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1. MIT Open Learning Overview

The mission of MIT Open Learning is to transform teaching and learning at MIT and around the globe through innovative use of digital technologies.

Highlights of the Year

In FY 2024, Open Learning continued to innovate and advance ongoing operations. Specific highlights include:

Open Education:

- **Digital Learning in Residential Education** continued to provide Institute-wide support to MIT faculty in use of digital technologies in residential teaching, including 2,833 Canvas course sites, 135 courses recorded using lecture capture, 64 courses on the Residential MITx platform, and over 60 faculty consultations. Supported innovative learning spaces, including 14 lecture capture classrooms and lightboard captures in seven departments. Offered trainings, seminars, and other ways to share best practices.
- **OpenCourseWare** published 44 courses (21 new and 23 updates) and 21 supplemental resources. Of these, 13 included video lectures. Added 20 new instructor insights to website and Chalk Radio podcast season 5. The website had 18.3M visits 72% of which were from outside the U.S. The YouTube channel had 50.9M views, with over 5.2M subscribers.
- MITx/MicroMasters enrolled 642K unique learners for 886K enrollments in 178 online courses, modules, and exams that were launched (9 new and 167 reruns). Awarded 1,189 MicroMasters credentials, and admitted 57 credential holders to the MIT blended Master's programs.
- **Digital Learning Lab** worked with faculty to develop and run 106 MOOC modules five of which were new. Hosted the 2023 IEEE Learning with MOOCs conference at MIT. Published 14 articles in academic journals and peer-reviewed conference proceedings.
- **Digital Credentials Consortium** added two new members, launched the deployment of DCC technology with five member institutions, and continued leadership in open standards communities for digital credentials in education.
- **MIT Video Productions** provided 12,081 billable work hours in support of 482 projects and received an Emmy Award nomination for one of its documentaries.

Corporate Education:

- MIT xPRO launched five new courses and reran many existing courses, generating over \$19.8M in gross revenue. Continued partnerships with third-party organizations — Emeritus and Global Alumni — to develop new courses and translate existing ones into other languages.
- **Horizon** published 25 new and 71 updated foundations articles, 14 new or updated reference articles, 99 new case studies, 20 eBooks, and 18 partner readings. Launched the United States Department of Defense Digital on Demand platform. Generated \$5.6M in gross revenue.
- **Bootcamps** delivered one online and four in-person programs to 155 participants. Launched its inaugural Substance Use Disorder Ventures program, funded by NIH.

Research and Engagement:

- **Abdul Latif Jameel World Education Lab** served 17 members throughout the year, delivering 34 events. Awarded a total of \$829,768 in Education Innovation grants and launched a new grant program. Emerging Talent graduated its fifth cohort program, with 63 learners completing the Certificate in Computer and Data Science.
- MIT Integrated Learning Initiative continued the CZI-funded five-year Reach Every Reader program and research projects on academic well-being and artificial intelligence (AI).



- **MIT Center for Advanced Virtuality** successfully concluded a three-year DSTA-sponsored research project focused on designing, developing, and evaluating computationally supported roleplaying experiences for digital media users.
- **Responsible AI for Social Empowerment and Education** delivered Day of AI, with four new course launches, to serve 924 participants from 81 countries. Launched a new course collaboration with Google on Generative AI for educators. Produced K-12 AI education policy guidance and published an open-access paper on the same topic.
- **pK-12** contributed to the design and establishment of a newly created school in Belize, published a framework for STEAM educational innovation, and ran the Full STEAM Ahead program.
- Strategic and Research Initiatives created novel algorithms for career development, devised an advanced-manufacturing curriculum, and led outreach initiatives through the Global Opportunity Forum.

Supporting Units:

- **Engineering** led an Institute-wide effort to create a new unified portal for non-degree learning at MIT, continued to scale up the MITx Online platform, and developed a prototype for an AI-powered search tool.
- **Business Operations** continued to support Open Learning with strategic planning, marketing, communications, finance, human resources, customer service, administration, and space. Augmented systems, including leveraging AI in customer service and marketing.
- **Resource Development** realized nearly \$5M in endowment payout, gift revenue, and future pledges, as well as helped secure multimillion-dollar grants for MIT faculty and Open Learning programs.

MIT Open Learning Finances and Funding

Open Learning's FY24 income was \$61.9M, up 8% from FY23. Within this, external revenues increased to 41.4M, up 7% from FY23. Provost funding increased to \$18.4M in FY24, up from \$16.8M in FY23, due to inflation and an investment in the unified portal for non-degree learning at MIT.

Total expenses increased to \$57M in FY24, up from \$52.8M in FY23. As a result, MIT Open Learning ended FY23 with a \$4.9M surplus.



Table 1 - Projected financial results for the FY24.

Description	Total (\$M)
Income	
Revenues	
Sponsored Revenues	4.2
External Fees	12.2
Non-Degree Tuition revenues	21.4
Fees Internal	1.9
Gifts and Investment Income	3.6
Transfers	0.2
Total Revenues	43.5
Total Provost Funding	18.4
Total Income	61.9
Expenses	
Salaries & Benefits	25.7
Department Support	5.7
Revenue Distribution	11.5
Other Expenses	13.2
Total Direct Expenses	56.1
Total Indirect Expenses (F&A)	0.9
Total Expenses	57.0
Net Surplus (Deficit)	4.9

Additionally, for the period July 1, 2023 through June 30, 2024, Open Learning had 27 hires and nine departures.



VICE PRESIDENT **OPEN LEARNING** Academic Community **FACULTY ADVISORY COMMITTEES** FACULTY GOVERNANCE COMMITTEES SR Assoc. DEAN DIGITAL OPEN LEARNING LEARNING RESEARCH AND ENGAGEMENT UNITS OPEN EDUCATION SUPPORTING UNITS CORPORATE EDUCATION RESIDENTIAL MIT xPRO J-WEL **BUSINESS OPS EDUCATION EMERGING xPRO S**ALES HR MIT OCW **TALENT** MITx / PK-12 ENGINEERING HORIZON MICROMASTERS & PRODUCTS MITILI DIGITAL RESOURCE **BOOTCAMPS** LEARNING LAB DEVELOPMENT DIGITAL **VIRTUALITY CREDENTIALS** CONSORTIUM RAISE STRATEGIC & MVP RESEARCH INITIATIVES

Figure 1 - Office of Open Learning organization as of June 2024.

Table 2 - Office of Open Learning's strategic management team as of June 2024.

Name	Position
Eric Grimson	Vice President for Open Learning (Interim)
Cynthia Breazeal	Dean for Digital Learning
Christopher Capozzola	Senior Associate Dean for Open Learning
Ferdi Alimadhi	Senior Director of Engineering and Products
Lisa Schwallie	Executive Director, Business and Operations for Open Learning
Tom Smith	Senior Director of Development



2. Open Education

2.1. Digital Learning in Residential Education

<u>Residential Education</u> supports faculty and instructors in using digital technologies to augment and transform how they teach to make MIT education more effective and efficient for students and faculty.

Key Accomplishments

- Managed MIT-wide support of Canvas LMS and integrations (e.g., Gradescope, Piazza, Perusall, Poll Everywhere, and Slack) and Panopto video platform.
 - o 2,833 sites published on Canvas.
 - 66,027 hours streamed on Panopto.
 - Provided Canvas Resources for Instructors site.
 - o Enrolled 600 teaching assistants (TAs) in Canvas Resources for TAs site.
- Supported innovative learning spaces, including lecture capture and lightboards.
 - o 14 classrooms for lecture capture (with four newly added).
 - o Recorded 135 courses with lecture capture, serving 16,094 students.
 - Facilitated lightboard capture in seven departments, the MIT Experimental Study Group, MIT OpenCourseWare, and Interphase.
- Managed Residential MITx, which hosted 64 sites across 17 departments, and piloted an MITx-Canvas integration for six courses.
- Shared innovative teaching and learning practices from within MIT.
 - Hosted xTalks and <u>Festival of Learning</u> on campus featuring MIT faculty and instructors.
 - Granted <u>six Teaching with Digital Technology Awards</u>, co-hosted by the Office of the Vice Chancellor.
- Consulted on the science of learning, learning analytics, and blended course design.
 - Facilitated 60+ individual consultations related to Canvas.
 - Gave 10+ presentations and workshops (Panopto New England User Group meeting, AECT practice session, multiple ICICLE sessions, and IS&T session).
 - Piloted five Canvas Innovation Fund projects. Faculty and instructors were paired with an MIT student — guided by Residential Education — to make instructionally impactful improvements to their class using Canvas.

2.2. OpenCourseWare

OpenCourseWare (OCW) provides free open-licensed educational materials from over 2,500 courses and supplemental resources, as a vibrant and current reflection of the entire MIT curriculum. Educators use OCW materials for teaching and curriculum development, while students and independent learners use OCW for self-paced learning.

MIT instructors share materials from their teaching through OCW on a voluntary basis, sometimes invited by the OCW team and sometimes through an instructor's proactive interest to publish. Many OCW publications also include sample student work. Content is shared on the OCW website, with



videos also shared on OCW's YouTube channel, and the Chalk Radio podcast, which features MIT faculty discussing their teaching. OCW's collaborations program builds learner impact by fostering trusted relationships with equity-focused educators at U.S. minority serving institutions who are adopting and adapting open educational resources like OCW for their teaching.

- Produced 65 publications, comprised of 44 courses (21 new and 23 updates) and 21 supplemental resources (14 new, 7 updates). Thirteen of these publications included video lectures.
- The OCW Educator Program added 20 new instructor insights sections, and Chalk Radio podcast Season 5 (9 episodes) was produced and released.
- The OCW collaborations program co-designed and delivered a culturally relevant pedagogy webinar series for historically Black colleges and universities (HBCUs) and MIT faculty, and curated inclusive open educational resources from OCW for various constituencies, such as UNCF's HBCUv and the U.S. Black Women's Chamber of Commerce.
- With grant support from the Sloan Foundation, <u>OCW engaged</u> faculty at Maricopa Community Colleges and College of the Canyons to use and adapt OCW materials in their AY23-24 teaching. A series of case studies are starting production, based on reflective practice interviews with participants.
- The OCW feedback team processed 4,177 user inquiries and comments.
- OCW's monthly newsletter was produced and shared with 93K subscribers. OCW also continued to expand its social media presence, with 45K followers on LinkedIn, 46K on Instagram, 497K on Facebook, and 218K on X (Twitter).

Table 3 - OCW publication metrics as of June 30, 2024.

Publications	Total
Live publications	2,536
- with video lectures	266
- with open textbooks	91
- with instructor insights	264
Archived in DSpace	1,369
Participating MIT instructors	1,874
Contributing MIT students	2,434



Use and Impact

- The OCW website had 18.3M visits from 9.3M unique users¹ 72% of users came from outside the U.S (a 5% increase over FY23).
- OCW's YouTube channel had 50.9M views and 5.7M hours watch time, with over 5.2M subscribers (the most subscribed .edu channel).
- OCW's <u>Educator webpage</u> received 48K visits, with 382K pageviews of Instructor Insights content on individual courses.
- Since its launch in 2020, Chalk Radio has had 301K podcast platform downloads and 715K YouTube views.

Operations

OCW's Faculty Advisory Committee advises on policy, sustainability, and relations with the MIT faculty and academic departments. There were no changes to the committee in FY24.

OCW's custom content management system and website were developed and are maintained by Open Learning Engineering.

2.3. Online Worldwide Learning Services

Online Worldwide Learning Services (OWLS) supports faculty who participate in the MITx Program, MicroMasters, and/or the MIT Open Learning Library. The mission of OWLS is to:

- support the development of free, scalable, MIT-quality courses to academically talented learners worldwide;
- support the use of digital learning tools and techniques in the delivery of MIT residential programs; and
- further the understanding of best practices in emerging digital and scalable learning environments via data collected from MITx learners.

MITx Program

<u>MITx</u> is the Institute's interactive learning initiative that offers online versions of MIT courses on the MITx Online or edX platforms. The courses offer a free version and a paid track. The paid track usually includes the summative assessments and/or course features that require payment and includes a certificate if the learner earns a passing grade.

- Launched 178 online courses/modules/exams, including nine new MOOC courses/modules/exams and 167 rerun courses/modules/exams that had been offered in prior semesters.
- Provided support for several CCx (custom courses on edX).
- Enrolled 642K unique learners for 886K enrollments from more than 250 countries across these 178 MOOCs.
- Generated \$6.5M in revenue through ID-verified certificates, including the MicroMasters comprehensive final exams.
- Held two calls for proposals for the MITx Grant Program, resulting in the selection and funding of 12 projects from 18 proposals submitted from nine academic departments and programs.

¹ Since ad blocking in user browser settings also blocks Google Analytics, website metrics are believed to undercount true traffic by at least 20%.



Table 4 - Cumulative worldwide impact of MITx since its inception.

Description	Total
Cumulative total enrollment (clicked enroll)	14.4M (6.6M unique learners enrolled)
Cumulative total participation (viewed courseware)	9M
Cumulative total exploration by unique learners (viewed more than half the sections of a course)	951K
Cumulative certificates earned	347K

Table 5 - FY24 offerings by department (courses/modules/exams).

Dept. #	Primary Department	New	Rerun
0	Custom		1
2	Mechanical Engineering	1	11
3	Materials Science and Engineering	1	15
4	Architecture		2
5	Chemistry	1	4
6	Electrical Engineering & Computer Science		12
7	Biology	1	27
8	Physics		9
10	Chemical Engineering		1
11	Urban Studies and Planning	1	2
14	Economics	1	22
15	Management		24
16	Aeronautics and Astronautics	1	
17	Political Science		1
18	Mathematics		7
20	Biological Engineering		1



21A	Anthropology		2
21G	Global Studies and Languages	1	1
21H	History		1
22	Nuclear Science & Engineering		2
24	Linguistics & Philosophy		4
CTL	Center for Transportation & Logistics	1	16
IDSS	Institute for Data, Systems, and Society		2
STS	Science, Technology, and Society		1
MITEI	MIT Energy Initiative		1
	Totals	9	169

MicroMasters Program

The <u>MicroMasters program</u> offers a professional and academic credential through online courses taught by MIT faculty and instructors. Learners can earn the credential by earning certificates in a defined series of courses and passing at least one proctored exam. Credential earners can also apply for an accelerated master's degree program at MIT and 56 pathway schools.

Key Accomplishments

- Continued to run the existing five programs (Supply Chain Management; Data, Economics, and Design of Policy; Principles of Manufacturing; Statistics and Data Science; and Finance).
- Exceeded 1.65M cumulative unique enrollments.
- Awarded nearly 16K individual course certificates.
- Awarded 1,189 MicroMasters credentials.
- Admitted 36 credential holders from Supply Chain Management MicroMasters program and 21 Data, Economics, and Design of Policy program credential holders into the blended Master's at MIT, respectively.
- Hosted the <u>annual joint completion celebration</u> for all five programs.
- Maintained cumulative global credit pathways with 56 schools from 31 countries.

MIT Open Learning Library

The <u>MIT Open Learning Library</u> is home to selected content from MIT OpenCourseWare and MITx. All material is free to use and accessible to anyone in the world with or without registration.

- Over 210K registered learners across the 59 live courses on the Open Learning Library.
- Since launch in 2019, there have been over 9.6M page views by more than 990K total learners from 228 countries.



- The site has been visited over 2.4M times.
- Approximately 150 learner feedback requests were resolved.

2.4. Digital Learning Lab

The <u>MIT Digital Learning Lab</u> (DLL) is a joint program between Open Learning and MIT's academic departments, composed of instructional academics (lecturers, instructors, and postdocs) who collaborate with faculty to advance digital learning initiatives and strategies for their respective departments. DLL members are experienced subject matter experts in their various fields and are also well-versed in the latest learning sciences and educational technologies.

Key Accomplishments

- Worked with faculty to develop, launch, and run 106 MOOC modules five of which were new.
- Hosted the <u>2023 IEEE Learning with MOOCs conference</u>, which brought more than 100 online learning practitioners from around the world to MIT for three days of workshops, panel discussions, presentations, and networking. In addition to chairing the conference, DLL members contributed to the talks, posters, panel discussions, and workshops.
- Supported hybrid learning activities using Canvas and MITx and developed digital educational tools to strengthen teaching and learning for MIT students.
- Received five MITx grants to develop new courses on topics ranging from sports technology to sustainable urbanization.
- Published 14 articles in academic journals and peer-reviewed conference proceedings on topics including virtual reality in manufacturing education, learner perspectives in open online courses, and AI analysis of MOOC discussion forums.
- Continued DLL's focus on equitable access initiatives, including:
 - a <u>summer internship program</u> in collaboration with Empowr, a nonprofit that uplifts underserved communities by creating a school-to-career pipeline;
 - expanding the <u>MICRO internship program</u>, an online research and education program for undergraduates from underserved backgrounds; and
 - o offering workshops that focus on inclusive teaching practices.

2.5. Digital Credentials Consortium

Under the leadership of MIT, the <u>Digital Credentials Consortium</u> (DCC) is a global network of post-secondary institutions that is innovating the ways in which universities issue credentials in service of equity and opportunity. Built on a foundation of open standards, the DCC has developed and deployed a suite of open-source software for issuing data-rich, cryptographically verifiable versions of diplomas, certificates, and courses.

- Launched deployments of DCC technology with five member institutions.
- Continued leadership in open standards communities for digital credentials in education.
- Developed user friendly software, making it easy for institutions to issue digital credentials.
- Added two new members.



2.6. MIT Video Productions

MIT Video Productions (MVP) documents and amplifies the messages of the MIT community to the world through video.

Key Accomplishments

- Provided 12,081 billable work hours in support of 482 projects to 142 unique MIT community partners.
- Highlights of MVP's work include:
 - o MIT Generative AI Week 2023
 - Opening ceremonies for Building 45 and Building 55
 - o 2024 MLK Gala 40th Annual Martin Luther King Jr. Celebration
 - o Bob Kramer's Bladesmithing class
 - o 2024 Commencement live webcast
 - o Emmy Award nomination for "We Are the Forest."

3. Corporate Education

3.1. MIT xPRO

MIT xPRO develops and delivers online, fee-based programs targeted to adult learners who wish to expand their knowledge and build their skills, primarily in the context of professional education.

Key Accomplishments

- Generated \$19.8M in total gross revenue, representing a 26% year-over-year growth rate.
- 18.1K enrollments with 94% certificate completion rate.
- Reran existing courses across all platforms.
- Developed and launched five new online courses:
 - In collaboration with Emeritus: Professional Certificate in Game Design and Development, Digital Supply Chain, Global Manufacturing Leadership, and AI for Senior Executives.
 - o In collaboration with Global Alumni: AI-Driven Computational Design.
- Partnered with Emeritus and Global Alumni to translate select MIT xPRO courses and programs into Spanish, Portuguese, and Chinese.

3.2. Horizon

<u>MIT Horizon</u> is a B2B subscription platform that helps large organizations train their workforce on emerging technologies like AI, Internet of Things (IoT), and sustainability. Much of MIT Horizon's content is developed in-house with the help of subject matter experts (SMEs). However, Horizon also includes content from several MIT groups, including the MIT Press, Sloan Management Review, MIT xPRO, and Environmental Solutions Initiative.

Key Accomplishments

 Published 25 new and 71 updated foundations articles, 14 new or updated reference articles, 99 new case studies, 20 eBooks, and 18 partner readings — across seven topics (AI,



autonomous vehicles, big data analytics, cloud computing, digital transformation, IoT, and Web3).

- Developed Horizon's first subtopic (a specific generative AI collection inside Horizon's larger AI
 module) and piloted a new multimedia initiative using recently available generative AI tools.
- "Hired" Davis, Horizon's generative AI voice, to augment the audio on the Horizon platform.
- Launched the United States Department of Defense (DoD) Digital on Demand platform on Cloud One, the DoD's enterprise Cloud service. This serves all 2.3M DoD employees.
- Delivered four in-person workshops generating over \$1.2M in revenue.
- \$5.6M in total gross revenue, delivering close to half million in surplus.

3.3. Bootcamps

<u>Bootcamps</u> offers intensive transformational programs at MIT and globally for aspiring and experienced entrepreneurs, who dream to advance positive change in the world through technology and innovation.

Kev Accomplishments

Bootcamps delivered a portfolio of programs via online and in-person format. One of the programming highlights is the <u>Substance Use Disorder (SUD) Ventures program</u> delivered through an NIH grant. For the program, the MIT Bootcamps team delivered a novel unified and customized curriculum. The combined audience brought together a comprehensive roster of stakeholders, including hospital and emergency response personnel, members of patient advocacy organizations, insurance providers, criminal justice system professionals, state and government professionals, investors, and small business owners. The program included significant contributions in mentorship and content from stakeholders at medical device innovation powerhouses like Massachusetts General Hospital. There is potential for significant improvements to cost, access, quality, and outcomes of SUD healthcare delivery through the innovative companies, products, and solutions that will be brought to market by participants. A key outcome of the program is a better trained biomedical workforce, including researchers and clinicians, and exposure of non-biomedical audiences to key issues and concepts of SUD, including the perspectives of persons in recovery.

Open enrollment Bootcamps programs included:

- MIT Innovation Leadership Bootcamp, Online Fall 2023
 - o 2686 applicants, 40 participants
- SUD Ventures Winter 2024
 - o 1187 applicants, 34 participants
- Venture Advancement Program Spring 2024
 - o 1325 applicants, 29 participants
- MIT Innovation Leadership Bootcamp, Croatia Spring 2024
 - o 1534 applicants, 42 participants
- MIT Bootcamps Trek, Croatia Spring 2024
 - o 10 participants



4. Research & Engagement Units

4.1. Jameel World Education Lab

The <u>Jameel World Education Lab</u> (J-WEL), joined by <u>MIT Emerging Talent</u>, inspires and activates educators, learners, and leaders. J-WEL's events, workshops, conversations, grants, educational programs, and collaborations enable education designed for everyone to thrive. In FY24 J-WEL had 17 member institutions.² Wadah Foundation, Technological Higher Education Network South Africa (J-WEL's first consortium member, with 10 institutions), Universidad Iberoamericana, University of Sharjah, and Tecnológico de Monterrey joined (or rejoined) J-WEL.

Key Accomplishments

- Thirty-four J-WEL and Emerging Talent events drew global participation online and in person:
 - With MIT support, members redesigned curricula online, they considered frontiers of educational innovation with fellow members and MIT researchers; and at MIT, they engaged in exploring AI in education.
 - Emerging Talent hosted its third flagship <u>Migration Summit</u>: 600+ attendees from 64 countries explored pathways to dignified work for displaced communities over 12 virtual events. Fourteen in-person events were supported in nine countries.
 - Online sessions explored action learning, gaming, non-traditional learning pathways, and more.
- J-WEL supported MIT research in nine departments with 12 Education Innovation Grants totaling \$829,768.
- J-WEL's <u>new grant program</u> brings MIT-generated ideas from the Digital Learning Lab to the world.
- <u>Emerging Talent's fifth cohort</u> of 63 learners completed the Certificate in Computer and Data Science with funding from the Office of the Provost, Global MIT, and individual donors.
- J-WEL presented its work at Spotlight Latvia (Boston), SEFI Engineering Education for Sustainability (Ireland), Asia School of Business (Malaysia), LightUp Latvia (Riga), UN General Assembly education event (NY), and MIT Generative AI Week. J-WEL spoke to the world virtually through StartSmart Saudi Arabia's accelerator, USP's Seminar on Good Teaching and Learning Practices, World Bank's global higher education community, Mangosuthu University of Technology's Teaching with Technology Summit, and USAID higher education.
- Collaborations with Riga Technical University, the New Uzbekistan University, and Cesar Vallejo University deepened J-WEL's impact.

4.2. MIT Integrated Learning Initiative

The <u>MIT Integrated Learning Initiative</u> (MITili) funds, connects, and shares research investigating learning effectiveness, including:

- **Mental Wellness**: MITili Director John Gabrieli <u>published a paper</u> correlating socioeconomic status with a child's rewards center.
- **Generative AI and Education**: Research includes helping junior high school students become more <u>confident public speakers</u> by using generative AI, and another <u>research project</u> evaluating the effectiveness of AI-generated personalized learning content.

² This number represents all members that had revenue recognized by J-WEL during FY24.



 Reach Every Reader: Continued MITili's research on identifying reading difficulties in young learners earlier and creating interventions to help those learners. The program was a <u>spotlight</u> on national news.

4.3. Center for Advanced Virtuality

The MIT Center for Advanced Virtuality (MIT Virtuality) pioneers innovative experiences using technologies of virtuality — computing systems that construct imaginative experiences blended with the physical world. The center's approach to engineering and creative practices pushes the expressive potential of technologies of virtuality and simulates social and cognitive phenomena, while intrinsically considering their educational, social, and cultural impacts. The center supports both creative projects and research endeavors through four components: studio, laboratory, salon, and hub.

Key Accomplishments

- Continued to design and study computer-supported roleplaying for supporting positive perspective transformation via reflection for digital media users.
- Successfully concluded a three-year DSTA-sponsored research project, "Computationally Supported Roleplaying for Social Perspective Taking," which was focused on designing, developing, and evaluating computationally supported roleplaying experiences for studying, evaluating, and positively impacting the social perspectives of digital media users.
- Provided student support through faculty supervisor role to the VR/AR club.
- Contributed to professional service with an MIT xPRO course on VR/AR and an open licensed resource on OCW on deepfakes and misinformation. MIT Virtuality Director D. Fox Harrell was a visiting professor at the Ritsumeikan Center for Game Studies in Kyōto, Japan.
- One CSAIL/EECS M. Engineering student graduated.

4.4. Responsible AI for Social Empowerment and Education

The <u>Responsible AI for Social Empowerment and Education (RAISE) initiative</u> umbrella includes MIT App Inventor and the project-based curriculum Responsible AI for Computational Action. RAISE's research and impact mission is to advance equity in learning, education, and computational action.

- RAISE built out several major projects and expanded sustainable funding. Its flagship project, <u>Day of AI</u>, launched four new courses on data science and climate change, aimed at ages 8 to 18. Its <u>Day of AI celebration</u> in May took place at the Museum of Science and served to announce the <u>2024 Global AI Hackathon</u> winners, which had 924 participants from 81 countries.
- RAISE launched a collaboration with Google on a new Generative AI course for educators.
- App Inventor saw its <u>100 millionth project and 20 millionth user</u>.
- The FutureMakers program helped prepare a diverse set of 114 participants who aspire to make a better world with AI.
- Principal investigators Eric Klopfer, Hal Abelson, and Cynthia Breazeal along with Professor
 Justin Reich published a key open-access paper "Generative AI and K-12 Education: An MIT
 Perspective."
- RAISE produced a K-12 AI education policy guidance and another roadmap paper on generative AI for equitable education pathways to computing, to be published by MIT Press.



4.5. pK-12

MIT pK-12 is a newly formed group whose mission is to create meaningful learning experiences for young learners and educators around the world through co-design, capacity building, and impactful work at scale.

Key Accomplishments

- Participated in the K-12 Working Group, under the leadership of Cynthia Breazeal, and contributed to the recommendations for a new K-12 initiative at MIT.
- Contributed to the design and establishment of <u>It'zat STEAM Academy</u>, a school in Belize that opened in September 2023 with 62 students.
- Published the <u>STEAM Learning Architecture</u>: A <u>Framework for Educational Innovation</u> and taught an <u>undergraduate/graduate class (CMS.S61/S97)</u>.
- Ran the Full STEAM Ahead program in Summer 2023.

4.6. Strategic Research & Initiatives

Global Opportunity Forum

The <u>Global Opportunity Forum</u> (GOF) is helping businesses, policymakers, and educators navigate a new world of talent management through research and engagement.

Key Accomplishments

- Created novel algorithms for career development by <u>mapping how millions of people move</u> among occupations over their lifespans.
- Developed an advanced-manufacturing curriculum as part of a five-year <u>USAID-funded project</u> in the Philippines.
- Investigated local workforce training ecosystems using a <u>novel conceptual framework</u> to assess readiness of educators, employers, and others to deliver advanced manufacturing skills at scale.
- Led outreach initiatives through ongoing <u>seminars</u>, <u>events</u>, and <u>discussions</u> on key workforce learning topics.

5. Supporting Units

5.1. Engineering

The Engineering and Products team designs, develops, and maintains digital products to support the mission of Open Learning.

- Led an Institute-wide effort to create a new unified portal for all non-degree learning at MIT.
 Launched a functional prototype presenting courses and learning materials from MITx, MIT
 OpenCourseWare, MIT xPRO, MIT Professional Education, and MIT Sloan School Executive Education.
- Built a scalable, integrated data platform with data from all Open Learning products.
- Continued scaling up MITx Online.
- Deepened integration of xPRO website with partners like Emeritus and Global Learning, expanding the catalog of xPRO courses and streamlining marketing.



- Continued collaboration with Axim and the Open edX community, including writing release notes and coordinating community testing of the last two major releases.
- Improved other Open Learning platforms, including Residential MITx, MIT Bootcamps, and MicroMasters.
- Developed a prototype for an AI-powered OCW search tool.

5.2. Business Operations

Business Operations includes finance and accounting, human resources, marketing, communications, customer service, space, media strategy, and general administration. It provides support for the rest of MIT Open Learning in defining and implementing strategic, operational, and organizational improvements and in facilitating ongoing operations. It also collaborates across the Institute to ensure that MIT Open Learning's work is aligned with MIT policies, best practices, and broader mission.

- Continued strong delivery of services, including budgeting and finance, human resources, marketing, communications, customer service, space, and administration.
 - Delivered budget, working budget, and four quarterly reports plus ad-hoc analyses to 22 Open Learning business units, as well as consolidated reports for Open Education, Corporate Education, Research and Engagement, and Open Learning. Supported units with ad-hoc modeling and financial consultations.
 - Paid 1,807 invoices, created 523 purchase orders, collected \$26.5M in revenues, processed approximately 2,000 faculty royalty payments, and submitted 18 sponsored proposals. Worked with Institute auditors on two audits — one on expenses and a second on revenues — for which Open Learning received very high marks.
 - Marketing brought in >\$8M of business-to-consumer revenues, continuing to provide marketing support for MicroMasters, xPRO, and Bootcamps. Experimented with new channels and marketing formats. Continued to conduct rigorous marketing lookbacks, leading to continuous improvement on cost per acquisition and other marketing metrics.
 - Produced 17 MIT News articles and published 44 original blog posts.
 - Responded to 25,135 customer service requests with an average first response time of 12 hours and a 92.3% customer satisfaction rate. Developed and installed an AI chatbot for xPRO learners, enabling many queries to be answered simultaneously, reducing learners' need to submit requests, and enabling Customer Service to serve more learners and courses without adding staff.
 - Legal resolved 231 legal matters, executed 67 contracts, membership agreements, sales contracts, NDAs, terms and conditions, and termination of agreements.
- Initiated a strategy to develop guidelines and recommendations for leveraging artificial intelligence in video.
- With Institute Communications, updated all Open Learning branding and assets.
- Worked with the Institute to levy taxes on learners from India, necessitated by U.S. trade law.
- Continued to improve business systems, including leveraging artificial intelligence capabilities
 to support marketing outreach efforts, developing and sharing tracking reporting to business
 unit heads to show the status of their legal issues, developing a Quickbase system to track
 xPRO courses and associated information, and updating Salesforce.
- Worked with Office of General Council and edX stakeholders to develop and enact a legal strategy to mitigate against 2U financial uncertainty.



- Worked with Engineering and business units leads to continue to identify and fix learner issues in Open Learning platforms, as well as to propose and support evolution of MITx Online and portal platforms.
- Worked with MIT Video Productions and MIT Facilities to design and build out new space on campus for MVP to relocate to in August 2024.
- Provided counsel, support, and legwork for various strategic issues within Open Learning and across the Institute.

5.3. Resource Development

Resource Development serves as central lead, coordinator, consultant, and information source on all development activities and supports the incubation and development of strategic initiatives.

- Realized nearly \$5M in endowment payout, gift revenue, and future pledges for Open Learning programs.
- Helped secure multimillion-dollar grants and sponsored research for several MIT faculty and Open Learning programs.
- Communicated Open Learning activities and impact with more than 187K newsletter subscribers monthly; helped source and write stories showcasing learners, MIT alumni, faculty, staff, and program milestones.
- Annual funds in Open Learning portfolio engaged more than 1,200 people; participated in MIT's 24-Hour Challenge, raising \$78,113 from 658 donors including a \$20K challenge gift.
- Hosted <u>a salon with Filecoin Foundation</u> on the role of decentralized technologies in knowledge distribution and preservation; gathered 45 people on campus and live streamed to a global audience.
- Convened more leading funders and actors in the open education space for the Open 2030 Working Group to discuss common opportunities and challenges.