

Historical Impact Report

A Decade of Academic Innovation at Boston University

2024



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Report prepared by
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Communications Manager
Digital Learning & Innovation

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Welcome.



I am honored to share the Shipley Center's Historical Impact Report with you. This report, which reflects our remarkable journey from the early days of the Digital Learning Initiative to our evolution into the Shipley Center for Digital Learning and Innovation, is a testament to our unwavering commitment to innovation, education, and community engagement over the past decade.

We sincerely appreciate the visionary leadership of Chrysanthos Dellarocas, who guided our efforts as Director and later Associate Provost for Digital Learning & Innovation from 2013 to 2024. His contributions have been pivotal in shaping the direction and impact of our work.

This report highlights the significant milestones we have achieved, the challenges we have navigated, and the invaluable lessons we have learned. It showcases the diverse range of projects we have undertaken, each driven by a shared commitment to making a meaningful difference for Boston University's students, faculty, and staff. We have consistently aimed to enhance the learning experience and contribute to the academic community through transformative educational initiatives and collaborative partnerships.

We remain dedicated to building on this legacy as we look to the future. Our focus will continue to be on nurturing the next generation of innovators, supporting interdisciplinary research into the role of educational technology in teaching and learning, and expanding our reach to ensure that our work's benefits are felt far and wide.

We are deeply grateful for the support of our partners, alumni, and community members, whose contributions have been instrumental in our success. We look forward to the exciting journey ahead.

Cheers,

Romy Ruukel
Executive Director *ad interim*
Digital Learning & Innovation

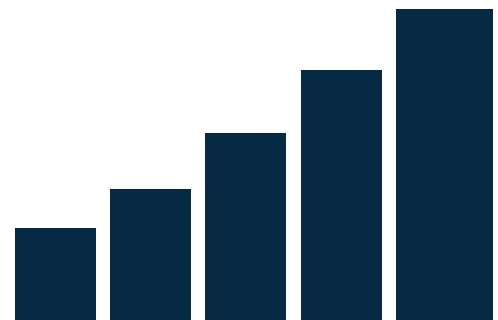




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Executive Summary

Established to foster innovative teaching practices that integrate emerging educational technologies into the academic curriculum, the Richard C. Shipley Center for Digital Learning and Innovation (“The Shipley Center”) at Boston University (BU) has played an integral role in advancing the university’s educational mission in the digital age. This historical impact report provides a comprehensive overview of the Shipley Center’s impact at BU, highlighting key initiatives and successes over the last decade.

Since its inception, the Shipley Center has been committed to promoting educational excellence through the strategic use of technology. From institutionalizing massive open online courses (MOOCs) to navigating teaching and learning in the age of artificial intelligence (AI), the Shipley Center has supported numerous initiatives that have reshaped the academic landscape at Boston University. This report delves into the Shipley Center’s various projects and initiatives, illustrating their impact on diverse target audiences, including undergraduate and graduate students, faculty, and alumni.

The following sections detail the milestones achieved by the Shipley Center, offering insights into how these initiatives have supported the university’s goals of inclusivity, accessibility, and innovation in education. By examining the historical context and outcomes of these efforts, this report underscores the Shipley Center’s vital role in positioning Boston University as a leader in digital learning and educational innovation.



Organization Overview

Mission

The Shipley Center aims to catalyze thoughtful educational experimentation by offering instructional design, digital media production, educational technology discovery, project management, and funding support to BU faculty and leadership. The Shipley Center's mission focuses on nurturing innovative ideas and approaches in digital education through incubating select pilot projects. The Shipley Center is committed to high quality standards, capacity building, flexibility, continuous learning, and transparent processes. They endeavor to cultivate a culture that invites dialogue and collective sense-making, especially across differences.

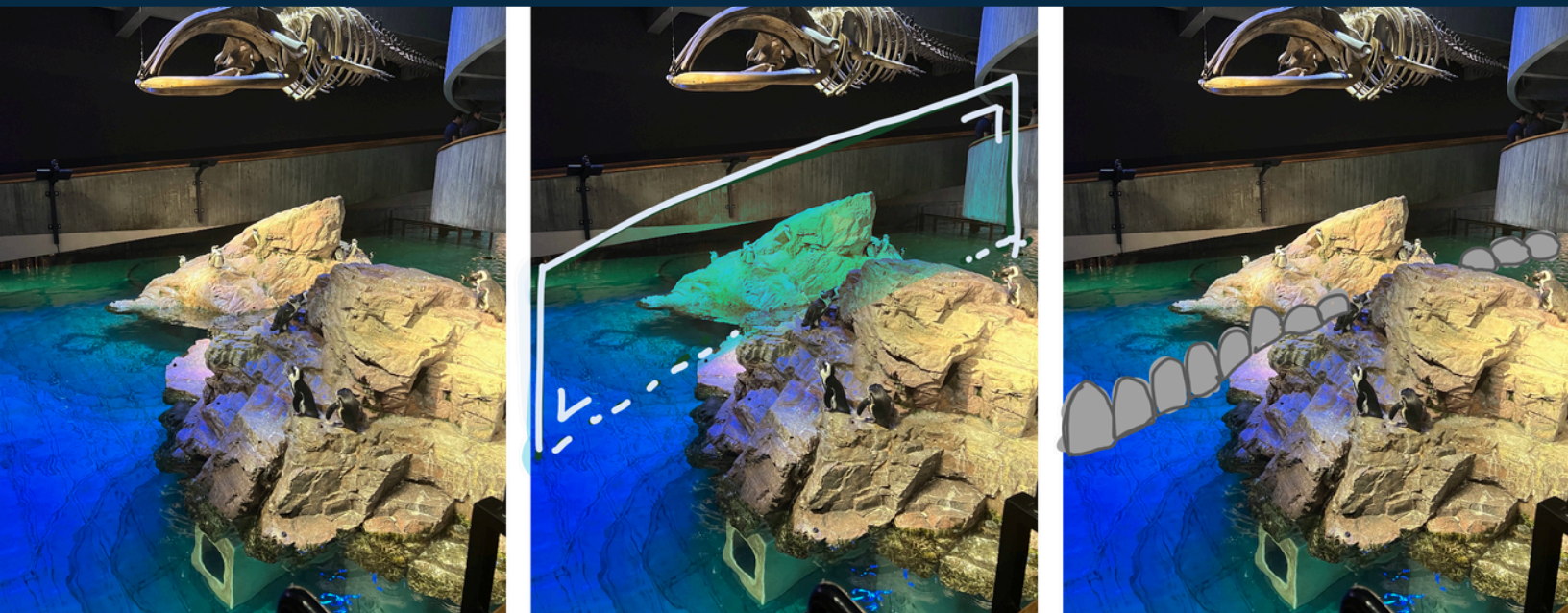
History

In 2012, a university task force, the Council on Educational Technology and Learning Innovation (CETLI), was formed and charged with researching Massive Open Online Courses (MOOCs) and digital learning across BU. The dissolution of CETLI in 2013 led to the creation of the new Digital Learning Initiative program, which carried on CETLI's charge and initiated the Digital Education Incubator (now known as the Shipley Center). In 2016, the Digital Learning and Innovation (DL&I) office was created and formed from the previous Digital Learning Initiative. This new office, located at 141 Bay State Rd., consisted of the Digital Education Incubator, Charles River Campus (CRC) Educational Technology (EdTech), and a partnership with the Center for Teaching and Learning (CTL).





In 2021, DL&I received an \$8 million gift from Richard Shipley (Questrom '68,'72), a BU trustee emeritus, to establish the Richard C. Shipley Center for Digital Learning and Innovation to assist in educational experimentation, which is an expanding evolution of the Digital Education Incubator. With this funding, the Shipley Center continues to offer pilot project incubation opportunities for multi-year high-expense projects and now offers Accelerating Course Transformation (ACT) grants and Future of Learning: AI Grants (FLAG) for short-term, low-expense projects (up to \$5,000).

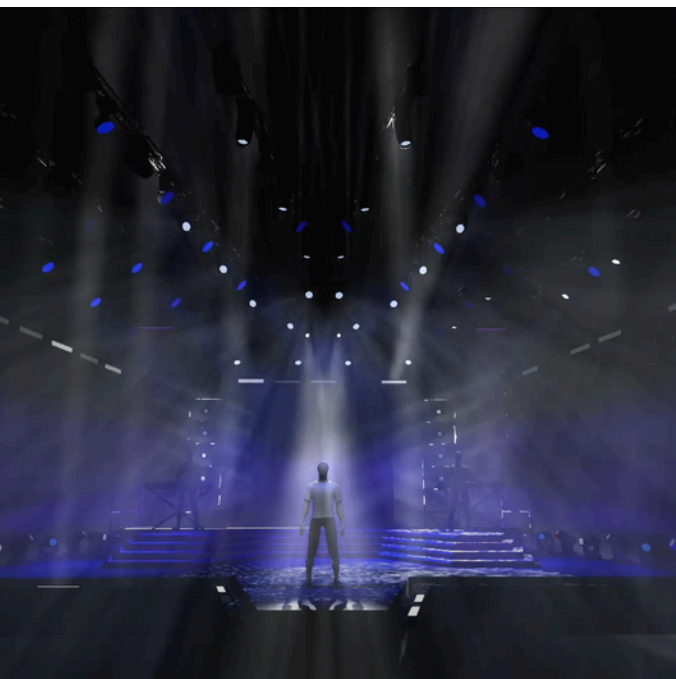


Key Initiatives & Projects

The Shipley Center has a robust history of supporting experimental projects and emerging technologies, ranging from open online courses and innovations in project-based learning to lifelong learning portals and digital infrastructure for advising and mentoring. They offer funding and development support from project inception to pilot implementation and evaluation.

The Shipley Center team also provides multimedia creation and course design services for BU faculty interested in developing digital or blended learning experiences. Their digital learning designers, media producers, and project managers support a variety of digital content production and delivery endeavors across BU, from helping launch select pilot projects in emerging technologies to incorporating multimedia assets in residential courses. The Shipley team also provides media production support for university-wide educational training programs and other special projects across the BU campus.

Advancing Educational Innovation



In 2013, the inception of the Digital Learning Initiative (DLI) and the Digital Education Incubator (“The Incubator”) aimed to enhance BU's capacity to develop Massive Open Online Courses (MOOCs) and position BU as a prominent figure within the Open Education (edX) consortium. They gained recognition within the consortium for their commitment to producing high-quality MOOCs and willingness to explore innovative ideas. In 2016, edX introduced the Micromasters concept. As a result, the Incubator/Shipley collaborated with Questrom to produce two Micromasters programs in Digital Leadership and Digital Product Management to utilize the Micromasters concept as a foundation for training Questrom faculty in online teaching and learning methodologies. This, in turn,



paved the way for future online learning initiatives to flourish.

In 2019, edX contacted academic leadership at BU and proposed launching a new online master's in business administration (OMBA) program through Questrom. Questrom's OMBA program required unprecedented student interaction and innovative experimentation at BU. In response, The Incubator/Shiplely stepped in and quickly expanded its Instructional Production Services (IPS) group to serve as the OMBA's dynamic instructional design and media production partner. Additionally, the CRC Educational Technology team collaborated with Questrom to develop a custom delivery platform, incorporating essential features for student interaction and peer-to-peer feedback, which were integral to the OMBA program design. Encouraged by the success of the OMBA degree, BU launched an ambitious online at-scale degree unit, BU Virtual, in 2021.

Academic Innovation Incubation

In addition to advancing educational innovation via MOOCs and scalable online degree programs, the Shiplely Center is the only university-wide office charged with incubating cutting-edge academic innovation to ensure BU faculty and staff remain at the forefront of educational leadership. This section explores the various funding opportunities provided by the Shiplely Center.

Pilot Project Funding

The Shiplely Center funds and co-manages pilot projects that are imagined by BU leadership, faculty, and staff and have the potential to positively change how one or more of BU's Schools and Colleges deliver value to students, both inside and outside the classroom. Their aspiration is to incubate projects that have a lasting impact on teaching and learning at BU and position the university at the forefront of educational innovation. Pilot projects are typically large-funded (over \$10k) multi-year initiatives that will substantially impact one or more learning environments at BU.

ACT Grant Funding

The Accelerating Classroom Transformation (ACT) initiative supports BU faculty and graduate teaching fellows experimenting with learning technologies to improve the BU student experience. Intended to fund small, low-cost, technology-enabled projects, ACT grants serve as a springboard for exploring, designing, and implementing new or improved pedagogical approaches in courses and educational programs that support learning for BU students. Managed by the Shiplely Center in partnership with the Center for Teaching & Learning and Educational Technology, ACT Grants are intended to offer a low-barrier, no-red-tape avenue to experimentation with technologies to achieve meaningful learning outcomes.

FLAG Funding

The Future of Learning: AI Grant (FLAG) initiative encourages BU faculty and graduate teaching fellows to explore AI technologies to enhance the student experience at BU. This funding opportunity is designed to support small, cost-effective AI-enabled projects. It serves as a catalyst for the development, design, and implementation of innovative pedagogical approaches incorporating generative AI in courses and educational programs aimed at supporting student learning.

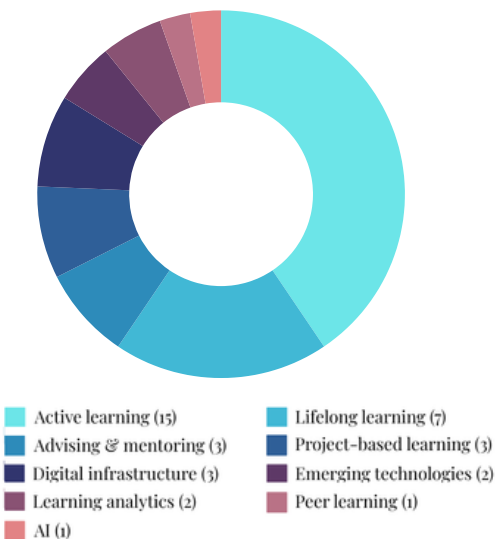


Academic Impact

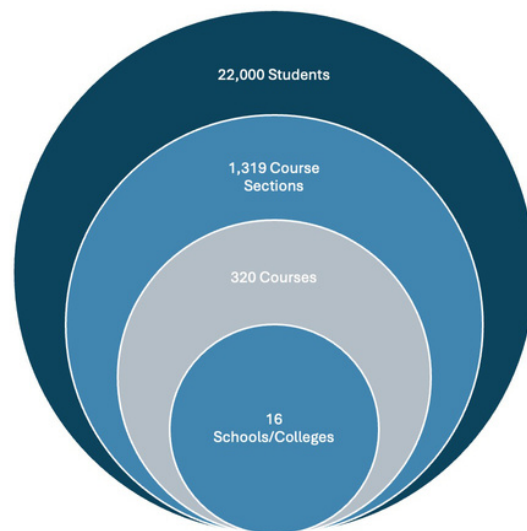
Over the last decade, nearly 70 initiatives have been funded by the Shipley Center. This report analyzes 37 of these projects to understand better the academic impact of the Shipley Center at Boston University. For these projects, 32 project interviews were conducted from June 2023 to January 2024 with team leads for projects initiated and completed between 2014-2024. Interviews, project reports, and website information were qualitatively analyzed and coded for central themes, which resulted in the following report categories: student engagement and success, faculty development and support, adoption and sustainability, and innovation and research. Additionally, website information and programmatic metrics were analyzed and informed in this report's technology integration and infrastructure section.

Overall, the 37 projects fall within nine academic innovation categories:

Academic Innovation Categories



Impact of Funded Initiatives Since 2014



Ultimately, these projects have impacted over 22,000 students (that we know of). Not all projects were analyzed, and of the projects that were, not all project leads were available for interview, so these are minimal numbers, whereas the true numbers are much higher. Additionally, these projects address a broad spectrum of target audiences, from undergraduate and graduate students to faculty, staff, alumni, international students, pre-college and high school students, and professional and lifelong learners:

1. Undergraduate Students

- A significant number of the initiatives (20) are aimed specifically at undergraduate students across various disciplines. These include general academic programs, specific departmental initiatives, and study-abroad experiences.

2. Graduate Students

- Several programs specifically target graduate students, offering advanced education, specialized training, and career development opportunities.

3. Faculty and Staff

- Initiatives targeting BU faculty focus on professional development and support, including initiatives for faculty to adopt new teaching methods and integrate technology into their curriculum.

4. Alumni

- Initiatives for alumni focus on continued engagement, professional development, and lifelong learning. These include mini-courses, spiritual growth groups, and career advising through alumni networks.

5. Professional and Lifelong Learners

- Various programs are available for professionals seeking continuing education, skill enhancement, and lifelong learning initiatives. These initiatives are aimed at diverse groups, including alumni and professionals outside the traditional student demographic.

6. Pre-College and High School Students

- Some programs have been designed for high school students, particularly in specialized fields such as journalism and physics.

7. International Students

- Projects have also included specific programs for international students, particularly those from China, focusing on integrating these student populations into the university's academic and social environment.

This diversity reflects the multifaceted approaches Shipley initiatives take to address the needs of various groups within and beyond the traditional student body.

Student Engagement & Success

The first theme identified in the data analysis focuses on student engagement and success, which underscores the importance of digital integration, student support, and thorough evaluation in enhancing educational outcomes and expanding the reach of programs. In this area, impact was seen in the following ways:



- Student Engagement and Learning Outcomes:
 - Enhanced Learning Experiences via Technology: Various approaches, including flipped classrooms, interactive tools, and real-world examples led to improved student engagement and learning outcomes.
 - Workforce Preparation via Skill Development: Many courses and programs prepare students for the workforce, often involving collaboration with industry partners. There have been notable increases in self-assessed skills pre- and post-participation, reflecting effective learning and application of skills.
 - Student Performance in Courses: Significant improvements have been seen in student confidence, anxiety reduction, and success rates in challenging subjects like Organic Chemistry and AP Physics.

INSIDE LOOK: PROJECT IMPACT

Each year, the Chemistry Department teaches courses in General, Organic, and Biochemistry, where a five-course sequence that includes Organic Chemistry is often required for major or pre-health aspirations. These courses heavily rely on prerequisites where students are expected to review and re-learn important skills independently, and the resources for doing so can often be difficult to find.

Chemistry Active-learning Resources for Educators (CA.R.E.) helps students prepare for their upper-level chemistry courses. This project includes novel content (videos, worksheets, self-paced learning assessments) that was developed, assessed, and deployed to support students taking Organic Chemistry. In 2019, the project team partnered with the Educational Resource Center (ERC) to deliver these modules as OrgoPrep 2.0 and continues today through the institutional support of the ERC.



Prepare with
C.A.R.E.

Student Learning Impact



98%
More confident
about taking course



75%
Less anxious
about succeeding

1500

students
impacted

Project Lead

Binyomin Abrams
Research Associate Professor of Chemistry,
College of Arts & Sciences

More Information:

<https://bit.ly/preparewithcare>

Abrams and his research team have conducted learning outcome assessments and found that students who engage with this program are up to three times less likely to drop or fail Organic Chemistry and up to two times more likely to get an A in Organic Chemistry. As an overall success, this project has led to five conference presentations, 7 peer-reviewed research publications, and one news media mention.

- Student Feedback and Satisfaction:
 - Faculty frequently received positive student feedback regarding their learning experiences and the perceived value of the courses and programs.
- Graduate Student Support: Initiatives and resources focused on graduate students specifically include:
 - Small grant funding for graduate students (e.g., ACT, FLAG).
 - PhD Progression: A digital badging program for doctoral students that offers professional development and skill building.
 - STH Workshop: Professional development to School of Theology graduate students to improve their ability to speak about doctrinal issues.
 - Graduate courses and experiences incorporate cutting-edge professional technologies, such as machine learning, theater production, lighting automation, and physical therapy.

INSIDE LOOK: PROJECT IMPACT

PhD Progression is an online digital badge tracking platform and dashboard that allows BU doctoral students to follow the development of their skills and achieve learning goals connected to the PhD Core Capacities. Through acquiring digital badges connected to activities and assessments recorded on the platform, doctoral students at BU can monitor their progress through various learning pathways, share benchmarks in their individual development plans, and develop a practice of career planning and lifelong learning.

"I've extensively utilized the pathways tool since I began planning my dissertation prospectus. It proved invaluable in crafting my Individual Development Plan (IDP) and establishing clear career goals for both the remainder of my Ph.D. journey and beyond," said Lizette Pizza, doctoral candidate.



Student Learning Impact

In 2022, Goldman and Hokanson received a National Science Foundation Innovations in Graduate Education grant, allowing them to expand their work with industry and institutional partners to build a multi-institutional consortium. Goldman and Hokanson have given three presentations and published one article on this project in Inside HigherEd. Through this initiative, BU is well-positioned as a leading institution in the space of graduate education for micro-credentialing.

PHD PROGRESSION TIMELINE



Ph.D. PROGRESSION

Project Leads

Sasha Goldman
 Director of Ph.D. Resources, Professional Development & Postdoctoral Affairs

Sarah Hokanson
 Assistant Provost and Assistant Vice President of Professional Development & Postdoctoral Affairs

More Information:

<https://bit.ly/PhDProgression>

Faculty Development & Support

The second theme focuses on faculty development and support, underscoring the importance of faculty learning opportunities, retention, and promotion. In this area, impact was seen in the following ways:

- Faculty Development and Teaching Innovation:
 - Faculty Learning Opportunities: Faculty learned and engaged with cutting-edge technology, enhancing their skills and encouraging innovative teaching practices.
- Faculty & Staff Retention:
 - Of the 81 project leads for each project analyzed, 63 still work at BU. For those not at BU, reasons for leaving include:
 - Six retired, 11 left BU for other career opportunities, and one graduate student graduated.
 - Of these, nine projects ended either simultaneously with the project lead departure or shortly thereafter.
 - None of these leads received promotions during or after project completion.
- Faculty & Staff Promotion:
 - Projects receiving larger funding amounts or multiple Shipley funding opportunities have led to project lead promotions for four recently completed projects (Interprofessional Leadership in Healthcare, PhD Progression, Prepare with C.A.R.E, and The Network for Professional Education)

Faculty and Staff Retention & Promotion



Faculty and Staff
Retention Rate

4

Promotions Received
During or After Project
Completion

INSIDE LOOK: PROJECT IMPACT

This project is a collaboration between the College of Health and Rehabilitation Sciences: Sargent College (Sargent College) and the School of Social Work (SSW) to create a non-credit online certificate in Interprofessional Leadership in Healthcare Certificate Using an Alumni Mentoring Approach. This certificate highlights the vast experiences of BU alumni by engaging them as e-mentors in five one-month online courses. The certificate aims to increase healthcare professionals' skills and knowledge in interprofessional leadership.

This certificate helps prepare healthcare professionals with the skills to coordinate and deliver services better, ultimately resulting in better healthcare outcomes. The program focuses on team-based approaches that capitalize on authentic case studies, simulations, and exercises. It uses an alumni mentorship model that leverages technology, such as Project ECHO and Zoom, and engagement with BU alumni.

Learning Impact

4 cohorts **110** professionals

Across multiple disciplines:

Occupational Therapy	Physical Therapy
Dentistry	Social Work
Medicine	Nutrition & Dietetics
Speech-Language Pathology	Nursing
Athletic Training	

Upon completing the certificate, participants reported (1) enhanced listening and communication skills, (2) a better understanding of team members' roles, (3) increased collaboration, and (4) improved leadership skills. This project's impact has been disseminated inside and outside of BU through seven presentations and [one peer-reviewed research publication](#).



Interprofessional Leadership in HEALTHCARE

Project Leads

Karen Jacobs
Associate Dean of Digital Learning & Innovation,
Sargent College of Health & Rehabilitation
Sciences

Craig Slater
Clinical Assistant Professor, Sargent College of
Health & Rehabilitation Sciences

Bronwyn Keefe
Assistant Dean of Workforce & Professional
Development, School of Social Work

More Information:

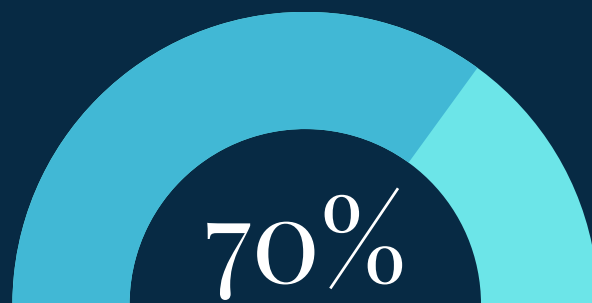
<https://bit.ly/interproleadership>

Adoption & Sustainability

The third theme focuses on project adoption and sustainability, which emphasizes a variety of factors in program adoption, the elements contributing to successful integration, and the potential for scalability and broader influence across educational and professional contexts. In this area, impact was seen in the following ways:

Adoption

The central themes across this data set relate to how projects are adopted, collaborations, influence, and scalability:



Adoption/Adaption Rate

- Program Expansion:
 - Not including the 10 ACT/FLAG-funded projects, which are too recent to assess long-term impact, 19 projects have been adopted, adapted, or merged into other programs/departments (70% adoption rate).
 - Program Absorption: Some initiatives, such as [A Unified Prevention Program for Depression and Anxiety](#) and practice-based learning at SPH via Collaborate.Health, were absorbed into other labs or programs.
 - Continued Use of Materials: Many educational materials and modules are still in use, even if their application has evolved over time or been adapted for different formats, such as residential or online courses.
 - Adaptation During COVID-19: Some programs, like [hybrid engineering courses](#), were slightly altered during COVID-19 but continue to operate, reflecting adaptability and resilience.
- Institutional and External Collaborations:
 - Collaborative Efforts: Programs have led to collaborations with external organizations and universities, such as extending AP physics content to partner high schools and adopting by universities like West Virginia University and the University of Texas via [Project Accelerate](#).
 - Multi-Departmental Adoption: Adoption across multiple departments indicates broader acceptance within the institution, as seen in initiatives adopted in 11 departments (Tutoring Writing in the Disciplines) and the involvement of 48 out of 59 PhD departments (PhD Progression).

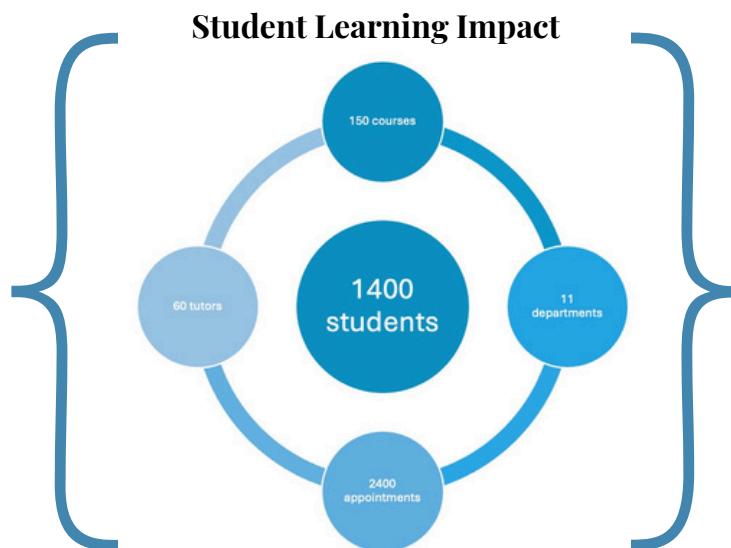
INSIDE LOOK: PROJECT IMPACT

Tutoring Writing in the Disciplines (TWID) is a discipline-based undergraduate peer writing tutoring program supported by the College of Arts and Sciences (CAS) Writing Program and adopted in over 11 CAS departments. The peer writing tutors provide writing support to undergraduate students in all courses within a discipline. Initially funded by CAS and a Shipley pilot project grant, TWID is now partially supported by a gift from Jennifer Simpson (CAS '00).

The project provides both face-to-face and online peer tutoring opportunities for student writers in the disciplines. The WCONLINE platform is essential for enabling not only online tutoring (synchronous and asynchronous) but also for collecting data on appointments, student users, and session notes. It allows for the assessment and innovation of the TWID program.



Tutoring Writing in the DISCIPLINES



TWID program organizers note that peer tutors can use their experience in the program as a pathway toward their professional goals, faculty are re-examining how they're teaching writing within their units, and there is a notable ripple effect impacting curriculum, how faculty teach, and the creation of new courses.

The TWID program has been a critical means of supporting the broader mission of Writing in the Disciplines, which aims to enhance writing and writing support throughout BU students' undergraduate experience. The results of this project have been disseminated inside and outside of BU through one presentation and two news media articles.

Project Leads

David Shawn
Associate Director for Writing in the Disciplines,
College of Arts and Sciences Writing Program

Deborah Carr
Professor and Chair, Sociology, College of Arts
and Sciences

Joseph Harris
Associate Professor, Sociology, College of Arts
and Sciences

More Information:

<https://bit.ly/tutorwriting>

- Influence and Inspiration:
 - Influence on Other Programs: Some initiatives, though not widely adopted, have influenced other programs and teaching strategies, such as the impact on study abroad experiences, the Hub Global Citizenship content, and ENG Mentor.
 - Cross-Disciplinary Influence: Programs have inspired approaches in other disciplines, like the hybrid influence on language instructors and integrating text annotation technology in literature studies.
- Ongoing Potential:
 - Ongoing Use and Evolution: Certain initiatives continue to be used and have evolved over time, adapting to new contexts and requirements, such as the COM lifelong learning approach.
- Context Limitations:
 - Of the 8 projects not adopted, some programs were only used in specific contexts, such as in residency programs pre-pandemic, and did not expand beyond those initial settings.



INSIDE LOOK: PROJECT IMPACT

COM Beyond is a lifelong learning initiative offered through the BU College of Communication (COM) that offers non-credit workshops, conferences, and other opportunities beyond pursuing a traditional degree for lifelong learners from their teen years through their adult lives. This programming is offered online and in-person, attracting local students and professionals and a sizable contingent of international students.

COM Beyond is home to professional education programs like Data+Narrative, academic peer programs like Biometric Workshops, pre-college summer programs like the Summer Journalism Institute and the Academy of Media Production, and special events like the International History of Public Relations Conference. Their conferences are designed for working professionals and their pre-college summer academies are created for high school students seeking a college-level experience emphasizing hands-on learning.

This project is sustainably self-supported through enrollment and registration fees and has influenced lifelong learning approaches at COM that have evolved and morphed over time. Pre-college initiatives like the Summer Journalism Institute have been an effective recruitment tool to establish a high school-to-BU pipeline. The project is also mindful of local economic inequalities and intentionally sets aside 10% of its capacity for low-income students.



COM BEYOND

Project Lead

Burt Glass
Director of Marketing and Communications,
College of Communication

More Information:

<https://bit.ly/bucombeyond>

Student
Learning
Impact

 600
students

 1400
participants

Sustainability

The central themes across this data set relate to funding support, institutional support, lifelong learning, community engagement, and sustainability challenges:

- Quick Facts:
 - All projects initiated since 2018 are still ongoing.
 - Average project lifespans: 5 years for all pilot projects (ended and ongoing), 3 years for ended projects, and currently 6 years for ongoing projects.
- Sustainability and Funding:
 - Self-Supported Models: Some programs are self-sustained through profits from enrollment and registration fees, highlighting a model of financial independence.
 - Donor and Grant Support: Programs sometimes rely on gifts and donations. For sustainability, there is an interest in securing long-term grant support.
 - Seeking Commercialization: Some programs, such as RANDOM Actor, are exploring commercialization opportunities, including seeking early adopters, donor investment, and potential transformation into an LLC for sustainability.

INSIDE LOOK: PROJECT IMPACT

RANDOM ACTOR is an innovative no-code software program designed to facilitate real-time theater visual projections, allowing seamless adjustments without the need for coding expertise. Initially developed to overcome the time-intensive coding demands during theater rehearsals, the software enables dynamic changes in generative algorithms, enhancing the creative process for performers and designers.

To move this project toward completion, the project team partnered with the Shipley Center, whose financial support allowed them to enlist the help of a Visiting Interdisciplinary/Interactive Media Artist in Residence, Paolo Scoppola, in the Spring of 2022. After receiving pilot project funding and support, RANDOM Actor received additional ACT grant funding that enabled the acquisition of advanced graphics-processing technology, refining the software's real-time interaction capabilities. This project has also received School of Visual Arts research funding and is currently seeking commercialization for broader applications across fields and disciplines.

Student Learning Impact & Dissemination

 **100**
students

 **2**
news media
publications

 **2**
conference
presentations



RANDOM ACTOR

Project Leads

Clay Hopper
Senior Lecturer in Directing, Theatre
Department, College of Fine Arts

James Grady
Assistant Professor of Art and Graphic Design,
College of Fine Arts, Faculty of Computing &
Data Sciences

More Information:

<https://bit.ly/BURandomActor>

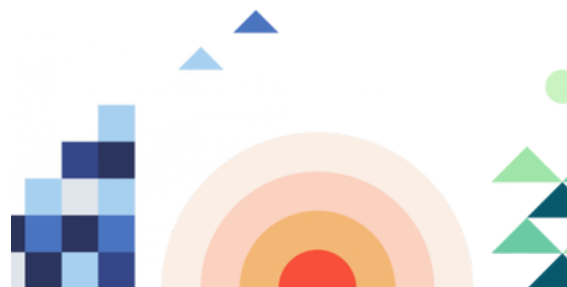
- Integration with Institutional Support:
 - Institutional Funding and Support: Various programs receive support from university offices, such as the Provost's office or specific academic departments, often highlighting internal political dynamics affecting funding decisions.
- Lifelong Learning and Professional Development:
 - Lifelong Learning Programs: Lifelong Learning programs provide a steady source of revenue and are crucial for professional development, often rebounding after process improvements and repricing.
 - Open Access and Affordability: Keeping programs affordable or free to students is a priority, supported by institutional or donor funding to offset costs.

INSIDE LOOK: PROJECT IMPACT

Collaborate.Health is a lifelong learning initiative that addresses urgent public health challenges and advances the field by forging and maintaining meaningful relationships between BU School of Public Health (SPH) students, faculty, and professionals in partner organizations.

Collaborate.Health leverages [an outward-facing website](#) to connect partner organizations and BU SPH student leaders and faculty in ways that foster collaboration and promote collective work. Additionally, the Practera online collaboration tool facilitates seamless interaction and continuous assessment among these stakeholders throughout the semester.

Incorporated into practice-based learning at SPH, Collaborate.Health has formed 49 external collaborations across Massachusetts, Tennessee, and Ohio. This community-engaged approach has significantly enhanced student preparation for the workforce, provided unique skill sets, and increased course enrollment. By connecting students with organizations, this initiative has directly impacted communities, supported strapped health service agencies globally, and helped secure grants for these communities. Collaborate.Health has been integrated into four courses, spanning 72 sections and involving 750 students.



Collaborate. HEALTH

Project Leads

Jacey Greece, DSc, MPH
Clinical Associate Professor, School of Public Health

James Wolff
Associate Professor of Global Health, School of Public Health

More Information:
<https://bit.ly/collabhealth>

Project Dissemination



7
invited
talks



9
research
publications



15
conference
presentations

Research & Innovation

The fourth theme focuses on project innovation and research, highlighting the importance of research and evaluation, affordability, program expansion, community impact, and sustainability. In this area, impact was seen in the following ways:

- Research, Evaluation, and Grants:
 - Several projects focused on assessment and evaluation of learning outcomes, like [KNOWLA](#)
 - Two projects received NSF funding ([Project Accelerate](#), PhD Progression)

Research Dissemination



39
news media
publications



89
conference
presentations



31
research
publications

- Event and Conference Engagement:
 - Academic Conferences and Webinars: Several projects organized academic conferences and interactive webinars with substantial attendance, leveraging platforms for promotion and registration.
- Outreach and Community Impact:
 - Access for Low-Income Students: Setting aside a percentage of seats in programs like the Summer Journalism Academy for low-income students ensure inclusive access.
 - Community Programs and Engagement: Various initiatives engage the community, including newsletters, podcasts, and interactive videos reaching wide audiences.
- Innovative Strategies:
 - Developing New Approaches: When faced with infrastructural obstacles, like registering non-BU students in lifelong learning courses, projects develop new approaches that ensure project sustainability and success.
 - Collaborations with EdTech: Faculty and graduate students are engaged with emerging educational technologies through the development of new technologies (e.g., [BULB](#)) or by leveraging new technologies.
- Program Expansion:
 - Recruitment and Accessibility: Lifelong learning initiatives included a focus on recruiting a diverse student body, including international students and low-income students, and offering both in-person and online experiences.

INSIDE LOOK: PROJECT IMPACT

Recent advancements in Science, Technology, Engineering, and Math (STEM) education emphasize student-driven learning, encouraging students to "figure out" phenomena rather than passively "learn about" science. To support this shift, the Open Educational Resource (OER) Science project leveraged a dynamic website created by project lead TJ McKenna, and offered open educational resources on Phenomena for Next Generation Science Standards (NGSS). Students, teachers, and the general public can engage in scientific inquiry through this platform.

Building on the success of his website, McKenna collaborated with BU students to create a two-video series titled "What Are You Curious About?" funded by a Shipley Center ACT grant. This interdisciplinary project involved students from computer science, STEM education, and TV and film courses. Together, they produced videos where BU students engaged passersby in exploring their curiosities.

This project is incorporated into Wheelock education courses like ED111 Educational Technology and ED130 and ED131 Exploring Professions: STEM Learning, Action, and Impact, demonstrating to students how the Triple E Framework for technology integration can be applied in a real-life educational context.

The videos and website have received 33,000 views and growing, and an interactive form accompanying the videos have garnered 126 submissions so far, the results of which clearly align with the four NGSS focus areas. Through promotion on Google and Twitter and cross-promotion by National Science Standards and universities, McKenna's website has over four million total views, exemplifying the impact that even small-funded initiatives can have across BU and beyond.



OER SCIENCE

Project Lead

TJ McKenna

Lecturer in Science Education, Wheelock College of Education & Human Development

More Information:

<https://bit.ly/BUoerscience>

Project Impact



The student team leader Evan Denenberg emphasized, "Teaching science from the perspective of natural curiosity is vital. This project allowed us to help people engage with their random thoughts about the universe, inspiring deeper exploration."

- Cost Savings and Accessibility:
 - Course Cost Savings: Several projects engaged in efforts to reduce the cost of educational resources, such as textbooks, making education more affordable for students by adopting open educational resources (OER) and reducing financial barriers for students.

INSIDE LOOK: PROJECT IMPACT

The Network for Professional Education (The Network) provides nationally acclaimed training in aging from the Center for Aging & Disability Education & Research (CADER) and broader workforce development programs. The Trainers Hub is a pivotal element of the Network, which features SSW alumni, staff, and faculty who provide training and consultation nationwide.

The Network has significantly impacted professional education, with over 16,000 social work professionals in its customer relationship management (CRM) list and 500 participants in the Train-the-Trainer Certificate program globally, which includes 275 BU SSW alumni.

The Network also facilitates cross-pollination among various workforce development programs, enhancing awareness of SSW's commitment to continuing education (CE). The CE Approval Service processes around 300 applications annually, providing a steady revenue stream. The Network enables BU SSW alumni to actively train the next generation of social workers, contributing to a supportive, forward-looking community of practice.

Project Impact

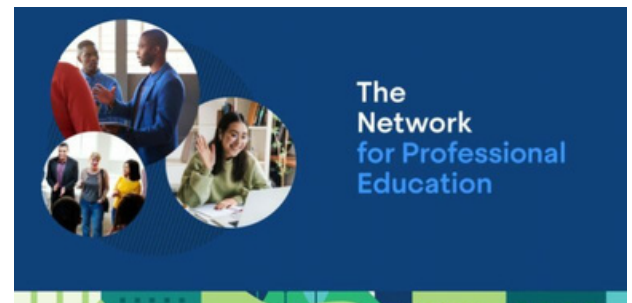
 **12 certificates**

 **30 courses**

 **12k web visitors**

\$2million revenue

 **338% ROI**



The NETWORK

Project Leads

Bronwyn Keefe

Assistant Dean of Workforce and Professional Development, School of Social Work

Anna Stathopoulou

Online Training Manager for The Network and CADER, School of Social Work

Alison Montague

Project Manager for The Network, School of Social Work

More Information:

<https://bit.ly/BUTheNetwork>

- Scale and Reach:
 - Global and National Reach: Programs and resources reach a large and diverse audience nationally and internationally, demonstrated by extensive views and participation numbers.
 - Revenue and Return on Investment: The financial success of lifelong learning courses and certificates generates significant revenue and high returns on investment.
- Revenue Generation:
 - Four projects, all lifelong learning initiatives, are currently revenue-generating for the university (COM Beyond, STH Lifelong Learning, Interprofessional Leadership in Healthcare), one of which has generated over \$2 million in revenue in less than four years (The Network for Professional Education).

Technology Integration & Infrastructure

The fifth theme focuses on technology integration and infrastructure, highlighting the importance of technological access, preparedness, and resources. In this area, impact was seen in the following ways:

- Technological Infrastructure and Support:
 - Access to Technology: Providing students with access to advanced technologies and infrastructure to enhance learning and support large-scale projects.
 - Technological Preparedness: Technology integration that prepares institutions and students for unexpected challenges, such as the COVID-19 pandemic.
- Technology and Online Platforms:
 - Plugin Activation: Integrating digital tools for various purposes, like using specific plugins across multiple sites at BU.
 - Online Learning Resources: Development and distribution of online courses, certificates, and custom programs, reaching thousands of participants globally.
- Alignment with IS&T Technology Strategic Plan (2022-2024)
 - Complementary alignment includes technology equity and access, enhancement of learning environments both on campus and online, development of new ways to digitally track student engagement, and development of competencies through both academic and co-curricular experiences.



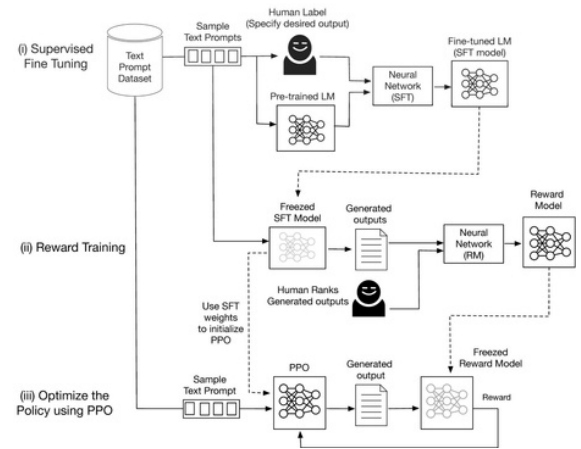
INSIDE LOOK: PROJECT IMPACT

Generative AI modeling is a rapidly expanding field in artificial intelligence; however, the high costs of hardware infrastructure required for training AI models often place this technology out of reach for many universities and individuals. To address this, the Democratizing Generative AI Models project leverages a desktop machine equipped with two graphics processing units (GPUs) capable of handling AI models' substantial data processing demands. This investment has enabled the integration of advanced AI technology into the classroom.

The Metropolitan College now offers several AI modeling courses, including MET CS767 Advanced Machine Learning and Neural Networks and MET CS788 Generative AI. This project has directly impacted 60 students, providing them with hands-on experience in building and experimenting with AI models on local machines and enhancing real-world application response times while maintaining privacy.

According to one student enrolled in CS788, Sandeep Yerra: "The Generative AI course was at the cutting edge, incorporating state-of-the-art models in its course content. Most of the latest AI models rely on computation capacity; hence, the GPU helped in both understanding finer details of algorithms and using the algorithms to hypothesize and build research projects."

Rawassizadeh is developing new courses and aims to establish a concentration in machine learning and AI within computer science, supported by the advanced computer technology acquired through the grant. His work has significantly improved course evaluations, with the first course receiving a rating of 4.98 out of 5 stars. This initiative was also presented at one conference and published in [one academic journal](#).



Democratizing Generative AI MODELS

Project Lead

Reza Rawassizadeh

Associate Professor of Computer Science,
Metropolitan College

More Information:

<https://bit.ly/GenAIModels>

Teaching Impact



4.98/5 course evaluation



Conclusion

Initiatives incubated by the Shipley Center have played a pivotal role in advancing educational innovation at BU, significantly impacting students, faculty, and the broader academic community. Over the last 10 years, the Shipley Center has pioneered new educational models through initiatives such as MOOCs, micromasters, and the Online MBA (OMBA), which laid the foundation for BU Virtual. These projects have expanded educational access and spurred academic innovation through funding mechanisms like pilot project funding, ACT grants, and FLAG funding.

The Shipley Center's academic impact is demonstrated through extensive research and evaluation of nearly 70 funded initiatives over the last decade, 37 of which were analyzed in this report. These projects have reached a diverse audience, including undergraduates, graduates, faculty, alumni, international students, and lifelong learners, positively affecting over 25,000 individuals and 22,000 students across 16 BU schools and colleges since 2014. These initiatives have led to enhanced learning outcomes, improved student engagement, and higher success rates in challenging courses.

Innovative teaching methods such as flipped classrooms and interactive tools have substantially enriched student learning experiences. These programs have prepared students for the workforce through skill development and industry collaboration, evidenced by increased self-assessed skills and improved performance in difficult subjects. Graduate student support initiatives, including small grant funding and professional development workshops, have further bolstered student success.

The Shipley Center has prioritized faculty development, offering opportunities to engage with cutting-edge technology and fostering innovative teaching practices. With a 78% retention rate of project leads, the Shipley Center's initiatives have shown lasting influence. Numerous projects have been adopted or adapted within BU, reflecting their enduring impact and the collaborative spirit supported by the Shipley Center.

The Shipley Center has contributed to the vibrant research environment at BU, leading to numerous scholarly publications, academic presentations, and media articles. Efforts to reduce educational costs through OER and recruit a diverse student body underscore their commitment to accessibility and inclusivity. Shipley projects also exhibit various degrees of sustainability, with many ongoing since 2018. Some programs have achieved financial independence through enrollment fees, while others rely on donor and grant support. Institutional backing and exploration of commercialization opportunities further support sustainability efforts.



Integrating advanced technologies has been crucial in enhancing BU's educational infrastructure. Shipley's technological initiatives have prepared BU to tackle unexpected challenges like the COVID-19 pandemic, from online learning resources to digital tools for tracking student engagement. Alignment with BU's IS&T technology plan ensures continued innovation in digital learning.

In conclusion, the Shipley Center's initiatives have profoundly transformed educational experiences at BU, demonstrating a steadfast commitment to innovation, accessibility, and sustainability. The broad and lasting impact on students, faculty, and the academic community highlights the essential role of the Shipley Center in shaping the future of education at Boston University and beyond.

Appendix A. Project List



Project Name	Focus Area	Timeframe
A Unified Prevention Program for Depression and Anxiety	Active Learning	2016-2018
AP Physics & PY105	Active learning	2016-2018
BMC Coaching Tool	Active learning	2017-2019
BULB: BU Learning Blocks	Digital Infrastructure	
BUSM+	Lifelong learning	2014-2016
Collaborate.Health	Project Based Learning	2015-2018
COM Beyond	Lifelong learning	2018-2020
Developing Zulu and Turkish for Hybrid-Online Delivery	Active learning	2014-2015
Dynamic Large Lecture Course in Org Behavior	Active learning	2015-2016
ENG Connect	Advising & Mentoring	2016-2018
Enhancing the Global Learning Experience	Active Learning	2014-2015
Executive MBA Virtual Tuesdays	Digital Infrastructure	2015-2016
Global Immersion Program	Active Learning	2014-2015
Hybrid Engineering Courses	Active Learning	2014-2015
Interprofessional Leadership in Healthcare Certificate Using an Alumni Mentoring Approach	Lifelong learning	2020-2024
Knowla	Emerging Educational Technology	2014-2015
Learning Moment	Emerging Educational Technology	2015-2016
MED Campus Digital Media Studio	Digital Infrastructure	2016
PhD Progression	Advising & mentoring	2020-2023
Population Health Exchange (PHX)	Lifelong Learning	2016-2018
Prepare with C.A.R.E.	Active Learning	2019-2022
Project Accelerate	Active Learning	2015-2018

Project List

Project Name	Focus Area	Timeframe
RANDOM ACTOR	Project Based Learning	2020-2022
School of Theology Lifelong Learning	Lifelong Learning	2020-2022
The Network for Professional Education	Lifelong learning	2020-2023
Training Opportunities to Augment Learning (TOTAL)	Lifelong Learning	2018-2022
Tutoring Writing in the Disciplines	Advising & mentoring	2018-2020
ACT/FLAG Funding		
Democratizing Generative AI Models	Active learning	2023-2024
Generative AI Efficacy	AI	2023-2024
Juneberry Review Project	Active learning	2023
Lighting Automation	Project-based learning	2022-2024
OER for Science	Active learning	2022-2023
Poll Everywhere	Learning analytics	2023
Sim Lab	Active learning	2023-2024
Sociological Analytics App	Active learning	2023-2024
STH Summer Writing Workshop	Classroom Community/Peer Learning	2023
ZooU	Learning analytics	2022-2023

Appendix B.

Glossary



ACT	Accelerating Classroom Transformation
AI	Artificial Intelligence
BU	Boston University
BUMS	BU Medical School
CADER	Center for Aging & Disability Education & Research
CAS	College of Arts & Sciences
CDS	Faculty of Computing & Data Sciences
CE	Continuing Education
CETLI	Council on Educational Technology and Learning Innovation
CFA	College of Fine Arts
CGS	College of General Studies
COM	College of Communication
CRC	Charles River Campus
CRM	Customer Relationship Management
CTL	Center for Teaching and Learning
DL&I	Digital Learning & Innovation
DLI	Digital Learning Initiative
edX	Open Education



ENG	College of Engineering
ERC	Educational Resource Center
FLAG	Future of Learning: AI Grant
GPU	Graphics Processing Unit
IDP	Individual Development Plan
IPS	Instructional Production Services
IS&T	Information Services & Technology
LfA	Learn-from-Anywhere
MET	Metropolitan College
MOOC	Massive Open Online Courses
NGSS	Next Generation Science Standards
NSF	National Science Foundation
OER	Open Educational Resources
OMBA	Online Master's in Business Administration
PAR	Frederick S. Pardee School of Global Studies
SDM	School of Dental Medicine
SPH	School of Public Health
SSW	School of Social Work
STEM	Science, Technology, Engineering, and Math
STH	School of Theology
TWID	Tutoring Writing in the Disciplines
WED	Wheelock School of Education & Human Development

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