### **# HARVARD**

# THE DEREK BOK CENTER FOR TEACHING AND LEARNING

# ANNUAL REPORT 2019–20

































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### DEAR FRIENDS,

2020 has been a year unlike any other. As life on campus was disrupted due to COVID-19, excellence in teaching and learning took on a new importance, as all of the things that were once taken for granted about Harvard classrooms had to be considered in a new way. The Bok Center has played a central role in ensuring that faculty and graduate students have the tools to teach in dramatically altered circumstances, through a year marked by extraordinary economic, social, and political stress.

The pandemic has amplified much of what we already knew about teaching; the principles of good teaching remain the same, regardless of whether students are sitting in a classroom or connecting via computer. Just as we do on an ongoing basis, we have helped instructors articulate key learning objectives, modify assignments to meet those objectives, build interactivity into their courses, and identify strategies for engaging students outside of class.

Building community remains an essential aspect of our work at the Bok Center. Throughout the year, we created communities for instructors at a range of levels to learn from each other, and our dedication to sustaining a sense of community became almost more important when our work moved online in March. We were pleased that the Bok Center was able to sustain our community, and became a haven, resource, and place of support for instructors.

Promoting equitable and inclusive classrooms has always been a central focus at the Bok Center, and 2020 also highlighted our commitment to this work, as the country and world grappled with the realities of systemic racism. The

pandemic highlighted issues of inequality, and we have helped instructors adapt their teaching to ensure that students living in a variety of circumstances could learn, and where all students feel that they belong and have the resources to succeed.

This report covers academic year 2019–20, with an added focus on our work in the summer to prepare instructors for remote teaching in Fall 2020. We are heartened by the amazing effort that our community has devoted to teaching and learning this year, and how much we have learned about what is essential for successful teaching and learning, whether we are online or on campus. While we don't know what the coming year will bring, we know that we are well prepared to work with faculty, graduate students, undergraduates, and campus partners to continue to develop and sustain effective teaching, meaningful learning, and a sense of collaboration and community around teaching.

Warmly,



Mobile Luc

ROBERT LUE
Richard L. Menschel Faculty
Director of the Derek Bok Center
for Teaching and Learning



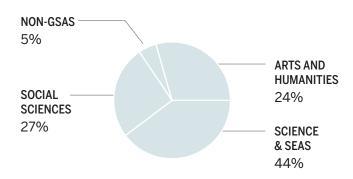
Janua & Brenner

**TAMARA BRENNER**Executive Director

### **OUR INTERGENERATIONAL COMMUNITY**

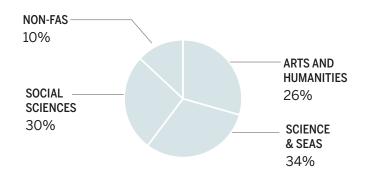
789

unique graduate students participated in Bok Center programming



960/0 of PhD programs represented

535 unique faculty worked with the Bok Center



410/0 of our faculty clients were **full professors** 

postdocs and teaching assistants worked with the Bok Center

undergraduate students visited the Bok Center as part of a course

Numbers reflect activities between July 2019 and June 2020.





"The teaching certificate and classes I took at the Bok Center have been so helpful in getting me to become the teacher and mentor I want to be."

MARIE-PASCALE GRIMON, PhD Candidate in Public Policy



"My experiences with the Bok Center have encouraged, challenged, and refined me as a teacher."

**BAILEY SINCOX, PhD Candidate in English** 



"Over the years, Bok Center staff helped me to become a more reflective and imaginative teacher. Additionally, we would have not managed remote education during COVID-19 without Bok Center support—they have provided an incredible service...in preparing us for remote teaching."

MANJA KLEMENČIČ, Lecturer on Sociology



"The lessons I've learned while pursuing a Bok Teaching Certificate have taught me a lot about both the diversity of student needs and the commonality of the student experience. I've also learned a lot about myself as a teacher and as a student, both why I am who I am and who I would like to be."

KARI TAYLOR-BURT, PhD Candidate in Organismic and Evolutionary Biology

### THE TRANSITION TO REMOTE TEACHING

In early March, 2020, Harvard announced that most students would be moving off-campus and that instruction would resume remotely after spring break. Since then, we have been working hard to translate our knowledge of effective pedagogy to support instructors in the transition to remote teaching.

### SPRING 2020

When teaching moved online in mid-March, we quickly activated our partnerships with the Office of Undergraduate Education (OUE) and Academic Technology for the FAS to develop a series of programs and resources that would help instructors learn how to use the technical tools necessary for online teaching, as they began to explore how to translate their goals and priorities into activities and experiences that would make sense for students who were adapting to new technologies and the new realities of life in the era of COVID-19.

100

faculty joined one or more of the **faculty meet-ups** that we co-hosted with OUE in March. These meet-ups covered topics ranging from general classroom management to assigning group work and teaching labs online, and provided a forum for faculty to ask questions and compare notes.

100 +

faculty members were paired with a staff member who joined their **initial course meeting after the transition** to troubleshoot any issues that arose in Zoom. This program, which was co-organized by Bok, OUE, and Academic Technology, drew on volunteers from across FAS staff.

36

faculty participated in **practice teaching sessions** over spring break. Faculty met in small groups over Zoom with a Bok staff member to try out various online teaching strategies.

44

graduate students attended a series of online workshops between mid-March and mid-April. Workshops explored strategies for teaching discussion sections online, features to employ in Zoom, and ideas for maintaining motivation.

50,286

unique page views were recorded to the <u>Teaching Remotely</u> pages of our website between March and August 2020. This new section of our website offers advice and examples of effective ways to teach online.

### **SUMMER 2020**

By early summer 2020, the FAS had announced that all instruction for the fall term would be remote. The Bok Center worked tirelessly throughout the summer to help faculty and graduate student instructors plan for the Fall term. Through workshops, one-on-one consultations, and online resources, we helped instructors redesign their courses with a focus on building community, fostering inclusion, and enhancing interactivity and engagement online.

# 987

**faculty** participated in a **four-part work-shop series** facilitated by staff from the Bok Center, OUE, and Academic Technology at FAS. Altogether, we co-led workshops for 32 cohorts, grouped by academic division, over the span of seven weeks.

To complement the synchronous workshops, we collaborated with OUE and the Vice Provost on Advances in Learning to develop extensive online resources to support faculty in redesigning their courses for remote teaching; materials were posted on a Canvas site and the OUE Remote Ready website.



Beginning in July, we offered **daily office hours** in collaboration with Academic Technology for the FAS and the Library. Faculty stopped by for help with everything from setting up online polls to restructuring in-class time with students.

# 400

**graduate students** participated in our redesigned <u>Fall Teaching Conference</u> in August, 2020, three weeks of synchronous sessions focused on teaching and building community remotely.

- » The conference centered around a new <u>Canvas site</u> with foundational self-study modules, based on our <u>Hit the Ground</u> <u>Running handbook</u>.
- » Nearly 300 Teaching Fellows (TFs) from across GSAS participated in a series of workshops in which they delved deeper into the Canvas modules, shared and explored ideas for teaching remotely, and connected with a group of their peers. Our team led a total of fourteen 3-session cohorts, each with a group of 15-30 graduate students.
- » 50 TFs joined practice teaching sessions to try out what they were learning.

# HIT THE GROUND RUNNING CANVAS SITE Join our Canvas site to work through a series of self-paced modules and access curated resources on teaching remotely.

### PRACTICE. PRACTICE TEACHING

SESSIONS
Join a small group of peers with a Bok
Center facilitator to practice delivering a lesson in Zoom.

#### ENGAGE.

SYNCHRONOUS TRAINING 3-session training via Zoom will cover the basics of teaching remotely and allow you to practice and collaborate with peers.

#### EXPLORE.

PLENARY SESSIONS Synchronous sessions on topics of interest, including equitable and inclusive teaching and responding to student writing.

### PIVOTING TO REMOTE LEARNING

The abrupt transition from in-person to remote teaching and learning in response to the COVID-19 pandemic posed technological challenges; faculty, Teaching Fellows, and students needed to brush up their skills on existing platforms like Canvas while learning a suite of new apps like Zoom and Slack. Beyond learning to log in to Zoom, instructors also needed guidance in how to *teach* through Zoom, and the Bok Center's expertise in helping instructors connect with, motivate, and deliver meaningful feedback to their students was essential to the success of the online pivot.

### **BUILDING COMMUNITY**

When teaching in person, it's easy to overlook how vital the hundreds of small interactions—between students and their instructors, but also between students—are to stimulating students' sense of belonging in a course and investment in their work. The Bok Center worked closely with hundreds of courses to identify online alternatives to these in-person interactions.

On March 11, as Harvard students hurriedly packed up their dorm rooms, attended their final face-to-face course meetings, and said goodbye to their friends and mentors, Ernest E. Monrad Professor of Slavic Languages and Literatures Stephanie Sandler composed an email to her students in GENED 1057: Poetry Without Borders. Reassuring them that their course would carry on with a refreshed syllabus after spring break, and wishing them well for their journeys away from campus, Sandler closed with "a poem to keep you company" through the pandemic—a ritual with which her students were well familiar, thanks to the "Poem of the Day" assignment that Sandler and her Head Teaching Fellow designed with the Bok Center over the semester before the course. As Sandler and her students reckoned with the new realities of remote teaching and learning, the sharing of poems back and forth among students and instructors became a vital way of maintaining community in her course. Read more.



"I am so happy with the Poem-a-Day piece of the course and so grateful for all the help that the Bok Center gave me."

STEPHANIE SANDLER, Ernest E. Monrad Professor of Slavic Languages and Literatures

### **REVISING TEACHING MATERIALS**

While some instructors had to modify their assignments to account for their students' inability to run lab experiments or access library and museum collections, others chose to rewrite their assignment prompts so as to be able to give their students a space in which to incorporate and learn from their unexpectedly varied local circumstances.

With instruction moving online and her students departing Harvard for destinations spread all across the globe, Coolidge Professor of History Maya Jasanoff was looking for a way to keep her students connected to Harvard and to each other by incorporating their experiences into GENED 1014: Ancestry. Jasanoff turned to the Bok Center to consult about creating a new assignment that would let students explore, analyze, and share the ways in which ancestry has marked their current locations. She asked her students to create and share three digital "postcards" that highlight anything from the genealogy of the namesake of a local site to the story of a family heirloom. We helped Jasanoff clarify the assignment's concept, and developed a platform for students to submit images and texts that would be displayed in an Instagram-like gallery. Read more.

#### MAKING THE MOST OF SYNCHRONOUS AND ASYNCHRONOUS TIME

While it is valuable for students and faculty to spend time learning together each week, asynchronous activities and assignments are also essential, especially for students with uneven internet access. The Bok Center has developed robust guidance for faculty about distributing their teaching across asynchronous and synchronous class time.

» Inspired by the wealth and diversity of the Harvard community's expertise on COVID-19, Allan Brandt and Ingrid Katz proposed to teach a new course on the pandemic in Fall 2020, giving them a very short timeline for course development. Brandt, a historian of science and former dean of the graduate school, and Katz, an assistant professor of medicine and associate director of the Harvard Global Health Institute, began meeting with the Bok Center in May to figure out the best way to bring dozens of guest experts into their classroom in a way that would allow students to engage and interact with them as much as possible. See Brandt's and Katz's advice about teaching about COVID in the context of the 2020 US Elections.





"A huge thanks to everyone at the Bok Center for helping us all ease into this strange year!"

**SARAH DIMICK, Assistant Professor of English** 

### TAKING THE STUDIO ONLINE

At the heart of the Bok Center's physical space is the Learning Lab, a studio and working space where a team of students, staff, and faculty design new and innovative activities and assignments. These activities often involve unconventional modes of communicating, making, and creating—including data visualization, film-making, public speaking, dance and performance, and public service, among many others.



The transition to remote learning in March increased the interest from faculty and students in richer media (such as 3D models, high quality videos, infographics, and illustrations) and richer interactions (more responsive online discussion tools, interactive web-based experiences). With many of the standard in-person tools and practices gone for the moment, the Learning Lab team spent the spring building resources and infrastructure to help faculty and students engage with new tools and with each other. To provide extra support for remote learning, the team built dedicated websites for courses with bespoke tips and step-by-step guides to help students complete assignments that involve a range of media and tools. These resources were created not only by the Learning Lab staff, but also by our many undergraduate and graduate fellows. (Read more about how students supported student learning.)

Much of the digital infrastructure that we have built to collect and organize information and media augments the physical space of the Learning Lab by making the materials and media produced there accessible to our fellows and now to many students online. In the current moment of remote learning, we are also leveraging the tools that we've been using internally for years, such as Slack, Airtable, and Google Suite, to support faculty and students who are using them in the classroom for the first time.

In the coming year we will continue to perfect these systems, and because these systems are not built only to serve us in this remote year but were constructed with the physical space in mind, they will continue to be valuable in the future as we return to campus.





### LAB 3D: THE SUCCESS OF VIRTUAL LABS IN OEB 126

When word came that courses would be moving online for the remainder of Spring 2020, Learning Lab Graduate Fellow Phil Fahn-Lai knew that the course for which he was a Teaching Fellow would face a particular challenge. Labs in OEB 126: Vertebrate Evolution, taught by Prof. Stephanie E. Pierce, involved visits to the Harvard Museum of Comparative Zoology, where students interacted with fossil specimens from the Museum's Vertebrate Paleontology collection. The labs reinforced information learned in lecture through hands-on observation of specimens, as well as student presentations.

Phil, who has a background in graphic and web design, approached the Bok Center's Learning Lab about designing a custom web app for the course. In collaboration with members of the Pierce Lab, Phil spent his last days on campus in mid-March using photogrammetry to scan and create 3D models of as many of the remaining fossil specimens as possible, and then got to work developing a tool to make them viewable. The result is <u>Lab 3D</u>, OEB 126's online platform for conducting labs.

The app has been a huge success. Professor Pierce commented, "Without access to museum specimens,

I was certain the essence of OEB 126 would be lost. But, Phil immediately jumped into action and developed a truly amazing teaching and learning resource. It was exciting to Zoom into lab each week and watch the students interact with 3D specimens and explore vertebrate evolutionary anatomy. Through Phil's hard work and ingenuity, OEB 126 was able to seamlessly transition to remote instruction and maintain its high-level student learning experience."

Similarly, students were impressed with Lab 3D. One OEB 126 student wrote, "Post spring break, the lab websites were AMAZING. Those are such powerful learning tools!!! They're incredible, and so beautiful, and so clean. I almost think I learned more during the remote labs than I did during the previous ones. It was like reading a Harry Potter newspaper where the pictures move and you can click on a word to get more information."

Lab 3D provides just one example of how the Bok Center partners with courses to develop new solutions that enable meaningful online learning experiences.

"Through the hard work and ingenuity [of Learning Lab Graduate Fellow Phil Lai], OEB 126 was able to seamlessly transition to remote instruction and maintain its high-level student learning experience."

STEPHANIE PIERCE, Thomas D. Cabot Associate Professor of Organismic and Evolutionary Biology

### LEARNING IN COMMUNITY

We believe that learning about—and improving upon—teaching happens best in collaborative settings. From our fellows programs to our seminars, we created communities where faculty, students, and staff could learn from each others' experiences and collectively develop new expertise, both in person and online.

376

participants attended the 2019 **Fall Teaching Conference** and 2020 **Winter Teaching Week.** 

These pre-term conferences help new Teaching Fellows (TFs) prepare for the semester, and provide more experienced TFs with opportunities to explore topics that include leading discussions, facilitating active learning, and fostering equity and inclusion.





67

**new faculty** attended fall orientation workshops, where we explored a variety of ways to engage students in different classroom spaces.

79

participants attended our **faculty lunch** series, where 5 faculty speakers shared their experiences and reflections on teaching. Speakers included Michael Pollan, on helping students grow as writers, and Robin Bernstein, on a new course that helps graduate students navigate graduate school.



25
Bok Seminars

184
Participants

3,360 In-class hours

- » Through our **Bok Seminars**, graduate students explored topics in teaching and learning in depth. Seminars are organized into broad categories based on target audience and topic: Foundations, Methods & Classroom Practice, Equity & Inclusion, Communication & Language, and Professional Development.
- » Spring Bok Seminars moved online in March, helping TFs make the transition to remote teaching and giving Bok staff firsthand experience in identifying ways to achieve our core goals under new circumstances. Read more.





72

faculty and graduate students attended our biweekly **STEM journal club**, which examines recent literature on science education research and encourages a community of scientists to share ideas about effective teaching. In late spring, the journal club continued on Zoom, with an examination of literature on equity in online teaching.

16

faculty participated in our inaugural **peer observation program**, in which cohorts of three faculty—plus a Bok facilitator—visited each other's classrooms and met to share reflections and ideas.

"The peer observation program provided thoughtful, considerate feedback about my own teaching. I was happy to discover that the diverse teaching practices of my peers sparked so many engaging conversations on teaching while motivating me to expand and improve my own instruction."

### **EQUITY AND INCLUSION**

The principles of equity and inclusion underlie all aspects of our work: consultations, course design projects, workshops, and more. This spring, we developed new resources on equity and inclusion with guidance on remote learning, and we helped instructors adapt their courses to be accessible to students in a range of environments.

WE OFFER WORKSHOPS AND SEMINARS FOR INSTRUCTORS ABOUT INCLUSIVE TEACHING.



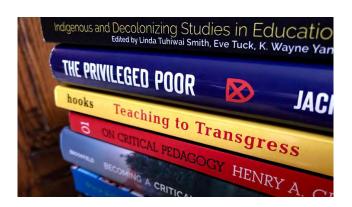
The Fall Teaching Conference and Winter Teaching Week included new plenary workshops on equitable and inclusive teaching, as well as identity and power dynamics in the classroom.

### STUDENT PERSPECTIVES INFORM OUR WORK

Our ongoing partnerships with undergraduate student fellows at the Bok Center inform our work in helping instructors create inclusive learning environments. This spring, our undergraduate fellows documented their experiences with remote learning; their reflections, found at One Month In and Gold Star Teaching Moves, provide ideas for instructors on ways to help students feel included, engaged, and motivated.

34

graduate students attended **Bok Seminars** on power, privilege, and identity in the classroom.
Seminars included Classroom
Dynamics: Navigating Obstacles to Equity and Inclusion, and
Teaching with Purpose: Critical Pedagogy in a Time of Pandemic.



"The critical pedagogies that this seminar exposed us to have radically changed the way I will approach the classroom both as a TF and a student. I hope to create generous, loving, equal classrooms and to persist at that."

PARTICIPANT IN BOK SEMINAR, TEACHING WITH PURPOSE

WE SUPPORT UNDERGRADUATES IN CREATING EQUITABLE COMMUNITIES WITHIN AND BEYOND THE CLASSROOM.

The **Undergraduate Pedagogy Fellows** (UPFs) led workshops that are designed to help teachers and learners grapple with power and privilege as it manifests within and beyond Harvard's classrooms.

UPFs

11

Workshops

137

**Attendees** 



### WE ARE WORKING TO MAKE STEM CONCENTRA-TIONS MORE INCLUSIVE AND ACCESSIBLE.

In collaboration with colleagues from Math, Chemistry, Physics, Applied Math, and the Office of Undergraduate Education, we implemented a **HILT Spark grant** that will help faculty **teach study skills** in their large STEM courses in an effort to increase student success. We surveyed 1300 students from introductory science courses about how they study and designed classroom interventions to encourage effective studying.

WE COLLABORATE WITH FACULTY TO DEVELOP COURSES THAT DIRECTLY ADDRESS ISSUES OF EQUITY, POWER, AND JUSTICE. FOR EXAMPLE:



EMR 135: Climate Migrations: Histories, Borders, and Activism explores the relationship between climate change and migration, as well as the rise of border enforcement and artistic and activist responses to these crises. The Learning Lab helped develop and host a capstone event that featured the artistic works of climate activists and students.



In GOV 94HJ: Technically Justice? The Politics of Technology and Criminal Justice Reform, students examined the politics and policies behind tech-based reforms, including surveillance tech and predictive policing. Students visited the Learning Lab to get hands-on experience with virtual reality and to explore its possibilities and implications in criminal justice.

### TAILORED CONSULTATIONS

While it may seem simple, a crucial element of much of our work with faculty and graduate student instructors is that we sit down with them, provide space for them to articulate their goals, talk through ideas or challenges, and help them be the best version of themselves as a teacher, whatever that may look like for the individual. By helping faculty and graduate students consider their teaching from other perspectives, we empower them to learn and grow in their practice.

212

faculty members consulted with Bok Center staff on topics ranging from student feedback, to assignment and syllabus design, to handling controversial topics.



86

**PhD students consulted** with Bok Center staff on topics that included classroom practice, communication, professional development, and preparation for the job market.

175

**video consultations** prompted graduate student instructors to reflect on their teaching with Bok staff and fellows.

THE REVISED GENERAL EDUCATION CURRICULUM, WHICH LAUNCHED IN FALL 2019, HAS BEEN A SPECIAL AREA OF FOCUS AT THE BOK CENTER.

52

**General Education courses** collaborated with the Bok Center during the 2019-20 academic year. We helped faculty design their syllabi and assignments, and we provided tailored training to Teaching Fellows.

14

faculty teaching in General Education participated in our **Course Design Institutes**, which were offered in August and January. Over multiple meetings, the faculty participants discussed principles of effective course design and created materials for their new courses.





### AN ONLINE MUSEUM, JUST IN TIME FOR A PANDEMIC

One of the pressing challenges that greeted the Bok Center team when Harvard pivoted abruptly to remote learning was the need to help faculty re-imagine their courses' final projects. The challenge went beyond determining how students writing term papers could substitute e-books for Widener's collections, or how TFs could distribute and proctor exams online. For a number of years, faculty have been branching out beyond more traditional forms of assessment and experimenting with creative assignments, many of which rely on a wide array of people and resources that are hard to find off campus. Some, moreover, culminate in public events, like a gallery exhibition or poster fair. How could faculty adapt these kinds of interactive capstones for the new reality in which students were dispersed around the world?

Fortunately, the Bok Center had already developed expertise in this arena by working with faculty who were interested in virtual capstones even prior to the pandemic. One such digital pioneer was Robert Reid-Pharr, Professor of Studies of Women, Gender, and Sexuality and of African and African American Studies. As he prepared to teach his new General Education course on Black Radicalism in fall 2019, Reid-Pharr worked with the Bok Center to envision an assignment sequence that would begin with students

identifying an item from among Harvard's extensive holdings of archival materials related to twentieth-century Black radical movements, and conclude with them mounting an online "museum" exhibition in which they would combine their individual artifacts to tell larger stories about key themes from the course. In order to carry it off, Reid-Pharr and the Bok team had to puzzle through a number of challenges—from identifying a software platform, to balancing student autonomy with the desire for coherence of the overall exhibit.

By collaborating with the Harvard Library and Academic Technology for the FAS, the Bok Center identified an open-source platform, Scalar, that met the needs of the course. During the fall 2019 semester. Bok staff visited the class to introduce the basics of building Scalar pages and hosted a pair of evening hackathons where students could assemble their virtual exhibition with hands-on help. The resulting exhibition was so exhilarating that Reid-Pharr and the Harvard Library decided to preserve the students' work by converting it to a public-facing resource. Though the coronavirus managed to cancel the launch party that Bok was scheduled to host in March, it could not cancel the Scalar exhibition itself. and interested readers can-and should-consult it here.

"Partnering with Robert Reid-Pharr was a privilege. Helping faculty and their students figure out how to share what they've learned with a larger audience is one of the most exciting parts of working at the Bok Center."

ADAM BEAVER, Director of Pedagogy, Derek Bok Center for Teaching and Learning

### PEDAGOGY FELLOWS



33

graduate student **Pedagogy Fellows** supported their peers in their roles as teachers. Pedagogy Fellows (PFs) collaborate with faculty, department administrators, and the Bok Center's senior staff to enhance training and support for teaching fellows within their departments and across the FAS by leading pedagogy seminars and workshops, consulting with TFs, and developing resources on teaching and professional development for their peers.

### TEACHING REMOTELY

In March, the work of the <u>Pedagogy Fellows</u> <u>moved online</u>, as they helped their peers navigate strategies for teaching remotely. Regular meetings between the Pedagogy Fellows and Bok staff, designed to offer ongoing training and mentoring, proved to be an essential space for exploring remote teaching tools.

A silver lining of the pandemic was that we reimagined the capstone poster session for the program, and built a virtual gallery that can be easily shared. Visit the <u>Pedagogy Fellows Capstone Gallery</u> to view the fellows' projects.



"I think there's just something about teaching where it becomes a lot better and a lot more interesting if you have a community of people to talk about it with. The Bok Center definitely has provided that for me."

ERIN HUTCHINSON, PhD '20, Pedagogy Fellow in History

Read an interview with Erin, in which she discussed the many different ways she participated in the Bok Center's programming, and what she hopes to carry forward with her into her career as a faculty member.





### LEARN, PRACTICE, REFLECT

Guided by three principles—Learn, Practice, Reflect—graduate students who pursue the Bok Teaching Certificate explore topics in teaching and learning through courses and seminars, reflect on their own teaching practice, and compile a portfolio of written materials documenting their experience. In the 2019-20 academic year, <u>24 graduate students</u> earned a teaching certificate, completing at least three Bok Seminars and demonstrating a substantive engagement with and reflection on teaching.

The **Learn** component of the Certificate asks PhD students to take Bok Seminars, which provide a forum for students to explore an area of teaching and learning, and connect with fellow graduate students in a community of practice. "As I worked my way through the Bok Center seminars I was really pleased to find a great sense of community and I developed a keen interest in pedagogy," remarked Julia Smachylo, a PhD candidate at the Graduate School of Design.

The **Practice** element of the Bok Teaching Certificate is a video consultation, where a Teaching Fellow records one of their own sections and watches the video with a member of Bok's senior staff or a Pedagogy Fellow. Inviting a consultant to observe your teaching is among the best ways to gain confidence in the classroom, to expand your repertoire of teaching techniques, and to become more reflective

about how students might experience your class-room. Clara Carus, a Fellow in Philosophy, noted that this experience provided her with a "more objective judgement of my teaching," which "heightened my confidence in my teaching. It was great to be given the chance to discuss my teaching in a one-to-one consultation."

Finally, students are asked to **Reflect** on their own teaching practice and their trajectory through the Certificate. This opportunity to consolidate the knowledge and skills they have gained over the course of their teaching career at Harvard helps PhD students create materials for their teaching portfolio and encourages them to engage deeply in the process of feedback and reflection. As Jonathan Larson, a PhD candidate in Biostatistics reflected, "One of the best parts of this process has been getting feedback... In so many other areas of my education, I've felt like it's hard to elicit coaching; this process has provided me with lots of opportunities."

In this year that presented unprecedented obstacles and challenges to teachers at every stage of their careers, we are grateful that graduate student teachers regarded us as a place where they can learn, practice, reflect, and connect with a supportive community.

"As I worked my way through the Bok Center seminars I was really pleased to find a great sense of community and I developed a keen interest in pedagogy."

JULIA SMACHYLO, PhD candidate at the Graduate School of Design

### THE LEARNING LAB

The Learning Lab is an intergenerational team composed of staff and undergraduate and graduate fellows, as well as a studio space built to support creative approaches to teaching and learning. In collaboration with faculty, the Learning Lab team explores, designs, and builds innovative materials, assignments, and activities for Harvard courses.

### THE LEARNING LAB:

**SUPPORTED** 

82

### courses and projects

— enrolling 2,315 students.



**OFFERED** 

45

workshops and hackathons to help students develop new skills and complete course projects. **HELD** 

449

**film shoots,** capturing student projects, interviews, and more.

**HOSTED** 

974

students enrolled in courses supported by the Learning Lab, many of whom visited multiple times. **PRODUCED** 

141

tutorials, guides, and digital resources to support students during the virtual semester.

### **OUR INTERGENERATIONAL DESIGN TEAM**

64

**Learning Lab Undergraduate** 

**Fellows** (LLUFs) tested assignments, assisted in building course materials, and assisted with workshops and hackathons.

7

**Learning Lab Graduate Fellows** 

(LLGFs) developed and deployed their skills in technology, art and performance; designed assignments and activities; and led workshops for courses. 11

**Digital Teaching Fellows** (DiTFs) supported digital teaching assignments in classes across FAS, with mentorship from the Bok Center and the Digital Scholarship Support Group.

### LABS: EXPLORING MODES OF TEACHING

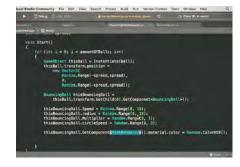
The Learning Lab hosts internal working groups, called **labs**, that explore a particular medium or mode of teaching. The Labs, which meet weekly, create communities that expand our shared knowledge base, and thus our capacity to support current and future projects utilizing these media. As examples:



animationLab created an Animation Toolkit to support students engaged in animation projects, and developed a workshop that introduced students to animation in GENED 1049: East Asian Cinema.



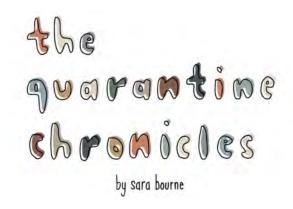
reality Lab supported students using augmented reality in TDM 169L: Immersive Storytelling Using Mixed Media, and developed tutorials for students making virtual museum exhibits in GENED 1099: Pyramid Schemes.



**codeLab** built a host of tools that enriched the Learning Lab both physically and digitally, and coded custom apps for courses.

### TEACHING REMOTELY

When the decision was made to transition to remote learning in mid-March, all of the labs came together as one team of staff, graduate, and undergraduate students. This central team, called **distanceLab**. was tasked with developing responses to the new challenges our faculty and students were facing in teaching and learning remotely. Each day in distanceLab, student fellows and staff joined a Zoom meeting to brainstorm responses to requests from faculty and students, or to pitch new assignment ideas in response to what our student fellows had experienced in the initial online meetings of their courses. We shared ideas for online teaching drawn from a wide range of sources; our staff envisioned new approaches to supporting student projects; our graduate fellows shared their course design projects; and our undergraduate fellows created new ways of providing feedback and developed their skills as "peer media tutors" to mentor other students undertaking new types of course projects.





### BUILDING MEDIA, TOOLS, AND CURRICULUM

The Learning Lab team works to build assignments, experiences, and tools to support Harvard students across a wide range of media, from podcasting to infographic design. Below are a few examples of projects from the past year.



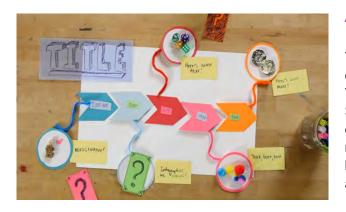
### **VIDEO, PHOTOGRAPHY, AND SCIENCE COMMUNICATION**

Students in SCRB 78: Science Communication were challenged with twelve weeks of project-based communication practice including scientific presentations, impromptu pitching, videography and video editing, scientific articles, biotechnology, policy, and grant-writing. The Learning Lab presented workshops and held office hours on filmography, photo editing, print-publishing, and video editing while students were on campus, and developed individualized resources to support students remotely in creating Vox-style explainer videos.

### WEB APPLICATIONS

music51.bok.tools, or Chord Crusher, is a web-based game designed and coded by Learning Lab staff and graduate fellows David Forrest, Phil Fahn-Lai, and James Bean that helps students in MUSIC 51 hone their music theory skills and fluencies. The interface offers students a responsive experience as it generates new questions, gives immediate feedback on each response, and logs each student's overall success. The app is built with the industry-standard front-end library ReactJS, and the web development skills that our team learned in the process of creating Chord Crusher have proven invaluable in producing custom web interfaces and games for other classes.

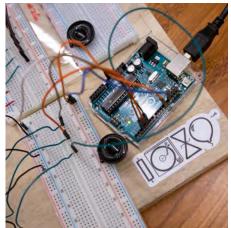




### **TIMELINES**

The Learning Lab developed a protocol for students to collaboratively construct timelines using Google Forms and TimelineJS for SOC 1106: Humanitarian Activism and Civil Society. Students used the timelines to examine the origins of organized humanitarian activism through independent research and also constructed timelines that investigate humanitarian efforts in regions including Yemen, Ukraine, and Syria.





### A TOOLKIT AT THE INTERSECTION OF MUSIC AND ENGINEERING

GENED 1080, How Music Works: Engineering the Acoustical World, attracts students with a range of backgrounds, "with expert composers working side-by-side with expert coders," as described by course head Robert Wood, Charles River Professor of Engineering and Applied Sciences. To support its transition from a departmental course to the new Gen Ed program in Fall 2019, the Learning Lab worked with course staff to make the engineering and music material more accessible and approachable for students with differing levels of academic preparation.

During summer 2019, the Learning Lab worked with Wood on online modules for math and music concepts that incoming students might need to review. These initial conversations led to the creation of the 1080 Toolkit, a website with videos, text, visualizations, and interactive apps built to prepare every student to succeed in the course. As an example, the music theory module includes the MakeAScale app, developed by Learning Lab Undergraduate Fellow Zachary Steinberg and Learning Lab Media Fellow James Bean, which demonstrates the concept of a musical scale by allowing students to create their own scale and play it back. "For any topic we thought

would help with foundational knowledge or exploration, the Learning Lab was quick to assemble interactive and accessible content for the Toolkit," reported Wood.

GENED 1080 is one of many courses that culminates in a capstone event that allows students to share their work more broadly. For Fall 2019, the Learning Lab helped design 1080Fest, a capstone event for the course that was part science fair and part talent show, once again interweaving the worlds of engineering and music. The event also presented a new challenge for the Learning Lab: 1080Fest was held in the library, as opposed to Bok Center space, which gave the Learning Lab team the opportunity to develop new capacities in mobile recording and space curation. The event gave students something to work toward as they developed their final projects, and it produced a gallery of ideas that will inspire and challenge future students in the course. Wood commented, "We billed 1080 fest as a 'music festival meets a science fair,' and the Learning Lab brought their creativity and energy to make this a very memorable event! Through their efforts, 1080Fest lived up to its billing!"

"For any topic we thought would help with foundational knowledge or exploration, the Learning Lab was quick to assemble interactive and accessible content for the toolkit."

ROBERT WOOD, Charles River Professor of Engineering and Applied Sciences

### ON BEING A LLUF

"Before becoming a LLUF (Learning Lab Undergraduate Fellow), my interactions with graduate students and even professors and administrators was somewhat limited. That all changed when I became a LLUF. At the Learning Lab, graduate students work with undergraduate students, who work with staff and professors in active dialogue about how to innovate and improve on course assignments. One of the best parts about being a LLUF is the ability to forge a unique connection with courses across the College by helping with their development. When GENED 1080: Engineering the Acoustical World



was being workshopped by Bok, I helped test a format for short explainer videos that Professor Wood was hoping to include with the course so as to ensure students of all math backgrounds could feel comfortable in this cross-disciplinarycourse. I was an eager participant as Professor Wood explained frequency and amplitude, drawings of sine waves spilling across the paper. It was such a memorable experience to interact with a professor in this setting – to witness his excitement about the development of this course bringing math, physics, and music in conversation and his desire to make it accessible."

SHIVANI (SHIVI) AGGARWAL, '21



"My work at the Learning Lab has been critical in keeping me connected to both school and my peers [while studying remotely]. By being able to work on creating resources [about how to use new types of tools and software], I have been able to supplement my existing knowledge with new material, all while teaching other people how to use those resources. During this time, when it can be difficult to find the same level of motivation you had as when you were at school, working on these projects has kept me focused and driven on being a student and a teacher. Within the Learning Lab I have found continuous men-

torship and space where I can openly talk about what my experience [learning remotely] has been like – both the positives and negatives. The prompts that we have done throughout the last few weeks ... have also allowed me to reflect and process my experiences, describe strategies to improve my productivity, and offer tangible feedback on how virtual learning can be improved."

**ELMER VIVAS PORTILLO, '20** 

### INTERNATIONAL TEACHERS AND SCHOLARS

We offer opportunities for international graduate students and scholars to develop their speaking, teaching, and cultural skills. Read more about the path international PhD students can take through our programming <u>here</u>.

38

graduate students participated in the Professional Communication Program for New International Scholars in August 2019. This three week **intensive summer program**, offered in partnership with GSAS, welcomes international graduate students who are beginning their studies at Harvard.



graduate students and scholars had their oral English language proficiency assessed at the Bok Center.



57

students completed Bok Seminars that focused on **language** and **culture**. Our seminars offer extensive individual consultations and tailored support.

12

undergraduate **Culture and Communication Consultants** provided international graduate students with an undergraduate perspective on teaching and academic life at Harvard.

<u>Read more</u> about how much the undergraduates learned as they helped international graduate students maintain community during the pandemic.



### TEACHING REMOTELY

As we transitioned to **remote teaching and learning** in the spring, our support for international graduate students moved online. Our seminars went online and we began developing more online programming and self-study resources for international PhD students, and we helped international graduate students stay connected through **Community Check-ins.** Read more.

### ENRICHING K-12 EDUCATION

Socially Engaged Learning at Bok provides undergraduates, graduate students, postdocs, and faculty with opportunities to work with diverse audiences beyond Harvard. Whether presenting research to teachers, leading laboratories for high school classes, or mentoring K-12 students, Harvard students and faculty are able to practice teaching and communicating research and become more reflective learners and teachers in the process.



27

undergraduates delivered interdisciplinary, project-based **mentoring to K–12 students** at the Harvard Ed Portal. The undergraduate mentors gain experience with skills central to good teaching, and reflect on their own development as teachers and learners.

38

high school science teachers attended a series of five meetings during the fall, where Harvard scientists **presented research and classroom activities.** Two graduate student Life Sciences Outreach Fellows collaborated with presenting scientists to develop engaging activities for these workshops.



### TEACHING REMOTELY

When mentoring shifted online in March, the undergraduate mentors benefitted from their own experiences as students to make online learning compelling for children. To keep children engaged, they identified topics that were relevant to their own interests. Mentor Allanah Rolph '23 appreciated having the agency to "tailor my content to things that both my mentees and I were interested in." Additionally, mentors prioritized making space for interpersonal relationships during program time. Allison Pao '21 observed, "I think we became a much needed source of social interaction for (the children)." The concepts of content relevance, learner agency, and interpersonal relationships are foundational to all effective education; the online shift brought these important themes into sharp focus.

<u>Read more</u> about how the mentors maintained a vibrant remote community.

### THE WORLD BEYOND HARVARD YARD

#### HIGHER EDUCATION TEACHING CERTIFICATE

In a prescient move, the Bok Center partnered with GetSmarter in 2017 to launch a high-touch <u>online course</u> designed to help instructors become more reflective and intentional in designing and delivering their teaching. The course has become a hit, enrolling hundreds of faculty and aspiring faculty around the globe in each of its twelve offerings to date, and receiving the highest feedback scores of any courses available on the GetSmarter platform. The Bok team was able to apply the valuable lessons learned in the process of creating our online course to the support we offered Harvard faculty and graduate students when the university transitioned to remote teaching in March 2020. Among these are the essential importance of activating peer feedback in online courses, and the necessity of building many opportunities for sequenced practice into the curriculum lest students become passive recipients of the course material. As the world continues to reckon with the new reality of online teaching for the foreseeable future, our Higher Education Teaching Certificate offers all instructors an opportunity to learn from, and with, Harvard faculty and staff.

# HERSCHBACH LECTURE: ENGAGING OUR STUDENTS IN SCIENCE VIA FLIPPED CLASSES, SCIENCE FICTION, AND MOOCS

Mohamed Noor, Dean of Natural Sciences and Professor of Biology at Duke University, delivered the Dudley Herschbach teacher/scientist lecture on December 11, 2019. Noor shared stories of his efforts to improve student learning and engagement in science classes, including flipping an introductory biology course and using science fiction to make biology more accessible. Watch the video here.



#### LEMANN PROGRAM ON CREATIVITY AND ENTREPRENEURSHIP

In 2019, Bok Center faculty director Rob Lue became the director of the new Lemann Program on Creativity and Entrepreneurship, which fosters innovative problem solving by Harvard undergraduates, with the aim of creating sustained value for society. The program's first staff member, Sam Magee, joined the Bok Center as Associate Director on Creativity and Entrepreneurship in March. The program launches in the 2020-21 academic year, with community- and skill-building events, opportunities for students to apply for funding for new ventures, and a new undergraduate course on creativity and entrepreneurship. In its first year, the program will focus on ideas and ventures that help build a "better normal" related to the COVID-19 pandemic, racial injustice, and climate change. By integrating essential skills in and approaches to creativity and entrepreneurship throughout Harvard's liberal arts curriculum, the program is designed to enable students to directly apply their education towards improving the world.

### **OUR TEAM**

June 2020



#### **Adam Beaver**

Director of Pedagogy

### Suzanna Bray

Office Coordinator

#### **Tamara Brenner**

**Executive Director** 

#### Rebecca Brown

Assistant Director, Graduate Student Programming

#### Casey Cann

Technical Operations and Learning Lab Studio Coordinator

#### Lauren Davidson

Assistant Director of the Learning Lab

### **Danielle Duke**

Program Coordinator

#### Sarah Emory

Assistant Director, International Teachers and Scholars

### **Eleanor Finnegan**

Assistant Director, Faculty Programming

### Katie Gilligan

Learning Lab Project Manager

#### **Shava Glater**

**Program Coordinator** 

### Jonah Johnson

Assistant Director of Writing Pedagogy

### Susan Johnson

Assistant Director, Socially Engaged Learning

#### Jordan Koffman

Learning Lab Fellow

#### Marlon Kuzmick

Director of the Learning Lab

### **Noelle Lopez**

Assistant Director, Equity and Inclusion

### **Robert Lue**

Richard L. Menschel Faculty Director

#### Laura Madden

**Director of Administration** 

#### Sam Magee

Associate Director on Creativity and Entrepreneurship

#### Colleen Noonan

**Program Coordinator** 

### Michael Oliveri

Media Production Coordinator

#### Pamela Pollock

Director of Professional Development

### Marty Samuels

Associate Director for Science

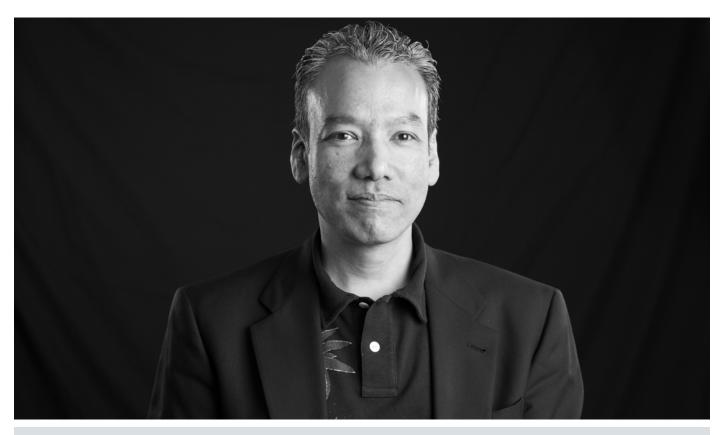
## 94 Undergraduate Fellows

Learning Lab Undergraduate Fellows | Culture and Communication Consultants | Office Assistants | Undergraduate Pedagogy Fellows | K–12 Ed Portal Mentors | Research Assistants

**71** G

### **Graduate Fellows**

ABL Connect Fellows | Digital Teaching Fellows | Life Science Outreach Fellows | Learning Lab Graduate Fellows | Pedagogy Fellows | Teaching Consultants



### **IN LOVING MEMORY**

Robert A. Lue 1964-2020

Richard L. Menschel Faculty Director of the Derek Bok Center for Teaching and Learning, 2013-2020





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