EAB

Student Segment Overview: Multi-Modal Undergraduates

Online and Hybrid Education Strategy, Part II

Three Ways to Use This Resource

- Effectively use off-peak terms to capture enrollment and meet student demand
- Communicate and clarify online learning strategy to faculty and external stakeholders
- Develop targeted online and hybrid programs based on the latest market intelligence

EAB

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Start with best practices research

> Research Forums for presidents, provosts, chief business officers, and key academic and administrative leaders

> At the core of all we do

> Peer-tested best practices research

> Answers to the most pressing issues

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1.2B+
Student interactions annually

1M+
Individuals on our student success management system

1,200+
Institutions we are proud to serve

1
Goal: Make education smarter

4

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Executive Summary

Five Keys to Effectively Serve Multimodal Undergraduates

Use hybrid course formats for pedagogical benefits and cost savings

The most effective redesigned courses include active learning techniques through interactive software, offer individualized support to students, and provide students with structured progress incentives. Similarly, institutions can leverage technology to redesign courses to facilitate cost savings.

Create short-term incentives for faculty to teach high-demand intersession courses

To incentivize faculty to teach high-quality online courses, institutions should offer temporary course development stipends that are tied to online pedagogy trainings. In order to effectively utilize "off-season" capacity, institutions should strategically select courses for intersession and summer sessions by analyzing the courses commonly transferred in from other providers. This analysis will allow colleges and universities to identify courses with the highest enrollment potential and develop a competitive pricing strategy for them.

Require students to demonstrate readiness for online coursework

Students without significant experience with online education are often unprepared and even unaware of the technical requirements and proficiencies required to be successful in online coursework. Without this upfront knowledge students often struggle to navigate the course structure and may struggle to complete the necessary assignments. To ensure students are prepared for online learning, institutions should develop online orientation modules that are designed, structured, and administered in the same way as the institution's online courses.

Accelerate academic preparedness with multimodal corequisite summer courses

By offering developmental courses in an online or hybrid format to incoming first-year students during the summer, institutions allow interested students to get a head start on some early requirements to ensure they are on-track and prepared in the fall. These "boot camp" or "ramp-up" offerings are most effective in an accelerated, online format that allows students to enroll prior to arriving at the physical campus.

Supplement course capacity and offerings through online consortia

Institutions can address capacity constraints in high-demand lower-division courses and supplement excess capacity in low-demand upper-division courses by sharing seats in online courses among multiple institutions. This allows institutions to effectively meet student demand for key graduation requirements while also providing them with the opportunity to pursue niche fields without straining existing university resources.

Multimodality Increasingly the Norm

More Traditional Students are Demanding Blended Learning Opportunities

More traditional college students are mixing online courses with face-to-face offerings. As the case of the University of Central Florida (UCF) demonstrates, institutions cannot simply classify students as face-to-face or online, as the boundaries between these groups have become increasingly porous. In 2016, approximately 42% of UCF's face-to-face students were also taking online courses. This is a 19 percentage point increase from 2010.

"Multi-Modality" at the University of Central Florida

Head count by location, Fall 2016

Secondary Campus Students (2,994)
2%
1%
1% 2%

Main Campus Students (50,272)
40%

Web Students (36,465)
16%

37%

1%
1% 1%
1%

Regional Campus (1,726)
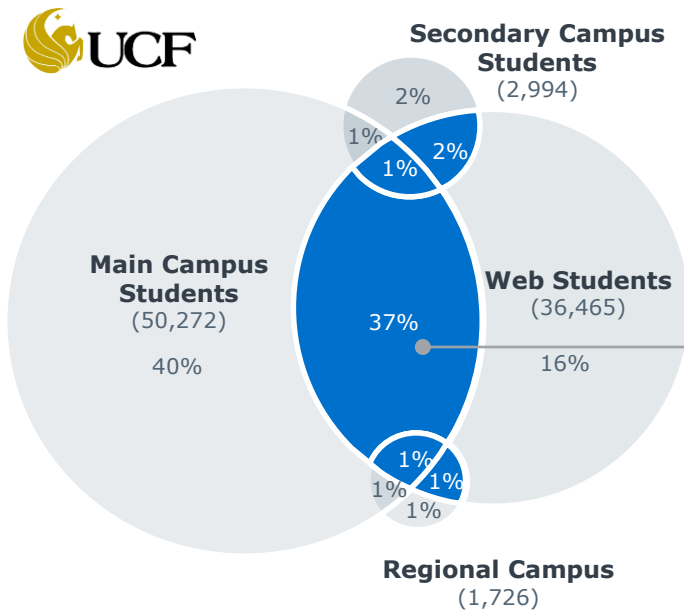
Face-to-Face Students Taking Online Courses Have Increased

23% — Fall 2010
42% — Fall 2016
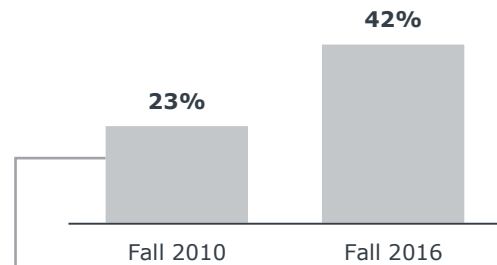
> " Classifying a student as 'main campus' or 'extended campus' or 'distance' becomes meaningless in an environment where students take whatever courses they need in whatever location or modality best suits their requirements at the time."
>
> *Thomas Cavanagh, Vice Provost for Digital Learning, University of Central Florida*

Not only are more face-to-face students taking online courses in conjunction with their regular courses but traditional face-to-face courses are also evolving. More instructors are leveraging technological advancements to develop blended and hybrid courses where a portion of traditional instruction is replaced by web-based online learning.

Traditional Students With 'Nontraditional' Needs

Students Increasingly Look To Institutions For More Flexibility

The opportunity to take online courses in conjunction with regular face-to-face classes provides students with greater flexibility to shape their course schedules to accommodate their competing demands and recover from any unforeseen circumstances. For example, if a student dropped a class, having the ability to switch into an accelerated online course may be crucial to maintaining their credit load for financial aid. Similarly, as students are encouraged to engage in time-intensive high-impact practices they need more flexible learning opportunities to remain on track for graduation.

Path to Graduation Eased by Online and Blended Coursework

Online remedial math course prior to Fall start

Self-paced online "catch up" course after dropping pre-med chemistry

Online summer course to complete missing pre-requisite

| Year 1 | Year 2 | Year 3 | Year 4 |

Hybrid gen ed course with online lectures and discussion boards

Two online courses to stay on track while studying abroad
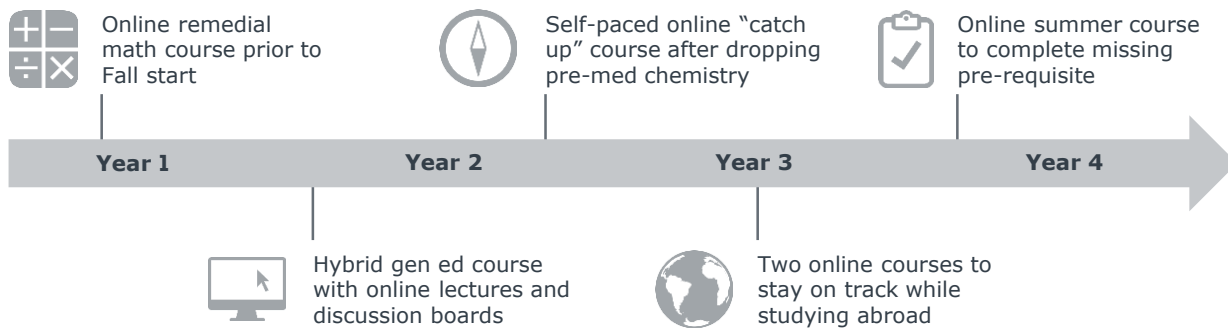
UCF Students Who Take More Courses Online Tend to Graduate Sooner

4.3 > 3.9

Average number of years it takes an exclusively face-to-face (0% of credit hours taken online) student to graduate

Average number of years it takes a student who takes 41%-60% of their credit hours online to graduate

Online and hybrid learning enables institutions to develop curricula that is more conducive to timely graduation. In fact, a recent report released by Boston Consulting Group and Arizona State University found that students taking 41% to 60% of their credit hours online completed their degrees, on average, in 3.9 years. In contrast to this, students who did not take any online courses graduated, on average, in 4.3 years. It is possible that the flexibility of taking online coursework better facilitates early graduation. However, this analysis also shed light on "the digital learning paradox" where students who took some online courses retained and graduated at higher rates than their exclusively face-to-face peers but earned lower grades.[1]

1) Allison Bailey, Nithya Vaduganathan, Tyce Henry, Renee Laverdiere, and Lou Pugliese, *Making Digital Learning Work: Success Strategies From Six Leading Universities And Community Colleges* (Boston: The Boston Consulting Group, 2018)

Redesign Courses to Promote Active Learning

Use New Technology to Scale Interactive and Effective Teaching Practices

Often, traditional stand-and-deliver lectures fail to engage students and tend to provide few opportunities for effective knowledge retrieval practices. By incorporating student-centered active learning pedagogies in the classroom, instructors can improve mastery of competencies and support underprepared students. Such interactive settings allow instructors to more easily identify and engage struggling students while also appealing to well-prepared students who may have been disengaged. One of the best ways to do this at scale is by using technological innovations to 'flip' the classroom.

Pre-Reading → Lecture Video → Practices → **Interactive Class** → Homework

Course Redesign Enhances Learning

The **National Center** for **Academic Transformation**

83%
Proportion of NCAT redesign projects showing a significant increase in student learning[1]

75%
Proportion of NCAT redesign projects reported a drop in DFW rates[1]

Key Features of Successful Course Redesigns

Online Tutorials

Regular Assessment

Interaction Amongst Students

On-Demand Support

Mastery Learning

By letting students watch lectures and complete practice exercises online, instructors can use class time more efficiently. This can allow for better student-instructor interactions, create effective peer relationships, and enhance student learning. The National Center for Academic Transformation (NCAT) analyzed numerous course redesigns and found that courses that used online tutorials, conducted regular assessments, and provided on-demand support were able to improve student learning (based on final exam grades) and reduce DFW rates.

1) "A Summary of NCAT Program Outcomes," The National Center for Academic Transformation.

Source: EAB interviews and analysis; Carol A. Twigg, "Course Redesign Improves Learning and Reduces Cost," *Policy Alert* (San Jose: The National Center for Public Policy and Higher Education, 2005).

Unpacking the Economics of Course Redesign

Significant Variability in Cost Savings Across Disciplines

Similarly, NCAT analyzed whether these technological investments in student learning were cost-prohibitive by looking at any cost savings that may occur through course redesigns. They analyzed the cost per student of traditional courses and compared them to the cost per student after a course redesign took place. In both instances they do not look at the developmental costs of creating either courses but at the post-implementation costs.

Cost Savings Unrelated To Discipline

Percentage cost savings per student by discipline from course redesigns

The **National Center** for
Academic Transformation

Course Redesign Cost Savings Unrelated To:

• Discipline

• Cost of Original Course

• Institution Type

• Faculty Compensation
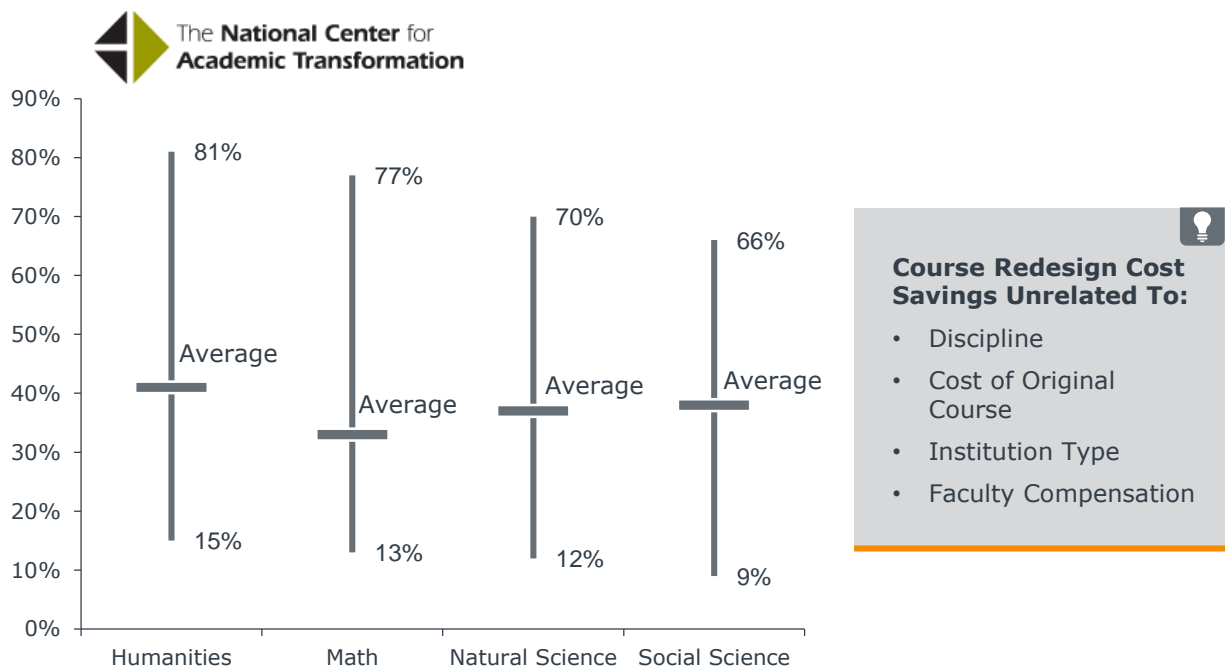
Over 13 years NCAT completed over 150 redesigns and found that per student cost savings ranged from 4% to 81% with an average of 36%.[1] An analysis of this variability found that cost savings were unrelated to the discipline of the courses, cost of the original course, institution type, or faculty salary. However, it demonstrated that any cost savings realized were related to key redesign decisions pertaining to class section size and the faculty composition.

1) Carol A. Twigg, "Academic Productivity: Decisions, Decisions, Decisions", *The National Center for Academic Transformation*.

A Tale of Two Redesigns

How Staffing and Section Decisions Drive Cost Savings

A case study analyzing the redesign of an introductory psychology course at Frostburg State University and Missouri State University exemplifies the staffing and section decisions that lead to cost savings. Both institutions reduced the number of in-class meetings and replaced them with online activities, and increased section size to reduce the number of sections. They also changed the nature of the in-class meeting to promote active learning (e.g. encouraging small discussion groups).

	Original Course Design	Key Changes	Impact on Cost
FROSTBURG STATE UNIVERSITY Course: Introductory psychology	18 Sections with 50 students each 9 Sections taught by full-time faculty and 9 sections by adjuncts	6 Sections with 150 students each 2 Sections taught by full-time faculty and 4 by adjuncts 12 student learning assistants	$89 per student → $31 per student **66%** Savings
Missouri State UNIVERSITY Course: Introductory psychology	18 Sections with 150 students each 13 Sections taught by full-time faculty and 5 sections by adjuncts	9 Sections with 300 students each 7 Sections taught by full-time faculty and 2 by adjuncts 6 grad students, 3 adjuncts, and 6 student learning assistants for support	$73 per student → $66 per student **9%** Savings

Frostburg reduced the number of sections taught by full-time faculty (replacing them with adjuncts) while Missouri State retained a large percentage of full-time faculty to teach the course. Additionally, Frostburg used 12 undergraduate learning assistants whereas Missouri State hired graduate students and adjuncts to support students. These differences in implementation were crucial to the differences in cost savings. Frostburg was able to reduce cost per student by 66% without negatively impacting student learning outcomes, while Missouri State only reduced costs by 9%. This example demonstrates that using technology effectively can allow institutions to achieve low-cost, high-reward outcomes.

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Untether from the Academic Calendar

Decrease Graduation Delays with Intersession and Summer Online Courses

Hybrid and blended learning can also help institutions facilitate timely degree completion. Even when comprehensive preventative measures are put into place, some students will inevitably encounter delays. Institutions can proactively help students recover from missteps by creating visible alternative pathways to on-time completion. Non-traditional terms, such as summer and winter sessions, add flexibility to the academic calendar that can afford students the opportunity to catch up on lost time.

Traditional Academic Calendar

D, F, W general education course

Unable to get into first-choice major

Unable to register for major requirement

Year 1 | Year 2 | Year 3 | Year 4

Flexible Academic Calendar

Year 1 | Year 2 | Year 3 | Year 4

Opportunity to re-take core course during intersession

Opportunity to take required courses over the summer

Opportunity to take major requirement over the summer

Course Prioritization: High demand prerequisites, general education courses, and introductory pre-med courses

However, for some students, summer enrollment comes at the cost of summer employment, internships, or study abroad opportunities. Through the development of online courses, institutions can ensure that students do not have to choose between internships and timely graduation. By prioritizing high-demand prerequisites and general education courses and offering them in online or hybrid format during the summer and winter session, institutions can ensure that academic and personal disruptions during the academic year do not derail their students' degree progress.

Source: EAB interviews and analysis.

A Second Life for Existing Online Courses

Restructuring Intersession as a Path to Degree Completion

The University of Maine (UMaine) systematically restructured its intersession term to provide its students with an alternative way to reach 30 credits each academic year. UMaine screened course offerings based on two criteria: historical barriers to student progression (general education bottlenecks, highly sequenced courses, and major requirements), and courses amenable to compression into a fully-online, 5-days-per-week, 3-week format. UMaine piloted its restructured winter session in January 2016.

1865 THE UNIVERSITY OF MAINE

Degree-Advancing Impact

- General education bottlenecks
- Sequenced courses
- Major requirements

Course Format

- 100% online
- 3-week duration
- 5 days per week

Faculty Incentives

- Receive extra pay for course overload
- One-time $500 bonus to work with Instructional Design

Credit Accumulation on the Rise

~650
Enrolled students

➡ **+4%**
Students taking 15 CH
(Spring 2015 vs. 2016)

+2000
Total credit hours accumulated

➡ 🚫
No decrease in Spring term credit accumulation

Participants Excel Academically

81%
Winter students attained an A/B grade

> **66%**
A/B grades for Fall term course equivalent
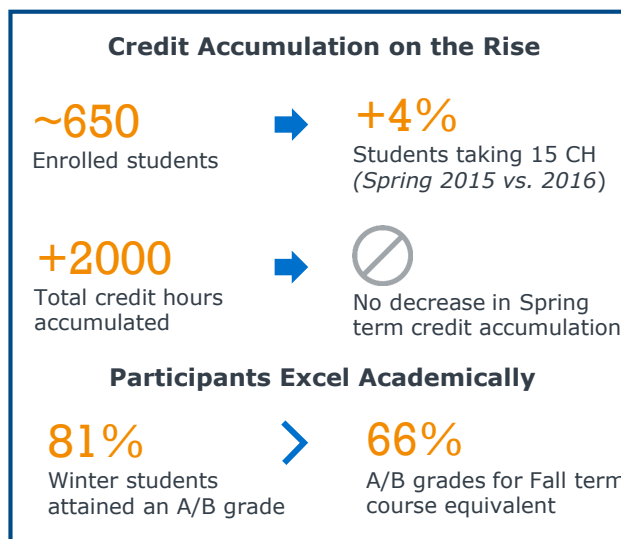
During the pilot, faculty offered a total of 20 three-credit courses, mainly major requirements, sequenced courses, and general education bottlenecks. Early results indicate that winter session is having the intended impact on graduation. UMaine saw 650 students enroll in winter session, which led to a four percentage point increase in the number of students taking 15 credits in spring 2016 as compared to students in spring 2015. A reduction in credit attempts during the regular term is one of the main concerns with building out a robust alternative term; however, UMaine's winter session resulted in 2,000 additional credit hours accumulated with no decrease in spring term accumulation.

Source: EAB interviews and analysis.

Recapture Lost Summer Credit Hours

Analyze Transfer Credit Requests to Guide Online Course Development Strategy

The greatest opportunities to increase credit-hour production are during off-peak times—summer and winter session—and online. Too often, departments teach these courses based on historical precedent and faculty preference rather than aligning with student demand. As a result, only a small number of students enroll in these courses. By identifying and analyzing the courses most commonly transferred in from other providers after an intersession period, institutions can regain lost enrollment share and prevent further credit leakage over time.

STONEHILL
C O L L E G E

1

Collect and Sort Transfer Credit Request Data

Assemble data and label each summer and intersession transfer request by subject, course title, number of credits fulfilled, and transfer institution.

2

Conduct a Competitor Analysis and Prioritize Courses for Development

Eliminate rare courses from consideration. Prioritize disciplines that are more easily replicated in online format.

3

Develop Summer and Intersession Online and Hybrid Course Catalog

Offer online sections of common courses out-of-state students take closer to home during summer.

Stonehill College began an analysis of intersession transfer requests in Fall 2013, using five years of summer and winter session data. After eliminating courses transferred in fewer than five times over that period and studying patterns among those most frequently taken, the registrar and provost's office identified several specific courses for development in online or hybrid format to be offered during intersession periods.

Source: EAB interviews and analysis.

Develop Temporary and Strategic Incentives

Staged Stipends More Sustainable than Course Releases

By offering faculty incentives for course development, institutions can increase their online and hybrid course offerings. In this case, stipends are an effective incentive because they can easily be tied to the completion of specific course development stages or participation in training in online pedagogy. Stipends are preferable to course releases because institutions can withhold payment of the full amount if the key stipulations are unmet. Course releases can also be more costly than stipends as institutions may have to hire adjuncts to maintain faculty workload.

Tie Incentives to Strategic Priorities

☑ Link incentives to program development goals and course completion

☑ Use central seed funding to steer dollars toward critical curricular needs

☑ Offer temporary short-term course development incentives

☑ Provide stipends instead of course releases to better calibrate incentive structures

DePaul University

Utah Valley UVU University

Staggered Stipend Tied to Course Development Stages

- Partial payment upon training completion
- Remaining payment after course review

Compensation Tied to Prioritized Courses

- Higher development stipends for high-demand, bottleneck courses

Moreover, research has shown that as faculty continue to teach online, the time it takes to develop the courses decreases. Similarly, as online and hybrid learning permeates the institution, there is less need to continue to offer faculty incentives. In order to ensure that costs do not rise disproportionately, institutions should primarily offer temporary stipends for online and hybrid course development.

Source: EAB interviews and analysis.

Assess Student Readiness for Online Coursework

Preparing Students to Navigate Unfamiliar Learning Environments

Students enrolled in courses with a significant online component are often unprepared for (or even unaware of) the technical requirements and proficiencies expected of them, resulting in difficulty navigating the course structure, extensive early-term troubleshooting by instructors, and even dropped coursework. Creating one or more online orientation modules to stimulate web-based learning, troubleshoot technical problems, and familiarize students with each component of the online course environment can help circumvent some of these challenges.

Online Orientation Modules at the University of Central Florida

Screenshot of the Webcourses@UCF Discussion Tool. Discussions are often used in many online courses and can be implemented in a variety of ways. Your instructor may require you to interact with fellow classmates through the use of online discussions.
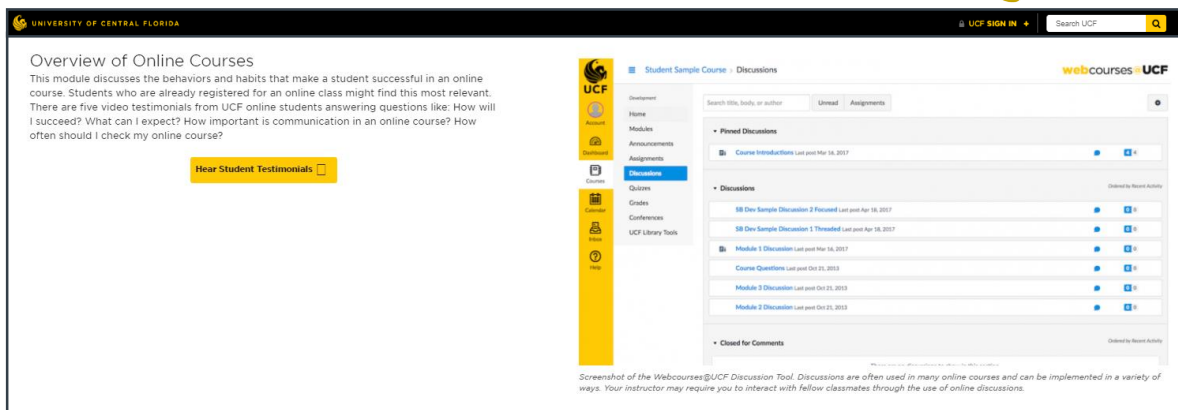
Key Characteristics

Online Learning Tactics	Student Testimonials	Faculty-led Course Walk-through	Overview of Online Course	Overview of Learning Management System

The University of Central Florida, through its Center of Distributed Learning, has developed orientation modules to prepare students for an online course, guide them through the learning management system, and introduce them to important strategies for success. The design, structure, pace, and administration of an online orientation module are critical to its success in ensuring student readiness. They should be self-paced and asynchronous to maximize flexibility, built in the standard learning management system to familiarize students to the organization and mechanics of a course, and available to students throughout the duration of the course.

Remedial Ramp-Up Courses

Giving First-Year Students a Head Start on Prerequisites

At many institutions, incoming first-years arrive on campus ill-prepared for particular introductory courses required for program eligibility. Institutions should offer for-credit prerequisites in an online or hybrid format to incoming freshman during the summer to allow interested students to hit the ground running upon their arrival in the fall. The California State University System accomplishes this through the Early Start program, which requires students who are not "college ready" to begin for-credit remediation in the summer prior to enrolling.

CALIFORNIA STATE UNIVERSITY FULLERTON

Spring

Students' English and math academic preparedness assessed

Criteria[1] include:

- ACT or SAT test scores
- High school GPA
- High school English and math courses completed
- Advanced Placement or International Baccalaureate scores
- Smarter Balance Assessment or Early Assessment Program Scores

Summer

Students requiring additional academic support begin coursework

Face-to-Face

Online

Hybrid

Credit bearing, college-level courses with integrated academic support[2]

Fall

Increase in college readiness among incoming first years[3]

2010   2014

44% ➡ 59%

Percentage of college-ready first years

Early Start participants retained at the same rate as college-ready peers

In order to maximize potential pathways for incoming students the Early Start Program offers multiple course formats. Moreover, students can also enroll in an Early Start Program at any CSU campus, regardless of where they intend to enroll in the fall. CSU Fullerton has found that since initiating this program that the proportion of college-ready first years has increased and that Early Start participants retain at the same rate as their college-ready peers. By summer 2019, the system as a whole is moving away from stand-alone prerequisite developmental education towards a corequisite system that integrates academic support into college-level courses.

Address Capacity Issues with Online Course Consortia

Achieving Curricular Scale Through 'Seat Share' Agreements

Most institutions have difficulty matching instructional supply perfectly with student demand. Inevitably, some courses end up with waitlists and others with too few students to justify a section. Often, introductory courses that meet general education requirements or serve as major program prerequisites fill quickly, making it difficult to add enough instructors or classroom space to meet demand. Conversely, upper-division electives in niche fields are difficult to justify with only a few registrants, and students seeking specialized courses are sometimes left with few options on campus.

Insufficient Lower-Division Capacity

ECON 101

Introductory courses that meet general education requirements fill up quickly

Shared Online Lower-Division Courses

Face-to-Face   *Face-to-Face*   *Online*

Create shared online sections of introductory and general education courses to meet student demands

Insufficient Upper-Division Demand

ECON 301   *POSC 450*   *ANTH 359*
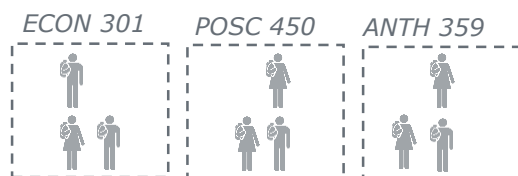
Upper-division electives in niche fields are often under-enrolled and are financially difficult to offer

Shared Online Upper-Division Courses

ECON 301   *POSC 450*   *ANTH 359*
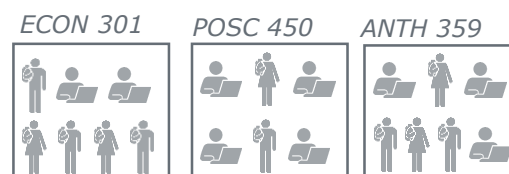
Opening up under-enrolled courses to online students at other campuses allows institutions to justify providing courses in niche fields

Institutions can address these problems by sharing seats in online courses among multiple institutions. By allowing students to register for online classes offered at partner colleges and universities, individual institutions are able to meet excess demand for general education courses while also allowing students to access upper-division courses in specialized fields that may not exist at their home institution.

Source: EAB interviews and analysis.

Scale the General Education Core Curriculum

Using a System-Wide Online Core Curriculum to Meet Student Needs

The University System of Georgia's eCore program is one such online course-sharing consortium which allows affiliated institutions to collaborate and offer online general education courses to their students. Course credits earned through eCore are awarded by the student's affiliate home institution and are transferable within the broader university system.

eCore

Student-Providing Institution	Administering Unit	Faculty-Providing Institution

- Student tuition $169 per credit hour[1] paid to student's home institution
- $42 per credit hour retained by student home institution

- $127 per credit hour retained by eCore
- Self-sustaining unit
- Provide student and faculty support services

- eCore pays faculty-providing institution $5,500 for a three-hour class and $6,700 for a four-hour class
- Faculty-providing institutions pay faculty $1,200 per credit hour

eCore provided services include:
- Online tutoring
- Early alert system that informs the Student Success Team of students who need to be connected to support services
- Access to help desk
- Proctored online exams
- Open education resources
- Faculty training, certification, and mentorship

The eCore program is self-sustaining and relies on centralized support services, such as course development, faculty and student support services, and open education resources, that are unduplicated at other institutions. The program charges students a unique tuition rate and returns a portion to the student and faculty-providing institutions. Overtime, eCore course completion has progressively increased, reaching 90% in 2017. Similarly, 69.4% of students enrolled in eCore courses completed the course with an A, B, or C. Since 2009 (despite changes in tuition rates[2]), total tuition generated by eCore enrollment has consistently increased over time, reaching almost $14 million in the 2017 fiscal year.
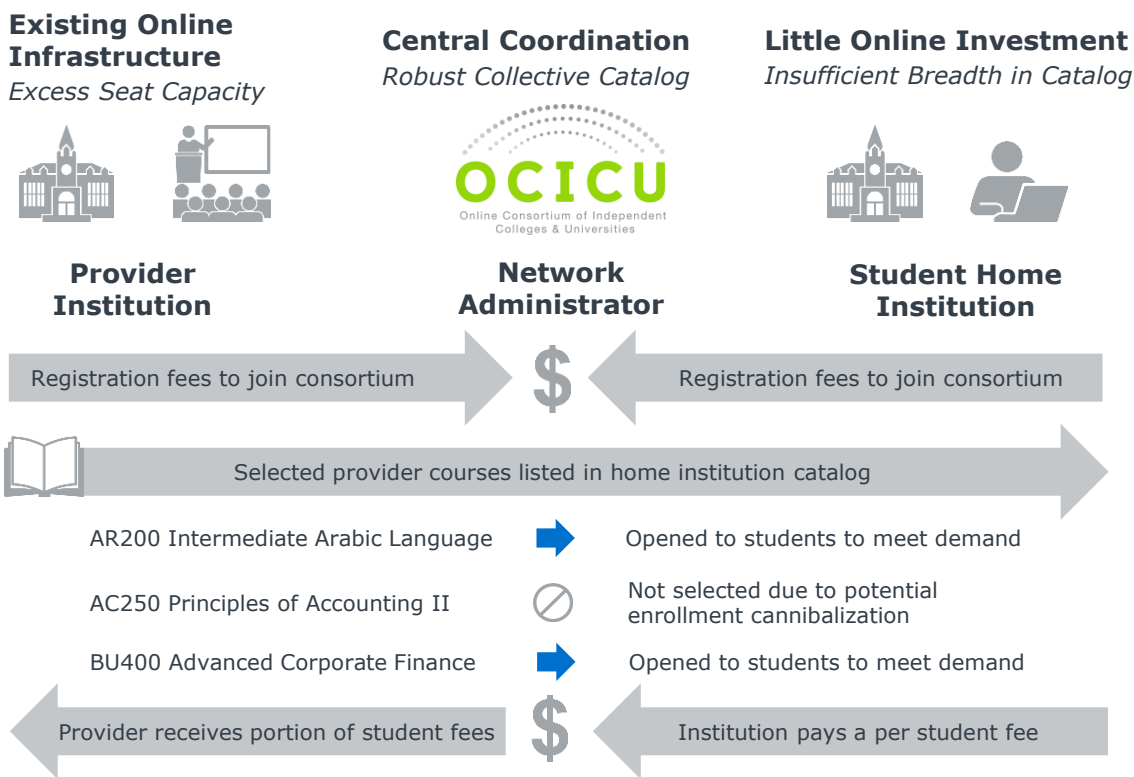
1) In 2018 fiscal year student tuition will be reduced to $159 per credit hour. This will not change the amount paid to student or faculty providing institutions.
2) In 2010, tuition increased from $144 per credit hour to $189 per credit hour. In 2014, tuition decreased from $189 per credit hour to $169 per credit hour.

Source: University System of Georgia, *eCore 2017 Fact Book*.

Matching Supply and Demand in the Upper Division

Balancing Excess Seat Capacity with Insufficient Breadth in Catalog

Founded in 2005, the Online Consortium of Independent Colleges & Universities (OCICU) brings together over 60 institutions (typically small, private, religious colleges) to share a wide online course catalog. This allows members with previous experience in online course development and excess seat capacity to earn additional revenue from members seeking to provide curricular breadth to students without additional instructional costs. Over ten provider schools offer more than 1,000 online courses through the consortium at both the undergraduate and graduate level.

Existing Online Infrastructure
Excess Seat Capacity

Central Coordination
Robust Collective Catalog

Little Online Investment
Insufficient Breadth in Catalog

Provider Institution

Network Administrator

Student Home Institution

Registration fees to join consortium → $ ← Registration fees to join consortium

Selected provider courses listed in home institution catalog →

AR200 Intermediate Arabic Language	→	Opened to students to meet demand
AC250 Principles of Accounting II	⊘	Not selected due to potential enrollment cannibalization
BU400 Advanced Corporate Finance	→	Opened to students to meet demand

← Provider receives portion of student fees $ ← Institution pays a per student fee

Moreover, individual member institutions can decide which courses from the consortium catalog to open up to their students. This feature allows institutions to ensure that there is no registration cannibalization between existing face-to-face courses and potential online offerings. Course sharing through OCICU is facilitated by Regis University, which handles enrollment, billing, and invoicing across the member institutions.

Source: "About OCICU," *Online Consortium of Independent Colleges & Universities.;* Alexandra Vollman, "The Middle Ground: Are Consortia the Answer to Sustaining Low-Enrollment Courses?", *Insight into Diversity*, October 19, 2016.

Advisors to Our Work

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