Arizona State Students Get Psyched with a Custom Course Powered by Learning Objects

CHALLENGES
- ASU needed a personalized online solution to support its flipped classroom model and help boost course success rates.

SOLUTION
Custom digital course built on Cengage’s Learning Objects (LO) platform, with content from Cacioppo and Freberg’s Discovering Psychology, 2nd Edition

RESULTS
- Students found the LO-based solution easy to use, engaging, and helpful in learning concepts.
- Students who completed online assignments on time were more likely to be successful in the course; targeted feedback helped to encourage their persistence.

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— Steve Goldinger

COURSE DROP RATES BEFORE AND AFTER IMPLEMENTING THE LEARNING OBJECTS/CENGAGE SOLUTION
**CHALLENGE:**

**Flipped Classroom Model Requires Innovative Online Support**

Like most colleges, Arizona State University (ASU) sees high enrollments in its introductory psychology course. Some years back, Professor Steve Goldinger was tapped to spearhead creation of a course featuring an “active + adaptive” methodology — a flipped classroom model with personalized online courseware for students to experience away from the lecture hall. The objective was to get students to come to class prepared, thereby freeing instructors to make face-to-face time more productive instead of regurgitating content students should have read. The underlying goal was to boost course success rates.

The initial digital solution, developed with Cengage, didn’t meet expectations. Goldinger didn’t have time to familiarize himself with the product before the course started, and its content was too high level. “The original Cengage partnership was better than my previous experience with another company. But the product we created, based on extensive pre-testing of background knowledge and on intelligent tutoring, wasn’t appropriate for a psychology course,” he recalls. “There’s no foundational knowledge in psychology — students don’t know anything when they first come to class as they might with math, so the testing discouraged them.”

Realizing the solution wouldn’t work, Goldinger pulled together materials for the course. “I made it through the semester, and then found out that Cengage had acquired Learning Objects. From that point on (in 2014) we moved quickly and established a new partnership.” That’s when Cengage called in its Institutional Design and Delivery (IDD) professionals to support the original Cengage team and bring additional perspective and insight to the project. Applying what they learned from the earlier experience, the IDD spearheaded the course redesign — collaborating with ASU to create a product based on instructional design principles that put students front and center.

**SOLUTION:**

**Cengage Content on The Student-Friendly Learning Objects Platform**

Although Cengage provided the content in a polished, customer-ready format, Goldinger was involved at every step and was able to review, change, and approve every word used in the course. There were no surprises when the course was delivered in July 2016; it went live in the fall of that year.

Cengage relied on learning science when building the new Learning Objects solution. For example, the earlier course had 45-minute video lectures, but research shows that students won’t watch video for more than six minutes at a time, no matter how interesting the content. The new product’s brief segments reflected these findings.

Another way Cengage applied the tenets of learning science was in their approach to formative and summative assessment. Cengage designed the course to have several low-stakes practice opportunities (including interactive media, not just quizzing) throughout the learning path prior to the graded end-of-unit test. Students quickly learned that if they completed the practice activities, they would be successful on the end-of-unit quiz, because the questions on both were clearly and similarly tied to the learning objectives for the unit.

The solution engaged students with dynamic content that covered low-level Blooms Taxonomy, arranged according to associated learning objectives — and saving synthesis...

— Steve Goldinger

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and analysis for class time. To promote comprehension and confidence, students interacted with manageable chunks of content in modalities such as video, interactive activities, and readings. They went to class with a knowledge base that allowed them to learn more about the concepts they were introduced to outside of class, and at a higher level. Goldinger could track student reading and progress through basic concepts, and tailor his lectures accordingly to build on what students already knew.

The product also leveled the playing field for students with different levels of knowledge, enabling them to get up to speed on topics before lectures and to work at their own pace. Short, low-stakes opportunities allowed students to check their understanding and build confidence before taking a graded quiz at the end of each module. Remediation was targeted and rich with focused feedback, which motivated students to persist — and consequently learn more effectively.

**STUDENTS LIKED THE EASE OF USE OF THE LEARNING OBJECTS PLATFORM**

Percentage of students who said it was easy to:

- Find learning materials in the product: 86%
- Understand how to do assignments: 73%
- Understand assignment grades: 93%
- Understand overall progress in the class: 76%
- Quickly navigate and understand the platform: 100%

**RESULTS:**

**Students Applaud Platform’s Ease of Use, and Come to Class Prepared**

Goldinger and his students gave high ratings to the Learning Objects solution. “We don’t have comparable data because we’ve never used anything like Learning Objects before. But we know that students enjoyed using the product. There was a VERY strong correlation between students who stayed on the assigned course schedule and students who had success in the course,” he says. “More than anything — it’s the first time I’ve taught a course and knew that students were doing the reading. Prior to this, I spent lectures going over content they should have read, but may not have read. Now they know I’m in there with them in a virtual space. That plus the fact that their progress is being reported on has increased student engagement.”

He continues, “Knowing that students are doing the work prior to class lets me use class time to do more engaging things. I’m able to see if they ‘get it’ before class. My goal is to create memorable experiences. The Cengage and Learning Objects product lets me focus on doing that.”

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Results from surveys submitted by 51 students and from a student focus group indicate that the product was well received. Key strengths mentioned by the students were simple navigation, ease of use, progress indicators/circles, understandable chunked content sections, and learner-friendly content and content display. Three-fifths of the students (60%) who responded to a question about navigation said they used the product’s progress circles (which appeared on students’ dashboard when they logged in) to track where they were and what they needed to do next.

Three-fifths of survey respondents (61%) said the learning experience was positive compared to other courses not using the Cengage platform, and 100% said they could understand/navigate the platform quickly. Other results:

- 73% said it was easy to understand how to do assignments
- 94% said it was easy to understand assignment scores
- 76% said it was easy to understand their overall progress in the class

One student said, “Learning Objects is good for psychology. It’s hard to pick up a big psych book and become engaged. But the videos and interactive tools help a lot.” Other comments: “It’s awesome and easy to use”; “I prefer LO to other software I’ve used”; and “LO makes it easier [to learn] and makes me want to read the chapters and do the assignments.”

CONCLUSION:

Collaboration Yields a Custom Solution — and a Positive Learning Experience

The Cengage digital solution built on the Learning Objects platform is based on proven instructional design principles that promote student engagement and course success. These include delivering manageable chunks of content as well as targeted feedback and remediation for incorrect quiz responses, which motivate students to persist until they understand.

Students find the solution easy to use and helpful in learning course material. Instructors can use lecture time to illuminate course concepts because they know that students have learned basic content outside of class.

Cengage continues to partner with ASU by using their suggestions to continually improve the platform and add functionality. And ASU, pleased with its Cengage/Learning Objects experience, is expanding the product’s use by offering the flipped course to a greater number of students.

“One many digital products only work in small controlled settings. But this course is working so well with the Cengage/Learning Objects product that I’m confident scaling up is going to work well, too,” says Goldinger. “Most students who take this course aren’t majors, so it’s my job to leave them with an appreciation of the study of psychology. I want to use class time to bring concepts to life instead of covering material students should have read before class. This product lets me do that by giving students the basic information up front, and bringing them to lecture prepared — freeing me to make the lectures interesting, memorable, and even surprising.”

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