into their classrooms.

Amy was drawn to Envisioning the Graduate of the Future because she wanted to make sure that teachers were being thoughtful about how they used technology. She decided to reach out to other teachers at her school to form a learning circle. Amy feels that **taking the course with other people at her school "gives us a chance to bring in perspectives from different places."**

Amy says she especially learned a lot from one of her colleagues in her learning circle who works with students who are in an alternative high school program. Talking about those students challenged some of her assumptions about her school and raised new questions. "Did the schools fail them in some way, so that they, now, have to do an alternative program? And **would a graduate profile have helped if we could have caught some of these things early?"**

Amy and her learning circle have continued to meet regularly to work on the graduate profile and plan to present their final version to administrators by the beginning of next school year.

Creating School-Wide Change

This learner found that a graduate profile can be a useful tool for encouraging teachers to use more innovative instruction with students.

"Alexis" is a high school teacher and curriculum specialist at a Catholic school in Hawaii. Her school is undergoing the execution of a new strategic plan to make instruction more student-centered and competency-based. Part of the challenge Alexis has faced is that teachers have "extreme autonomy" in their instruction, and there is no existing system in place to ensure that instruction is aligned with the mission of the school. "We are three years into a five year strategic plan and we are not at 100% - even at 20% adoption."

Having previously worked on developing graduate profiles, Alexis knew that graduates profiles can effectively help everyone in the school align their thinking. When she found out about Envisioning the Graduate of the Future, **she organized a learning circle for the administrators at her school so they could develop a new graduate profile that fit with their current strategic plan.** Throughout the process, Alexis included teachers in the process of creating a new graduate profile for the school, "We've posted our graduate profile in the faculty lounge and we've asked for feedback... We shared all of the XQ resources with faculty. One of the things we did was the 'my student will be able to' assignment with every single member of the faculty."

For Alexis, one of the most important parts of the course was soliciting feedback from a diverse set of community stakeholders about the graduate profile. She estimates that **she's already spoken to 150 members of the community, and that these conversations have shaped what is included in the graduate profile.**

Currently, Alexis is working to integrate the characteristics listed in the school's graduate profile into classroom instruction. She and the rest of her learning circle are leading a three-day workshop for teachers to design projects for students that incorporate the various characteristics included in the graduate profile.

Alexis and her learning circle are also currently working on expanding the graduate profile to also make profiles for faculty and administrators. She says, **"that profile process is really good for us... because we're now using it to create common language across the entire school.** In how we talk about things, how we interact with each other, how we look at the characteristics of what we want in people we work with and work around."

Certificates

Each learner comes to the course with their own set of goals, resources, circumstances, and commitments. Learners have different expectations of what they would like to accomplish in the course, which may or may not include course completion or certification. We know that the course can still have a great impact on learners who do not complete the course or earn a certificate.

266 learners signed up for the verified certificate track for the course and 95 learners (36%) met the requirements to earn a verified certificate. 49% of learners who earned a certificate said the opportunity to earn a free certificate was “very” or “extremely” important to their completion of the course. We are grateful for XQ’s generosity in paying for our learners’ certificates, and we know that our learners were grateful for the opportunity as well.

“I wasn’t going to [pursue a certificate], but when I saw that it was free, I was like, ‘Well, heck yeah.’ And then, that actually motivated me to go in there and do everything, because I don’t wanna waste that money, even though it wasn’t mine.”

“[The certificate] will hopefully give a little bit more weight behind when we do present something here we can say, ‘Look, we went through this course,’ and, of course, attached to MIT has that status symbol as well.”

Typically, we expect roughly 2% of registrants to earn certificates in our courses-- we teach to a busy population. In this course, about 5% of all registrants earned a certificate, more than double our usual rate! We suspect that the free certificate offer played an important role in that.

Learning Circles

Before the course started, we invited learners to ask colleagues in their school or community to join them to take the course in a learning circle. A **learning circle** is a facilitated group of registered learners who meet in person during the course. By working on the course with colleagues, learners are able to ground course content in their specific context. We provided learners with a Facilitator's Guide that included resources and suggestions for organizing and managing a learning circle.

It's difficult to know exactly how many learners were involved in learning circles or how many learning circles there were. However, in the post course survey, we did ask learners to report if they were a member or a facilitator of a learning circle. Of 109 respondents,

- **30%** learners responded **Yes** to **Are you a member of a learning circle? (Mark yes if you are also a facilitator.)**
- **18%** learners responded **"yes"** to **"Are you a facilitator of a learning circle?"**

We know that participants valued taking this course in groups:

"Since my learning circle included both teachers and leadership, it was very rich to see the different perspectives and try to find some common ground. As leadership, it was very important for me to notice how much teachers worry about citizenship and students becoming contributing members of society."

We also see that participants were ready to turn their learning circles into groups for action:

"This was a fantastic exercise to go through with my learning circle. We serve a network of schools, and I thought it would be an amazing thing to help facilitate with individual schools--to facilitate a vision for their graduates and how that impacts their school in tangible ways (instruction, culture, supports, workforce experiences, etc.)"

"I am working with my colleagues to develop this profile and we have a meeting on April 25. I have read through all of the resources and jotted down features they suggested. I also scoured through notes from brainstorming sessions with my colleagues on two occasions."

Participant Work

We designed activity and assignment work to progressively build towards a comprehensive graduate profile, and to encourage learners to explore course ideas with people outside of the course, expanding the impact that the course has into our participants' communities. In Part 1 of the course, learners began to explore what they and others in their context believe to be the purpose of high school and expectations for high school graduates. In Part 2, they developed the first and second drafts of their graduate profile, sharing with their classmates and others offline for feedback. In this section, we share select participant work.

Activity: Brainstorm Characteristics

We asked participants to brainstorm what features or qualities they thought should characterize the graduates of their schools and communities by responding to the following prompts:

My graduate will be (a)...

Assignment: Talk with a Stakeholder

Learners spoke with CEOs, IT specialists, business school professors, bus drivers, parents of high school students, college professors, high school, college, and elementary students and teachers, and more!

Conversation with high school and middle school instructional coach:

"I resonate with a lot of what my stakeholder had to say. As a former educator in the public school system, I do see the discrepancy between what students should have under their belts when they graduate and what they actually do leave with. I have also felt the pressure of what I should teach because of both state and federal laws and regulations. While I'm not necessarily surprised by anything she had to say, I am sort of surprised that we still haven't figured this out for our students."

Conversation with 3 seniors in high school:

"What struck me was the emphasis they placed on school helping them to become successful social beings.... I had imagined they would place a bit more emphasis on exam results. They do talk about those; but in a slightly jaundiced way as if they realise they are an imperfect way of judging their accomplishments."

Conversation with waitress/bartender:

"My interviewee shared how she felt the purpose of high school was to go to college. She had enrolled in college twice but stopped out both times, and is currently working as a waitress and bartender. In many ways she feels like she's failed because she hasn't "lived up" to the dominant cultural expectations of her school and her parents... I felt sad her sense of agency and worth were affected so deeply by her not achieving a prescribed definition of postsecondary success."

Assignment: Develop Second Draft

In this assignment, learners created a relatively polished draft of their graduate profile that was meant to be shared among their school and community. They also generated an action plan, containing steps for how they would continue the graduate profile process after the course ended. Looking over the second drafts, we noticed that **Communication** is by far the most included characteristic on graduate profiles. Learners also frequently listed **Collaboration/Teamwork**, and then **Critical Thinking** and **Self-Determination**. Here are a few examples excerpted from learners' second graduate profile drafts.

Math/English Proficiency

Appropriate level of math / english proficiency (min 11th gr level). Algebra II
Financial literacy defined as basic consumer economics (financial management/ planning, budgeting, insurance)

ENGAGED COMMUNICATOR

I am fluent in oral and written communication in multiple contexts

I listen and seek to connect with others

Self- Advocacy

Graduates will be informed citizens able to advocate for rights, opportunities, supports and services for not only themselves, but for their community.

“Culturally Competent - Our graduates will recognize that every culture and every individual has the potential to make unique and valuable contributions to develop stronger global systems... They will identify and challenge their own cultural assumptions, values and beliefs, and will be committed to communicating at the cultural interface.”

Critical thinking: Now that I have figured out what I need to know, reached out for help, and put value into that help, do I know how to critically asses this new information?

Sample Action Plan Steps

- “Work with my learning circle to refine a final, collectively-generated draft.”
- “At a leadership meeting, introduce the concept of creating a graduate profile, which will certainly be new to them. Share our learning circle draft and explain what we aim to do with the development of this profile and how much the whole school can contribute and be impacted by it.”
- “Create a “Graduate Profile Committee” to develop the final draft after compiling all the data gathered in the process.”
- “Work with all grade levels to develop an understanding of what the characteristics in the profile look like at each grade level; in other words, what can elementary and middle school teachers do to help develop these characteristics in their students.”

Course Team Reflections

- As learners began to reflect on what they hoped graduates should know and be able to do, a few learners realized that they were creating a list of characteristics, skills and knowledge that were important for adults to have, too. One learner framed their second graduate profile draft around the idea that we should have the same expectations for teachers that we do of students. In creating this course, we hadn't considered this idea, but we're glad our learners brought it up.
- In previous courses, we were hesitant about asking learners to do assignment work that required them to do work with others in their offline context such as interviewing or getting feedback on their work. In this course, both activities and major assignments asked learners to engage with others offline (Activity: Considering the Purpose of High School, Assignment: Talk with a Stakeholder, Activity: Share and Reflect on Feedback). Learners who were able to were not only willing to do this work, but they also found it valuable for their own learning and reflection. We will still design courses so that learners who are not able to engage with others offline have a rewarding learning experience. However, we're excited by the possibilities of assignments that ask learners to get started with work in their communities.
- This course introduced the concept of a graduate profile using an instructional comic, "What is a Graduate Profile?" Of the 47 learners who responded to a survey about the comic, 96% found the comic "useful for conveying introductory concepts" and would "like to see more instructional comics in the future." Our team is always interested in innovative and engaging instruction, and we look forward to trying new things in the future.

Future Work

Building on the strengths of our work this year, we have identified **two major goals** for future work:

1. We want to **offer learning experiences with multiple entry points and opportunities for engagement**, in different formats and at differing commitment levels. We will pursue a variegated approach to developing online learning environments--new MOOCs, reboots of previously run MOOCs, blended learning experiences, and new modes of learning, including experiments like workshops adapted from course content.
2. We want to use our large-scale learning environments to **bring educators from across the country, and the world, into the movement for school innovation**. This includes featuring the creative work happening inside schools, so that innovative educators can realize they're not alone and everyone can get inspired to make real changes that truly affect the lives of students.

Acknowledgements

TEACHING SYSTEMS LAB

We would like to thank the following people who contributed to the creation, development, delivery and marketing of this course.

Course Instructors:

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Alyssa Napier

Video Production:

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COMPETENCY-BASED EDUCATION:

THE WHY, WHAT, AND HOW

IN REVIEW

January 31 - March 13, 2019

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Executive Summary

Competency-Based Education: The Why, What, and How (January 31-March 13, 2019) was a massive open online course (MOOC) that invited learners to consider the nature of competency-based education (CBE), why schools pursue it, and the opportunities and challenges educators and others face when implementing it. The course featured schools at various stages of implementing competency-based education, including Crosstown High (a member of the cohort of XQ schools in Tennessee, USA), Montpelier High School (Vermont, USA), and Noble High School (Maine, USA). **Nearly 4,000 educators and others from across the United States and 120+ countries enrolled** and many engaged in reflective activities and assignments, notably working towards the creation of an artifact that would support a conversation around CBE with a stakeholder in their context. We provided guidance for learners to take the class in learning circles, where registered learners from the same context meet in person to discuss course content. It's difficult to know exactly how many learners chose to participate in learning circles. Of 271 respondents to a quick mid-course survey, 27% indicated that they were participants in a learning circle.

“This CBE course has given me the tools to begin developing competency based learning targets, assessments, and rubrics...Moving forward, I plan on using these resources as I develop a curriculum model for next year, and plan to share these changes with my colleagues...”

Competency-based education is something that many schools are experimenting with. We expected that most of our learners would be affiliated with schools who are beginning exploration of CBE. While we did have many learners like this, we also had a sizable amount who were working in schools that had already implemented aspects of CBE. The mix contributed to a lively atmosphere in the forums. It was great to see learners sharing knowledge and interacting thoughtfully and animatedly in response to the videos and readings.

Thanks to XQ's support for certificate coupons, a relatively high percentage of learners signed up for the track to earn a verified certificate. **In total, 659 learners signed up for the verified certificate track, which was 17% of all registered learners—more than triple the rate of our other courses without this support. By the end of the course, 329 of these learners had earned certificates, which is about 50% of the verified learners and 8% of all registrants, which is a higher percentage than in our other courses.** We also observed higher rates of watching videos (35% vs 29%) and submitting assignments (16% vs 4%) in this course compared with our other courses. The people directly enrolled in the course are only a fraction of the educators and community members who are affected. Later in this report, we'll take a closer look at impact and share stories from learners.

Helping learners share and leverage course content was a top priority for this course. All course content was released under a Creative Commons-Attribution 4.0 International license that gave permission for anyone to freely use, adapt, and share materials with attribution. We also created a “Course To-Go,” which is a minimally-formatted, shareable, downloadable version of the entire course in a Google Doc. We believe this has encouraged learners to use the content in new and creative ways, whether that's creating a CBE workshop for parents or a presentation about challenges around implementing CBE for school administrators. In fact, in the days after releasing course to go, one of the consultants from reDesign (the coaches working with Crosstown) came to our office to visit, and she shared that she had already used the Course To-Go to share links with other clients.

We will continue to develop and share content on the open web through mechanisms like workshop guides, video playlists, and more. Exploring approaches like CBE can be useful for schools that are focusing on improving teaching and learning; we are proud to help educators delve into ideas and examples.

Course Overview

Unit 0: Welcome & What is Competency-Based Education?

Learners hear about characteristic elements of competency-based education (CBE).

Unit 1: Why Competency-Based Education

Learners are introduced to the featured schools and hear about why the educators there decided to pursue CBE, as well as what their systems look like. Learners explore research around CBE and begin the assignment they will work on throughout the course: creating an artifact that supports a conversation about CBE with a stakeholder in their context.

Montpelier High School is a public school with approximately 350 students in a small town in Vermont. They made significant changes to their schedule and grading system when they implemented proficiency-based learning.

Crosstown High is a new, urban charter school in Tennessee that opened with approximately 150 ninth grade students. It has a strong focus on project-based learning, in addition to being competency-based. Some classes are team taught to facilitate interdisciplinary learning.

Noble High School is a public school with approximately 1,000 students in rural Maine. They have heterogeneous class groupings, where students of all abilities take classes together. When they adopted proficiency-based learning, they decided to continue using letter grades, but to rethink other aspects of assessment, like retakes.

Unit 2: Competency-Based Education in the Classroom

Learners “visit” classrooms from the featured schools to see what competency-based education looks and sounds like. Teachers and students from those schools share their experiences with CBE, and the challenges and opportunities they’ve encountered.

Unit 3: Considering Competency-Based Education Systems

Learners hear from each featured school about a specific facet of their implementation of competency-based education. Noble High School educators discuss Knight Time, their flex block. Crosstown High teachers and administrators consider the importance of professional development. At Montpelier High School, the principal explains the role of the Principal Advisory Team in the transition to CBE.

By the Numbers

3,967 enrolled learners

659 verified learners

40 median Age

Around **1,000** people have signed into the forums

≈ **6,200** posts

*Note: Not all people who sign into the forums are active.

According to survey data, learners represented approximately

91 unique K-12 schools in the US from **37 states** serving approx.

79,000 students of which **48% are students of color** and

37% are eligible for free or reduced price lunch

4 XQ Super Schools are represented in the forums

There may be more participants from XQ Super Schools who have not identified themselves in the forums.

- **Elizabethton High School**
- **Iowa BIG**
- **Furr High School**
- **Grand Rapids Public Museum School**

Virtual Live Events

Welcome YouTube Live Event (February 6, 2019)

Approximately **90 participants** attended and the recording has been **viewed 921 times** so far. Learners joined us from across the **U.S.** as well as **Saudi Arabia, India, Romania, Spain, Pakistan, Ukraine, Mexico, and Denmark.**

Final YouTube Live Event (March 11, 2019)

We featured two learners who shared their projects from the course. Approximately **47 participants** joined live. The recording has been **viewed 198 times** so far, with participants from the **U.S., Canada, Sweden, Brazil, Columbia, Egypt, Argentina, and South Africa.**

*Location pins from both live events

Research and Impact

The goal of our research was to better understand the backgrounds and motivations of our learners, and how their experiences in the course might have affected their beliefs and practices related to CBE. We collected data from a variety of sources. All participants could access a pre-course survey (N = 1,169, 55% response rate) and post-course survey (N = 367, 17% response rate) within the course platform which asked about participants' interests, background, school context, and attitudes and practices related to CBE. We also conducted interviews during the course with a stratified random sample of pre-course survey respondents (N = 6).¹ We will be sending a follow-up survey to participants at the end of May and conducting follow-up interviews with interview subjects.

The learners in the course had a wide range of prior experience with competency-based education, from learners who had little to no prior exposure to the concept, to experts in the field. **Among learners in K-12 schools, 17% had done nothing related to CBE, 34% said they were “exploring ideas” but had not implemented anything, 30% were just starting to implement CBE, and 16% had been implementing CBE for a while.**

We surveyed course participants on the pre- and post-course surveys about their self-assessed ability to describe and discuss CBE and respond to stakeholder concerns.

Respondents **substantially increased** in their self-assessed ability between the pre- and post-survey, reporting high levels of self-assessed ability on the post survey.

¹ Using pre-course survey data, we randomly selected subjects to contact for interviews with an over-sample of participants in K-12 schools. We interviewed six participants approximately halfway through the course.

At the beginning of the course and end of the course, we asked participants to rate their ability to engage in activities related to implementing competency-based education in school, such as describing different models of CBE or responding to stakeholder concerns about CBE. Across all the survey items we measured, we found that respondents (N = 304) substantially improved in their self-assessment of their abilities related to implementing competency-based education in schools.

Learners reported changes to their professional practice both at the **classroom level** and the **systems level** of their schools and organizations.

- **83% reported having conversations with stakeholders about CBE**
- **75% described changing something about their professional practice**
- **46% reported organizing colleagues to take action in the school/organization**

“I have much better understood the importance of competency vs. grading. I have slowly started to break down the barriers between teacher and student, by allowing the students to have a better understanding of my expectations. In addition, I have been trying to implement time periods where struggling students have the chance to come speak to me about their weaknesses so that we might overcome them together.”

“I work at the state level so the course has helped shape conversations that I have and will have with colleagues and stakeholders.”

“I feel like I’ve taken the time to be more intentional about my learning objectives and goals for students learning—and more direct in sharing those with students.”

“I am engaging in a variety of conversations within my administrative team and with district level supervisors to determine readiness levels and next steps...”

Learner Stories

From our interviews, we are pleased to share two stories of educators who participated in the course. One educator was inspired to experiment and make change in his context during the course. The other educator is laying the groundwork for a CBE pilot that was already in progress at her district's middle school, and is excited to have deepened her knowledge and found new resources to share.

Inspired to make change in a district

"Carl" has spent the last twenty years working in many educational roles, from classroom teacher to assistant principal. Currently he works in the central office of a major US urban school district supporting K-8 teachers in the "planning, preparing and implementation of special education instruction." Carl happened across our course in edX, and enrolled just to "try to gain some insight and learn a few things." However, **the course materials ended up inspiring him to try a different way of tracking student achievement in his district.**

In the process of taking the course, Carl got inspired by the level of internal coherence that he observed in the featured CBE schools. He noticed that in his district there was no coherent "map" that compared state standards, skills, and subject rubrics for special education learners. Working with teams of teachers, he created these maps, and then calculated where students fell on the map in terms of their skills. Teachers were enthusiastic about this idea; some used the maps to communicate areas of strength and challenges to students, while others used them to plan or refocus instruction, based on what they revealed about student skill levels. Carl has been asked to bring this approach to multiple schools in his district, and has gotten good responses from teachers and administrators: "It's almost overwhelming that the feedback has been 'Oh, this is a good idea, this could be useful.' Hands down, I haven't had anyone that was even remotely ambiguous about it."

As a learner in our course, Carl found himself absorbed in the material: "my commute is two hours each way, so I find myself listening to the videos over and over again just to make sure it sinks in." He hadn't been very familiar with CBE to start with, and wanted to know how it was different from what was already being done in his district. As he says:

“I wasn't really expecting to have interactions that would be informative. I really wasn't expecting for questions to be posed that would lead to deeper contemplation or even impact my practice. But that's kind of what happened...in a very subtle way [it] led me to think about my professional practice and...when I talk with the teachers and the teams, [we talk about] how can we be more meaningful and make [teaching] more relevant.”

Preparing for a small-scale CBE pilot

“Gina” is an instructional specialist in a socioeconomically and racially diverse district of 4,200 students. This district is located in a small city on the East Coast of the US. Her role is to provide support for the middle and high school teachers in her district, and she helps them deliver the best possible learning experiences to their students.

Parts of Gina’s district are very traditional, but the middle school is more open to exploring new ways of teaching. The middle school is launching an innovation center soon and a small cohort of teachers are interested in piloting CBE. When she heard about the course through XQ, Gina decided to enroll and use the course “as a lens for building up more resources to work with teachers [participating in the pilot] and educate them more as we work to shift what we’re doing in our classrooms here.” She explained:

“If I’m going to expect my teachers to transition and understand, embrace this mindset and this way of learning, I needed to have a better understanding, and figuring out what that might look like and gathering the resources to help support them, and this was a great way to do that.”

Gina already had some basic familiarity with CBE, but was interested in a deeper dive. She found it particularly valuable to watch the videos with examples of what CBE looked like in classrooms at the featured schools. She is looking forward to sharing readings from the course with her colleagues and using them to spur conversations about their CBE pilot.

Learner Work

In this section, we include some samples of work from learners. We designed activities and assignments to help learners build an understanding of CBE and how it might relate, or not, to their contexts. In Units 0 and 1, learners considered what CBE is and how it affects systems in schools; they chose their stakeholder and goal for their conversation around CBE. In Unit 2, learners reflected on CBE in the classroom and thought about their own context through the lens of some implementation frameworks, as well as creating the first draft of their artifact to support their conversation. In Unit 3, learners took a closer look at various facets of CBE implementation and refined their artifact by adding resources and further reflection.

Activity: Readiness Assessment

Learners considered their own context through the lens of one of several CBE implementation “readiness” assessment tools. Some learners discovered that aspects of their context were already aligned with CBE. For others, the tools were a window into how their school could evolve.

“Through my reading of the assessment tool I have learned that my current school does implement some CBE tools in the classroom. We incorporate personalized learning plans...for gifted and weak students, we work on transferable skills through cross-curricular projects, and we use rubrics to evaluate (especially in English language classes).”

“I found [one of the readiness assessment tools] very enlightening. At first, I was certain that my school would be defined as “traditional” by most measures on the rubric. As I started to analyze the self-assessment tool, however, I began to see growth... [For example, we have] an atmosphere of authentic differentiated learning. Still, we have a long way to go when it comes to our learning pace and our learning program. For those, we are still traditional.”

Assignment 3: Refine Your Artifact

In this assignment, learners created a polished draft of the artifact they had been building throughout the course. The artifact could be in any format, and was meant to support a conversation around CBE with a stakeholder in their context. Learners found many ways to adapt this assignment to their needs. We noticed that the artifacts were often oriented around action. For example, teachers indicated that they were planning to speak to colleagues about making changes in their classrooms, or school leaders described planning to share new ideas and receive feedback from stakeholders. **In our post-course survey, over 60% of respondents reported having conversation with the stakeholder identified in their assignment.**

Chosen Stakeholder: My literacy coach

Goal: "I want to talk about implementing some form of CBE in my 7th Grade classroom next year. (My district is in the process of transitioning to CBE)."

Why make a classroom switch before full school system implementation?

- Increases actual learning of standards vs. grades based on effort
- Provides relevance/meaning for our standards-based report cards
- Students will take ownership over their learning, reducing behavior issues
- Better use of both teachers in co-taught classes
- Focused Lessons and Units of Study can be incorporated
- If successful, could serve as a model classroom for other teachers

Questions, comments, thoughts, potential issues

- Will there be any whole-group instruction if everyone is at a different pace?
- For students who show competency early—provide extension activities or allow them to get ahead (move on to next unit)?
- What to do about students who don't show competency after multiple attempts, even with extensive support?
- How to equate competency scores (1-4) with traditional number grades (0-100) still used by our system?
- How to handle team content planning if the other teacher and/or the co-teacher doesn't "buy in"?
- What other issues might come up? Add your thoughts/questions to the next slide.

Classroom setup

- The room will be organized into a variety of centers, some independent and some small group. For example:
 - Teacher-led mini-lesson
 - Tech center (iReady, DXL, quill.org, noredink.com)
 - Writing station
 - Editing station
 - Conference station
 - Reading center
 - Peer tutoring center
- Competencies will be posted at the appropriate centers.
- Early in the year, students will rotate through all centers on a schedule. The goal would be to allow more autonomous movement after they learn how to use each center and can track their own competencies.

Chosen Stakeholder: High school science team

Goal: "To find out where my colleagues are at with their understanding of and openness to CBE practices and to develop action items to implement in the classroom."

Teachers already do this:

Differentiated instruction:

- Provide students choice in projects to pique interest
- Develop authentic learning experiences for skill development and for demonstrating mastery
- Differentiate modalities of instruction to convey similar content
- Continuous feedback and activities that help students where they're at

A **competency-based model** provides a strong backbone allowing for personalization in the classroom

What do we need?

"COMMON GOALS, COMMON LANGUAGE"

- We need to determine which competencies (bundled standards) that reflect the our school's values
 - Students grow K-12 in these competencies
- We need to develop detailed rubrics (learning continuum) for students and teachers to evaluate growth and proficiency.
- We need to create reliable and accurate assessments that that evaluate these competencies.

Where can we grow from here?

What **next steps** should we take to move in the direction of CBE?

- Can we collaborate as a science team to determine what our competencies should be?
- Can we develop assessments that allow for students to demonstrate proficiency of competencies, or at a minimum, NGSS standards?
- Can we re-evaluate the activities in our classroom so they directly relate to learning targets and help students develop these competencies?
- Can we pick a competency or learning target and develop multiple activities that would allow students the ability to practice?

“ The artifact assignment was one of my favorites. We were given choice and voice over design, goal, stakeholder and deliverable. Along the way we utilized feedback from course participants. The rigor and complexity of the artifact increased as we progressed from unit 1 to unit 3. Ultimately, the final product was relevant to our experience and practice of CBE in our unique environments.”

“ ...I loved that the assignments were designed to be broad enough in their scope to permit me to customize the assignments to fit my personal goals and my professional context.”

Activity: I Used to Think, But Now I Think

At the end of the course, we used a simple reflection tool to help learners think about how their knowledge and mindsets changed throughout the course. The answers to the prompt “I used to think _____, but now I think _____” show that for many learners, the course brought about a change in their conception of CBE and its relevance to their context.

“I used to think CBE was a “thing”; something that you could pick up and implement; purchase training and get everyone on board; something I could take a class on and become “knowledgeable-enough” to share. I now think that CBE is much, much more. It is a change in mindset, habits and hundred year old methods. While I still strongly believe it is the right direction to take, I now have a clearer understanding what we are asking of our staff, students and parents is to take a leap of faith—and that’s difficult and scary.”

“I used to think that CBE was most likely to be implemented in schools whose demography is white and affluent and live in certain zip codes (U.S.A, context). I also thought that students and teachers who would most likely gravitate to this way of learning would be those who had already figured out the “game” of school and could succeed in any school setting. But now I think that CBE if implemented correctly could be a great vehicle for educational equity...”

“I used to think it is just about meeting standards and designing rubrics...but now I think it is really a whole individualized and holistic approach to teaching that does not stand alone but require[s] participation of teachers, parents, students, administrators and even directors and ministries.”

“I used to think that competency-based education was just an improvement to the traditional system [of] education, but now I think that it is an approach to prepare students to be productive citizens in a world of frequent change.”

Sharing Content From the Course

Creative Commons

Allowing learners to freely share and reuse our content is an important part of our mission; we want learners to disseminate and utilize materials in the ways that are most helpful considering their context. To facilitate this process, the course was released under a Creative Commons-Attribution 4.0 International license, which permits sharing and adaptation with attribution. In the post-course survey, approximately half of respondents (51%) said that the course's Creative Commons license affected how they used and shared materials from the course.

In response to the survey question "Please describe how the Creative Commons license affected how you used and shared materials from the course," learners said:

- **"I was able to download the resources and share the content at our team meetings. For example, we used the self-assessment tools, we studied sample student report cards and transcripts, and we held text-based conversations anchored in a few of the articles provided."**
- **"This helped me gain so much information...the shareable material made this worth every penny!"**
- **"It allowed me to discuss and share content with others in my learning community that did not necessarily have the time for the course. Their increased learning will have direct impacts within our school."**
- **"I was able to use the material from this course to create a beginner's guide to CBE course for parents."**

Social Media

Twitter has an active community of K-12 educators who we wanted to reach, whether or not they were enrolled in the course. While we were happy to use Twitter to share content from the course and other resources, we were especially pleased to see learners in the course sharing what they found impactful, including links to resources, and even encouraging others in their network to enroll.

57% of respondents to the pre-course survey reported that they used Twitter within the last month and 42% reported using it for professional learning within the last month. In the post-course survey, 16% of respondents said they interacted with course content through Twitter. Of these respondents, the most common ways they interacted with the course on Twitter was by following the Teaching Systems Lab Twitter account ([@MoocsTsL](#)) (90%), checking the course hashtag ([#cbemooc](#)) (79%), and tweeting with the course hashtag (50%). Here are some examples of the ways our learners shared course resources on Twitter:

Learners shared their favorite quotes from featured schools...

Theresa [redacted] Following

Yes! This is what I love about Competency Based education! "...it allows students of any ability to enter where they are and grow to where they need and want to be."
[#cbemooc](#) [#competencyed](#)

Crosstown High: Competency-Based Education in the Classroom

1:15 PM - 26 Feb 2019

5 Likes

shared course readings with their online networks...

Jean [redacted] Following

Demonstrations of Learning | [#cbe](#)
[#cbemooc](#) [#stuvoice](#) [#choice](#) [#mastery](#)

Demonstrations of Learning
 Competency-based education personalizes how students show mastery by giving them choice in how they're assessed.
edutopia.org

4:05 AM - 3 Mar 2019

3 Likes

MIT's Teaching Systems Lab MOO...
 @MoocsTsl

Trying to fit MOOCs into teacher's busy lives!
 Thanks for the signal boost, @EDvidence!
[#cbemooc](#) [#dtllmooc](#) [#futuregradsmooc](#)

Tosha [redacted]
 Replying to @Chris [redacted]

Not intentionally trying to add more to your busy schedule... but I'm really enjoying these ED offerings from MIT, @MOOCsTSL. Maybe we could make an Iron Horse sponsored learning group? 😊

9:29 AM - 25 Feb 2019

invited others to learn with them...

Tom [redacted] Following

"Teacher-to-teacher learning is central to change." -@MoocsTsl CBE & School Innovation youtu.be/nfhpHQfah7A
[#cbemooc](#)

CBE & School Innovation
 Justin Reich identifies coherence as a quality that effective schools have. He makes some observations on the nature of school innovation; teacher-to-teacher...
youtube.com

11:21 AM - 5 Mar 2019

and highlighted their favorite course videos!

Acknowledgments

TEACHING SYSTEMS LAB

We would like to thank the following people who contributed to the creation, development, delivery, and marketing of this course.

Course Instructors:

Justin Reich

Elizabeth Huttner-Loan

Instructional Designers:

Kelley Hirsch

Abigail Machson-Carter

Video Production:

Garrett Beazley

Fresh Cognate

Aimee Corrigan, Denez McAdoo,

Daymian Mejia, Doug Pietrzak

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Key Team Members at MITx:

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Envisioning the Graduate of the Future

IN REVIEW 2019

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Introduction

Envisioning the Graduate of the Future (first launched in March 2018) ran for a second time May 2–30, 2019. This massive open online course (MOOC) features schools at various stages of developing their vision of a high school graduate, including Washington Leadership Academy (a member of the cohort of XQ schools), Shrewsbury Public Schools (a suburban public school district), and Community Charter School of Cambridge (an urban charter school).

Over 1,000 educators from around the United States and 100 countries registered for the MOOC. Around 250 learners engaged in our discussion forums and 97 learners earned a verified certificate (reporting completion of 60% or more of the coursework and verifying their identity). This is approximately 9% of all registrants, higher than both our typical percentage of completion and the percentage of completion for the first run of this course. We appreciate that XQ again generously offered to fund the purchase of a verified certificate for interested learners and we believe this made the certificate option more attractive.

Creating a graduate profile is an opportunity for schools and communities to rethink how they are preparing students to be successful, and is by nature a collaborative process. We continued to foster learning circles in this run of the course, meaning groups of registered learners from the same context who meet together to discuss the course, in order to encourage collaboration within schools. In a poll in edX, we asked if learners were members or facilitators of a learning circle. Of 137 respondents, 28% said they were participating in a learning circle and 4% said they were leading a learning circle.

We also created a suite of new, easy-to-share resources for learners to take away from the course. Research for this course, conducted via surveys and interviews, shows the range of ways learners are leveraging and sharing course content. Glimpsing the broader impact that learners in the course have had is encouraging, and we hope that they will continue to share their graduate profiles and our course content with others now that the course is complete.

“I will be sharing all of the information and resources from the course with my colleagues and the Assistant Superintendent and Building Principal... I hope to be a facilitator of the graduate profile steering committee and create one for our district.”

By the Numbers

1,054
PARTICIPANTS
ENROLLED

191
VERIFIED
LEARNERS

251
Approx.
FORUM USERS

1,700
Approx.
TOTAL POSTS

Representation in the forums from at least 2 schools from the cohort of XQ schools

- Elizabethton High School (3)
- Crosstown High (1)

Location of US participants working in K-12 Schools

**This map is based on pre-course survey submissions from 71 participants*

97 learners earned certificates. That is 9% of all learners and 50.5% of verified learners.

Compared to 4.7% of all learners and 36% of verified learners from EGF 2018

Community Teaching Assistant

Alex Campbell, a former Envisioning the Graduate of the Future learner and a teacher at XQ Super School Elizabethton High School, was the community teaching assistant for the course.

Course Overview

A GRADUATE PROFILE HELPS ANSWER...

Welcome and Course Overview

Learners are introduced to the concept of a graduate profile through video and the course's instructional comic: "[What is a Graduate Profile?](#)" They introduce themselves in the course forums and learn about course logistics.

Part 1: Reflecting on the Purpose of High School

Learners hear multiple perspectives on the purpose of high school. Educators from Washington Leadership Academy (Washington, D.C.), a member of the cohort of XQ schools, share how they leverage conversations about expectations for high school graduates. People from across the Shrewsbury Public Schools (Shrewsbury, MA) community share how they engaged multiple perspectives during their process of developing a graduate profile.

Part 2: Focusing on the Graduate Profile Process

Learners dive into developing the first drafts of their graduate profile and iterating based on feedback. Educators at the Community Charter School of Cambridge (Cambridge, MA) share how they use their vision of a graduate to make changes in the classroom. Learners also learn more about Shrewsbury Public Schools' graduate profile process.

Research and Measuring Impact

The goal of our research is to gain a better understanding of our learners' motivations, backgrounds, and experiences in the course. We are particularly interested in the impact our course may have had on their mindsets and practices. We collected data through pre- and post-course surveys, and interviews of six learners in the course. Our response rates were 53% for the pre-course survey (N = 233) and 22% for the post-course survey (N = 95). We plan to administer a follow-up survey in the fall to learners who spent a significant amount of time in the course.

In the pre-course survey, we asked learners to assess their ability to perform a variety of tasks involved in creating a graduate profile. Overall, learners increased in their self-efficacy for tasks related to creating a graduate profile over the length of the course. The figure below shows changes from the pre- to the post-course surveys for a selection of the items we asked.

We also asked about the actions participants had taken since the beginning of the course in the post-course survey. Most learners reported changing something about their practice, in addition to creating a graduate profile, sharing their profile with colleagues, and getting input from stakeholders.

Actions participants reported taking as a result of the course (N = 81)

Sharing Course Content

One of the Teaching Systems Lab's goals is to make course content as usable and shareable as possible. When highly engaged learners share course content, it substantially increases the number of people impacted by the MOOC and increases the likelihood that the people with whom they share will change their practice. We asked learners to tell us how they are sharing course content and with whom in the post-course survey (N = 79). Here are some of their responses.

- **62%** of respondents shared course materials with people who did not take the course
- **62%** of respondents shared course materials with people in their school or organization
- Respondents who shared course materials, **shared them with an average of 5.5 people** in their school or organization

Of the learners who shared course content, we found that more learners shared materials in-person than virtually, and that learners incorporated content from the course into professional development experiences.

95% talked about course content with colleagues in their school or organization

72% shared course content at in-person meetings

47% adapted course content for use in professional development

32% integrated the content of the course into existing professional development offerings

For this run of the course, we created some new, ready-to-go resources designed for learners to share with colleagues and people in their networks who did not take the course. **We asked learners if they thought they would use each of these new resources in a poll in edX, and 66-72% of respondents said "yes" (N = 88).** These new resources include:

- **Course To-Go** - a minimally formatted version of the entire course in a Google doc
- **Starter Kit** - a brief overview of selected course concepts
- **Vision of a Graduate Workshops** - two ready-to-share workshops to help learners bring the idea of a graduate profile into their context

On the post-course survey, we asked participants (N = 84) about which of the resources they've accessed from the course.

- **58%** accessed Course To-Go
- **64%** accessed the Starter Kit
- **65%** accessed the Vision of Graduate Workshop

Learner Stories

We chose two stories from the six learner interviews. Each learner interviewed had a unique story, background, and motivation for creating a graduate profile. Some were already familiar with the concept of graduate profiles, and others were learning about this for the first time. Some themes include an interest in using the graduate profile strategically (to drive backwards design of curriculum or choices about professional development) and the inclusion of social-emotional characteristics in their profiles. These learners also appreciated the online community in the course forums, and used it to find inspiration and make professional connections.

Cora

Cora teaches math at a small, public high school in the rural southern United States. The school is competency-based, and students work on several school-wide, project-based learning experiences each year.

One of Cora's colleagues was a learner in the first run of the course and had shared his graduate profile with the faculty. Cora's goal for the course was to take this teacher-facing document and turn it into a student-facing "roadmap" to graduation that would concisely summarize the school's expectations for students.

“We identified stress for our students as one of our biggest problems, [and] the way that we would like to address that is to create this roadmap for them.”

Students at her school self-assess twice a year on both academics and what they call “survival skills” (collaboration, critical thinking, entrepreneurship, creativity, etc.). Cora wants her students to think deeply about their own growth and better understand how to measure it.

“I hope having this progression [the roadmap] in place, they’re going to see...that it’s okay to be at that surface level when you begin, but then you want to move forward and by the time they graduate, they can deeply understand what those skills mean and what they look like in their life.”

Although Cora wasn't in a formal learning circle, her school is so small (seven teachers) that it was easy to share what she was learning, and receive input and feedback. As a first-time MOOC learner, she enjoyed the forums and was inspired by other examples from schools in the course. She came away with some clear ideas about how to update her school's graduate profile.

Kristin

Kristin is an English teacher who just moved to Northern California, and is using MIT Teaching Systems Lab MOOCs to keep learning while she searches for a job. Previously, she held positions as a high school English teacher as well as various district-level administrative roles. She and her husband dream of opening up their own school one day.

Kristin explained that at this point in her career, and with the dream of opening a school, the course provided some useful reflection.

“This topic is really important to me. It’s something that’s kind of been in the back of my mind for a long time, because I think it’s something that we don’t actually focus on enough in the field-of really digging into not only what we think the purpose of education is, but how we are explicitly and implicitly communicating that purpose.”

For Kristin, one of the challenges of this course was not having a local context to engage with. She adapted by doing things like interviewing a friend whose child is just entering kindergarten for “Activity: Talk with a Stakeholder”. Before this year, Kristin had never taken an online course. For her, the MIT Teaching Systems Lab MOOCs functioned as kind of professional learning community while she doesn’t have a face-to-face one. Now after three MOOCs, she has a portfolio of experiences, ideas, and lenses to bring to her next endeavor.

Learner Work

The activities and assignments in the course progressively build towards learners creating a polished draft of their graduate profile. In Part 1 of the course, they began the process by brainstorming features or qualities that should characterize graduates in their context, and by seeking perspectives from stakeholders, ranging from teachers and students to local business leaders. In Part 2, they developed drafts of their graduate profiles and sought feedback from colleagues offline. Finally, they created second drafts of their graduate profiles and action plans for continuing to work on the profiles after the course. In this section, we share select participant work from the graduate profile second drafts and an end-of-course reflection.

Assignment: Develop Second Draft

We noticed that some common characteristics were: learning to overcome failure, effective communication, lifelong learning, empathy, and innovation. Here are some examples of characteristics excerpted from learners' second drafts.

Empathy, Tolerance, Acceptance

Students should be able to be sympathetic and empathetic, tolerating the shortcomings and biases of others, and accepting those challenges that can build skills.

Self-Efficacy

Students should hold realistic self-views and be empowered to enact change.

Cooperative Problem Solvers

Students understand how to tackle problems and understand that multiple perspectives often make for the most comprehensive solutions.

Passionate Leaders

Students will reflect on their personal leadership styles and develop the skills and confidence to pursue future leadership opportunities.

Inquirer

Students are intellectually curious, encouraged to ask questions and push the boundaries of accepted truths. Their inquiring spirit leads to strong critical thinking, as their awareness of the world is shaped through the power of the question.

I Used to Think, But Now I Think....

We asked learners to reflect on how their thinking about graduate profiles changed throughout the course. Here are a few sample responses:

“I used to think that a graduate profile was mainly about academics and skills, but now I think that it is equally about character development.”

“I used to think the graduate profile was for high school only, but now I think it’s important for all of our district to connect to the outcomes we want for students and all be working towards that. It gives us clarity and a common way to assess what we are doing, what is important to keep, and what is important to let go of.”

“I used to think that developing a graduate profile was an academic exercise, the product of which sits on a cyberspace shelf. Now, I think that every decision that the District makes should be filtered through the lens of whether it strengthens our ability to foster our desired characteristics.”

“I used to think that there was a correct way to develop a graduate profile, but now I think that there is no rule, as long as it reflects the core ideas, values and pursuits of all stakeholders.”

Acknowledgements

TEACHING SYSTEMS LAB

We would like to thank the following people who contributed to the creation, development, and delivery of this course.

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Key Team Members at MITx:

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