Case Study

Georgia State University (GSU)

Contents

About the Contributors

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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.

Introduction

Georgia State University (GSU) is a highly lauded and successful public research university. Under the APLU grant, adaptive courseware products have been implemented in the redesign of five GSU general education courses. Each course has been assigned a faculty course coordinator who led the adoption and implementation of various adaptive courseware products. These course coordinators have been working diligently with staff from GSU's Center for Excellence in Teaching (CETL) to explore, pilot, and scale adaptive courseware in the five general education courses.

Case Study: Georgia State University (GSU)

This case study from Georgia State University demonstrates their approach to scaling adaptive courseware and the effective use of analytics.

Key Takeways

- GSU has been dedicated to scaling adaptive courseware in high-enrollment general education courses that have low completion rates. GSU's cumulative enrollments in the pilot courses—five general education courses, of which three have achieved scale—have increased to 18,107 enrollments.

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- Faculty are most interested in the use of data to drive intervention strategies by providing analytics and assisting with the identification of at-risk students.

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- While dashboards provide faculty with access to student learning data, this data is not necessarily what they are looking for. Encouraging faculty to systematically engage with courseware vendors can lead to the creation of new dashboards and data exports/reports that better meet the needs of both faculty and students.

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About the School and Grant

Georgia State University (GSU) is a comprehensive public research university with six campuses throughout metropolitan Atlanta. It enrolls more than 53,000 students and is among the most diverse colleges and universities in the U.S., graduating more African American students than any other public or nonprofit higher education institution. GSU's student population is 73% non-white and more than 50% are Pell-eligible.

GSU was awarded the Accelerating Adoption of Adaptive Courseware Grant in 2016 to scale the use of adaptive and other innovative technologies in order to improve student success in general education courses. The grant is administered by the Personalized Learning Consortium at the Association of Public and Land-grant Universities (APLU) and is generously funded by the Bill & Melinda Gates Foundation.

Adaptive courseware technologies are powerful but must be coupled with other critical course pedagogical changes.

Substantial faculty training in how to effectively utilize **adaptive analytics data** from student assessment outcomes is required, and faculty must also learn **active learning pedagogy**. Both approaches are crucial for achieving improved student pass rates.

Adaptive courseware can provide keen insights into student learning regardless of where that learning takes place. Online, blended, and face-to-face teaching and learning environments can all be enhanced through the adoption and implementation of adaptive technologies.
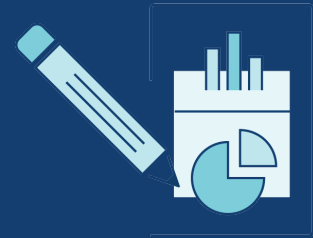
Goal

GSU has been dedicated to scaling adaptive courseware in high-enrollment general education courses that have low completion rates. Stakeholders, including the Georgia State Senior VP for Student Success and PI, have focused the APLU grant on making a significant and sustainable impact on retention and graduation rates, particularly for high-risk populations consisting of Pell-eligible minorities, first-generation students, and adult learners.

Approach

During the first year of the grant in 2016, CETL staff and faculty, including technical staff and instructional designers, created a modified version of the CWiC Framework Product Taxonomy to evaluate adaptive courseware products. From there, they reviewed 15 vendors who responded to a Request for Information (RFI). Faculty-led teams evaluated RFI submissions and invited seven vendors to a two-day Courseware Vendor Fair that led to choosing four different courseware products for the five general education courses.

Additionally, an open Adaptive Learning Workshop Series was hosted by CETL to educate course coordinators and staff, along with the broader GSU campus, about adaptive learning technologies, with the goal of building community and nurturing faculty buy-in.

Based on an approach that is **data-driven and collaborative**, the initiative has been designed to support faculty members as they explore, pilot, refine, and scale adaptive courseware across all sections of the five courses, with a potential to reach more than 15,000 enrollments annually (Tesene, 2018).

Case Study – Georgia State University (GSU)

The following five redesigned courses are part of GSU's entry into the APLU grant program:

Redesigned Course	Adaptive Courseware Provider
Global Issues	Realizeit
Introduction to American Government	Realizeit
Introduction to General Psychology	Macmillan Learning Curves (Launch-pad)
Principles of Macroeconomics	McGraw Hill's LearnSmart
Principles of Microeconomics	McGraw Hill's LearnSmart

Piloting of these redesigned courses began in Fall 2017 and resulted in 1,761 students enrolled in sections supported by the APLU grant that first semester. GSU's cumulative enrollments in the pilot courses have increased to 18,107 enrollments.

Global Issues, Introduction to American Government, and Introduction to General Psychology have all reached scale, meaning all sections of those courses use adaptive courseware.

Principles of Macroeconomics and Principles of Microeconomics, which have not yet reached scale, have been continuing to iterate to improve student success. Beyond adaptive courseware, a new modified emporium hybrid model was piloted in Spring 2019. Refinements for Fall 2019 included increasing section size to ascertain scalability of the model and applying more stringent guidelines for using the adaptive platform during learning lab sessions.

Relevant Findings

Global Issues achieved scale in AY 2018-19. Student success rates are higher than those in pre-grant years, and success rates are more than 10 points higher than in 2014-15. In Fall 2017, DFW (Drop-Fail-Withdrawal) rates fell nearly 20%.

Introduction to General Psychology has achieved scale, but there has been an increase in DFW rates overall, with Fall 2018 at 25% and Spring 2019 at 28% while in 2014-15, DFW rates were at 21.8%. Course coordinators believe the increase could be caused, in part, by students not spending enough time working on adaptive assignments. Data around how much time a student spends on a particular question points to the possibility of students searching the internet for answers rather than working in the courseware. Consequently, course coordinators are reviewing different adaptive courseware solutions that may discourage students from conducting internet searches instead of remaining in the platform.

American Government achieved scale in Spring 2019 and has seen student success rates increase. The DFW rate for adaptive sections in Fall 2018 was 26%. The DFW rate for Spring 2019 dropped to 17%. The DFW rate for 2014-15 was 16.3%. The course coordinators believe that digital courseware should continue to be used in a scaled manner with additional focus placed on the use of **data to drive intervention strategies.**

In addition, coordinators have indicated a desire to explore other digital courseware providers that may or may not have adaptive components. They are interested in courseware that has a **strong analytics focus** and want to see courseware assist instructors with the **identification of at-risk students** as part of the platform without the need for custom reports.

The DFW rate for Principles of Macroeconomics in Spring 2019 was 22%, which was an improvement over Fall 2018 at 27%. The DFW rate for Principles of Microeconomics in Spring 2019 was 31% compared to 38% in Fall 2018.

Coordinators have not yet pinpointed what changes contributed most to the reduction in the DFW rates. One theory is that the change to a hybrid format, with required attendance once a week in a learning lab, positively impacted the DFW rate. However, since rates are still higher than those reported in 2014-15, co-ordinators are reviewing their student learning outcome data to determine if students performed better on questions in the Test of Understanding College Economics (TUCE).

Data Needs and Development

Throughout the pilot, regardless of vendor, faculty have been underutilizing the data presented in the dashboards to design student interventions. However, many faculty have requested special reports from vendors with desired data in order to design student interventions. Others have requested special data extracts to assist with research related to student engagement and learning outcomes.

Data discussions have been focused on questions regarding the feasibility of integrating specific data elements related to temporary access status, purchase status, expiration of access, and last access dates from courseware platforms into advising systems.

While dashboards provide faculty with access to student learning data, faculty report that this data is not necessarily what they are looking for when designing scalable intervention strategies.

The general consensus is that dashboards should help faculty determine how students fit into these three categories:

| ▲High Engagement/ ▼Low Performance | ▼Low Engagement/ ▼Low Performance | ▼Low Engagement/ ▲High Performance |

This categorization can allow for the identification of at-risk students enabling faculty to design appropriate interventions.

Faculty also show interest in gaining access to student learning data related to assignment/activities such as:

- Assignment/activity type

- Assignment/activity results

- Student confidence

- Length of time to record a response

Five Key Findings

In conclusion, here are the top five findings:

- **Student feedback on digital courseware solutions is positive.**

- **Simple utilization of the courseware is not enough—good pedagogy remains the key to success.**

- **Engagement of academic department leadership at all levels is vital.**

- **Availability of useful analytics varies across platforms and vendors.**

- **Preparation of instructors to use analytics effectively is key.**

Future Directions

With additional funding, faculty will continue to engage with courseware vendors to discuss the current state of dashboards and data exports/reports and how they can and should be used. **Encouraging faculty to systematically engage with courseware vendors can lead to the creation of new dashboards and data exports/reports that better meet the needs of both faculty and students.** Approaching the discussion with institutional input can also lead to options for including courseware data in scaled student advising and support systems and processes. As with the economics models, additional funding is key to moving forward data-informed student intervention strategies through dashboards, data exports/reports, and integrations.

References & notes

Tesene, Megan M. (2018) "Adaptable Selectivity: A Case Study in Evaluating and Selecting Adaptive Learning Courseware at Georgia State University," Current Issues in Emerging eLearning: Vol. 5 : Iss. 1 , Article 6. Available at: https://scholarworks.umb.edu/ciee/vol5/iss1/6.