

ACIGV2: Case Study

Biology at Medgar
Evers College



Contents

Contents	2
About the Supporting Organizations	3
Background	4
Active learning	4
Project Contact	4

Author

William Carr, PhD,
Associate Professor of Biology at Medgar Evers College

Citing this Resource:

To reference this work, please cite:

Carr, W. and O’Sullivan, P. (2020, September 30) Biology at Medgar Evers College: Active learning and learning analytics for student success [Case Study] Every Learner Everywhere. <https://www.everylearnereverywhere.org/resources/case-study-biology-at-medgar-evers-college/>

Materials are freely available on the Every Learner Everywhere website and licensed under a Creative Commons Attribution-No Derivatives 4.0 International License.

About the Supporting Organizations



Every Learner Everywhere is a network of twelve partner organizations with expertise in evaluating, implementing, scaling, and measuring the efficacy of education technologies, curriculum and course design strategies, teaching practices, and support services that personalize instruction for students in blended and online learning environments. Our mission is to help institutions use new technology to innovate teaching and learning, with the ultimate goal of improving learning outcomes for Black, Latinx, and Indigenous students, poverty-affected students, and first-generation students. Our collaborative work aims to advance equity in higher education centers on the transformation of postsecondary teaching and learning. We build capacity in colleges and universities to improve student outcomes with digital learning through direct technical assistance, timely resources and toolkits, and ongoing analysis of institution practices and market trends. For more information about Every Learner Everywhere and its collaborative approach to equitize higher education through digital learning, visit www.everylearnereverywhere.org.



Association of Public and Land-grant Universities (APLU) is a research, policy, and advocacy organization dedicated to strengthening and advancing the work of public universities in the U.S., Canada, and Mexico. With a membership of 244 public research universities, land-grant institutions, state university systems, and affiliated organizations, APLU's agenda is built on the three pillars of increasing degree completion and academic success, advancing scientific research, and expanding engagement. Annually, member campuses enroll 5 million undergraduates and 1.3 million graduate students, award 1.3 million degrees, employ 1.3 million faculty and staff, and conduct \$49.2 billion in university-based research.



Achieving the Dream (ATD) leads a growing network of more than 277 community colleges committed to helping their students, particularly low-income students and students of color, achieve their goals for academic success, personal growth, and economic opportunity. ATD is making progress in closing equity gaps and accelerating student success through a unique change process that builds each college's institutional capacities in seven essential areas. ATD, along with nearly 75 experienced coaches and advisors, works closely with Network colleges in 44 states and the District of Columbia to reach more than 4 million community college students. Follow ATD on Twitter, Facebook, and LinkedIn.



Intentional Futures is a Seattle-based design and strategy studio. We work closely with clients across the public and private sectors to solve hard problems that matter and make big, ambitious ideas come to life. Our core offerings include human-centered strategy, data-driven storytelling, intentional, collective learning, and product design and prototyping. To learn more about iF or see our past work, visit intentionalfutures.com.

Biology at Medgar Evers College

Active learning and learning analytics for student success.

Background

Medgar Evers College (MEC) of the City University of New York is a 4-year HBCU located in Brooklyn, NY offering both associates and baccalaureate degrees. The student population of 7,000 is 76% Black and 15% Hispanic. Traditionally the population was first-generation, older, working students who attended classes part-time, but enrollment has shifted in recent years, and now 60% of students are under the age of 24 and over 70% attend classes full-time.

Active learning and learning analytics for student success

In 2018, Dr. William Carr discovered through conducting a pilot study that in-class active learning exercises alone were not sufficient to increase student learning outcomes in General Biology I. He added Lumen Learning's Waymaker digital learning platform to the class as a means to engage students in course content outside of class to reinforce their learning. Through student performance data collected from Waymaker, Dr. Carr was able to identify topics that were the most challenging for student learning. After attending a Lumen Learning sponsored Hackathon as part of their Continual Improvement Program, he decided to use a digital learning platform as an intervention to address these gaps in learning. The platform, HTML5 Package (H5P) is a free, mobile friendly, and open-source content collaboration framework based on JavaScript. The platform allows instructors and students to create, share and reuse interactive HTML5 content. The activity required students to develop multiple choice questions as formative assessments of the most challenging topics. Students were instructed to write questions that measure the first five levels of learning in Bloom's Taxonomy: remember, understand, apply, analyze, and evaluate. In developing these questions, students employed the highest level of Bloom's Taxonomy: create. They also used critical thinking to design real-time feedback to explain to learners why an incorrect selection was incorrect and why a correct selection was correct. Carr surveyed his students on the experience of creating these formative assessments, and learned that 75% reported their confidence in explaining scientific content increased.

Project Contact

William Carr, PhD

Associate Professor of Biology Medgar Evers College