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## **DELTA VISION**

We seek to improve the quality of education by harnessing technology to provide ready access for all learners. In this way we hope to meet the challenges of a changing society.

## **DELTA MISSION**

Transformative educational experiences benefit a complex, global society and are key to a quality future. DELTA collaboratively applies expertise in innovative technologies and pedagogies to solve instructional challenges in an efficient, effective and service-oriented environment, with the overarching goal of helping faculty build student success.



Years from now when we're sitting around having a beer and reflecting back on online learning in 2012-13, we'll undoubtedly say, "Remember all the hype about MOOCs?" The question is, will we be making analogies to Beanie Babies and Pet Rocks, or will we talk about how they profoundly changed online education? Will the early MOOCs from Stanford be compared to NCSA Mosaic, which changed the face of the Internet forever? Or will they be remembered as a brief chapter in the history of open access to education?

The numbers are staggering—Coursera has enrolled

more than 5.4 million students in its brief history, growing faster than Facebook at a similar point in time. To put this in perspective, the National Center for Education Statistics pegs the total enrollment of U.S. degree-granting institutions at 21 million. Well over \$100 million has been invested in

MOOC efforts, much of it from the same top-tier Silicon Valley venture capitalists that fueled startups like Google and Amazon. You can't ignore that.

While it will be some time before the post-MOOC future of higher education becomes clear, we're taking steps to learn some things that will help us prepare for that day. This spring, DELTA participated in an "OOC experiment" with Engineering Online and the Electrical and Computer Engineering department. Dr. Paul Franzon volunteered his time to offer his graduate course in ASIC Design as an "open online course" (OOC). The goal was to better understand the technical and operational requirements to support a MOOC, as well as the cost in terms of faculty and staff time. Enrollment was capped at 1,000 students to avoid any impact on NC State's technology infrastructure. Students took the course

for free, and could opt in to pay for an authenticated assessment that would earn them a certificate of completion. Approximately 700 students enrolled in the course, and less than 20 opted to pay for a certificate of completion. After all the costs were considered, the "break even" point was around 15 to 20,000 enrollments. You can read more about the OOC experiment in this report, but one thing is clear: sustainable financial models for these types of offerings have a long way to go.

While the jury is still out on "MOOC Mania," the

value of digital learning technologies is clear in achieving NC State's #1 goal of enhancing the success of our students through educational innovation. We're seeing impressive gains in student learning outcomes through course redesign. More students are leveraging the flexibility of online courses to accelerate progress to degree. DELTA designers and faculty

technologies is clear in achieving NC State's #1 goal of enhancing the success of our students

the success of our students through educational innovation."

The value of digital learning

-Dr. Tom Miller

are collaborating to create powerful learning tools based on game technologies. We're streamlining and seamlessly integrating enterprise learning technologies to improve the user experience for both students and faculty. You will find these stories and more in this year's annual report. Please take time to read the stories, review the data, and learn more about the many ways that DELTA is supporting our faculty as we all work toward the common goal of enhanced student success.

Sincerely, Dr. Tom Miller Vice Provost. DELTA



## Developing an Educational Game to Teach Horse Care

While learning shouldn't be all horseplay, who says we shouldn't play games to learn about horses? With educational games in higher education on the rise, DELTA's Instructional Innovation Services teamed up with Dr. Shannon Pratt-Phillips, associate professor of equine nutrition and physiology, to create a horse game. The opportunity was the perfect union of DELTA's desire to develop a serious game and Pratt-Phillips' search for a mobile solution to reinforce concepts in her equine science course. And thus the Mane Event was foaled.

Pratt-Phillips approached DELTA through the IDEA Grants program looking for teaching solutions for her course, ANS 110: Introduction to Equine Science. Each semester her students enter the course with varying backgrounds and experience with horses, and she wanted a way to get students

up to speed on the basic concepts of the course: nutrition, anatomy, breeds and horse careers. While she initially had a mobile app in mind, Pratt-Phillips embraced the DELTA team's idea to explore a game approach.

"A game is a great way to capture a wide audience," Pratt-Phillips said. "For students who already have some background in the area, the game allows them to build on what they know easily and practice in a fun way. For those students who have less experience, the game helps to reinforce concepts for them, at a pace that they can control."

course is over."

Developing the Mane Event was a welcome challenge for DELTA's production team. While this small group of full-time staff led the project, they relied heavily on NC State student staff to research,

storyboard, design, animate and program the game. The game's artwork and animations were produced entirely by students. Through research, trial and error, and strong staff-faculty-student collaboration, the team saw the game take shape. And while attacking the mountain of technical details, they kept the educational focus and sound learning theories as the highest priorities.

"When you think about chunking content for student learning, mini-games are great ways to learn," said Amanda Robertson, assistant director for educational media development and project lead for the Mane Event. "We could grab these discrete bits of knowledge, like nutrition or anatomy, and build individual mini-games out of them."

This series of 11 mini-games formed the Mane Event, a smart, interactive, visually stunning 2-D game that entertains and teaches at the same time. Players start out as a ranch hand cleaning stables at Hillcrest Ranch and level up as they master increasingly complex concepts of horse care and nutrition. Along they way they encounter the spirited El Diablo, compete

against the evil Luchador and earn Horse Bucks for their accomplishments. As they play and compete, they learn.

"I think faculty can become excited about the game development process when they realize that their students might actually play—and continue learning—long after

-Dr. Shannon Pratt-Phillips

"I think faculty can become excited about

the game development process when they

realize that their students might actually

play-and continue learning-long after the

the course is over." Pratt-Phillips said.

The Mane Event Web version is currently available at maneevent.ncsu.edu. The mobile version will be released through the iTunes App Store and Google Play in spring 2014. Let the horseplay begin!



# Examining the Impact of the DE Tuition Change

When full-time, on-campus students registered for fall 2012 Distance Education (DE) courses, for the first time in more than a decade they didn't wince at the additional cost. For them, the price tag for taking their class in a lecture hall or taking it online was exactly the same. As a result, the percentage of the on-campus student population taking one or more online courses increased by one-third, jumping from 18 to 24 percent of the student population. Looking just at the undergraduate population, there was a startling 44 percent increase in the number of full-time, degree-seeking students who enrolled in a DE course.

In a world where costs only go up, why did taking a Distance Education course just get cheaper for some students? The answer lies in a change set in motion by the Provost's Distance Education Task Force. The task force was asked to examine, among other things, the NC State tuition model and recommend solutions to eliminate the tuition penalty for full-time, on-campus students taking some DE courses. They recommended, and it was approved, that tuition for on-campus degree-seeking students should be the same regardless of the course format.

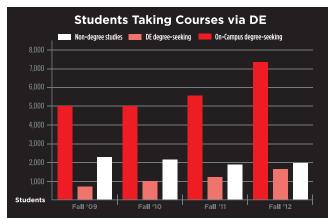
"We've had concerns for years about the inequities resulting from the different tuition models for campus and online courses," said Dr. Tom Miller, vice provost for DELTA. "When those models were put in place, no one expected Distance Education courses to be so popular among our on-campus students. We had to do something to fix the inequities."

The rush to sign up for DE courses begs the following question: "Why do so many on-campus students want to take courses online?" The reasons vary quite a bit. Some students take DE courses to accommodate schedule conflicts with their job or other courses. Some take DE courses because they learn better in an online environment. Some take DE courses because campus sections are filled and they

don't want to delay a course until the next semester.

A survey of NC State students enrolled in a fall 2012 Distance Education course showed that 66 percent of students listed "progress toward degree/certificate" as one of the main reasons for taking a DE course. In other words, taking courses via Distance Education allows on-campus students to maintain steady progress toward their degree, leading to more efficient graduation rates. Given this survey result, we conclude that by eliminating the tuition penalty for Distance Education courses, students can complete their degree programs and earn their diplomas more quickly.

"NC State's strategic goal of enhancing student success through educational innovation was a critical driver in getting the new tuition policy approved and implemented," Miller said. "We have seen an uptick in the average number of credit hours taken by full-time, degree-seeking students after the change, so it has made a positive impact on progress toward degree."



"Our challenge now is meeting the increased demand for online courses from on-campus students," Miller said. "Our courses are filling to capacity immediately after registration opens, leaving many students unable to enroll in the online courses they desire. The problem is exacerbated by the budget cuts the university had endured in recent years, but I'm hopeful that we will be able expand online offerings in the future as budgets catch up."



"The time required was much more than I

expected. Working out the best pedagogical

approach and then structuring the content to

produce a 'tight' course; preparing boat loads

of guiz guestions; and then lots of data entry

# **Exploring New Frontiers with Digital ASIC Design**

Any good experiment starts with good questions. What will it take to launch an open online course (OOC)? How many staff hours will course development require? Can we manage the necessary infrastructure to host it ourselves? Will it be financially feasible? Will

we learn lessons to help NC State find our place in MOOC mania?

These questions and more surfaced when DELTA first learned of Dr. Paul Franzon's plans to launch Digital ASIC (Application Specific Integrated Circuits) Design as an OOC experiment

in summer 2013. With the support of Engineering Online, Franzon, professor of electrical computer engineering, had decided to jump into the national trend of massive open online courses (MOOCs) by offering this free, graduate-level course to the public. At DELTA, we saw this endeavor as an opportunity to observe, and be part of, an intriguing experiment.

Step back a few months. By the summer of 2012, MOOCs were making headlines from *The New York Times* to *The Chronicle of Higher Education*. Universities across the country were scrambling to assess this disruptive innovation and determine how to participate. In December 2012, DELTA formed an internal MOOC response team, composed of staff with expertise in instructional technology, instructional design, systems development and support, technology infrastructure, and marketing and course administration. This response team was charged with assessing the MOOC landscape and exploring the components of a MOOC, so that DELTA would be ready to assist if an OOC/MOOC opportunity arose at NC State. Franzon's Digital ASIC Design was that opportunity.

"Our goal was to support Dr. Franzon, answer

questions, and learn along the way," said Kay Zimmerman, DELTA associate vice provost for marketing and partnership development.

As Franzon worked expeditiously to develop and deliver course content to the 651 students from around the globe who enrolled in the OOC, DELTA staff provided support in the background. Without resources to pay for a partnership with a third-party provider, DELTA used its existing technology platform

and infrastructure to host the course. Instructional staff worked with Franzon to develop accessible videos, assessment strategies and group work activities that would scale to a large, international class. Web developers created a website to market the course and assist in registration. And

into Moodle. Each step took significant time."

-Dr. Paul Franzon

all involved watched closely as the OOC experiment played out.

"The time required was much more than I expected," Franzon said. "Working out the best pedagogical approach and then structuring the content to produce a 'tight' course; preparing boat loads of quiz questions; and then lots of data entry into Moodle. Each step took significant time."

When the 12-week OOC came to an end, the experiment yielded more questions than it did answers. As expected, the team determined that successful deployment of an OOC/MOOC requires a vast amount of time and resources from the faculty and from DELTA. Now we're asking, what business model can provide resources to support MOOC development? How do MOOCs support NC State's and DELTA's strategic plans? How did we benefit from this OOC? As with any good experiment, we will examine the collected data, reflect and cautiously experiment further in search for answers.



# Flipping Precalculus to Improve Student Success

Several years ago Dr. Brenda Burns-Williams started to notice her students in MA 111: Precalculus Algebra and Trigonometry becoming disconnected from the course material—quite literally. They didn't want to carry around the enormous course textbook because it was heavy and not particularly useful, and it embarrassingly signaled to others that they were taking a "remedial" math class. More and more, her students left their books at home.

The textbook was symbolic of other problems with MA 111. Burns-Williams, senior lecturer in mathematics, believed her students were not retaining information from her lectures and were not interacting with the material in a way that allowed them to learn course concepts. In this large, predominantly freshman lecture course, around 35 percent of students were receiving Ds and Fs. In 2007, the NC State Registrar's Office pinpointed MA 111 as being high-needs for improvement given the high D and F grades and course withdrawal (DFW) rates and the prevalence of course repeats.

In 2009, Burns-Williams applied for, and was awarded, a DELTA Large Course Redesign (LCR) pilot grant to redesign MA 111. The grant program's purpose was to reconceive and rebuild the delivery of a large enrollment course to increase student learning outcomes, primarily by incorporating learning technology. Over the summer of 2009, Burns-Williams worked with DELTA instructional designers, instructional technologists and LCR coordinators to develop new course materials that would entirely change the way she taught.

When the MA 111 redesigned course piloted in fall 2009, Burns-Williams offered a new learning experience for her students.

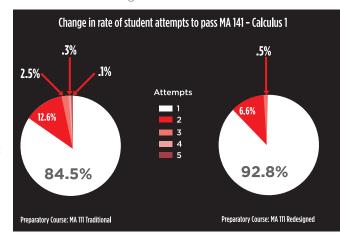
"Students can access material in a way that is most comfortable for them," Burns-Williams said. "They're able to get videos or read PDF versions of the notes and they can practice and write things down as they are learning. Instead of having a dry textbook or recalling what we did with the notes in class, they're

able to have a more dynamic interaction with the material."

By flipping her course and delivering content through short videos and PDFs on the new course website, Burns-Williams used class time for better purposes, such as small group work, active learning exercises and answering questions.

MA 111 has been taught in a redesigned manner each semester since fall 2009. DELTA has collected and analyzed data to assess student success after redesign, and the results have been impressive. Students' ABC grades have increased as much as 15 percent some semesters. DFW rates have declined. And most exciting to Burns-Williams, students who have taken the redesigned MA 111 are more successful in the subsequent course, MA 141, indicating a positive outcome associated with the course redesign project.

"The results have given DELTA statistical evidence



to promote course redesign across campus," said Dr. Traci Temple, DELTA assistant director of planning and assessment. "It serves as encouragement and provides more than anecdotal evidence that course redesign efforts have the potential to increase student retention, improve student performance, and increase mastery of learning and successful transfer of knowledge and skills to future courses."



### Improving NC State's Enterprise Learning Technologies

At DELTA, we are almost always upgrading something—a learning management system (LMS), tool, plug-in, or some piece of our extensive enterprise learning technologies. If we're not actively upgrading, we're planning an upgrade. It's enough to make a user wonder, why all the changes?

When it comes to learning technologies, our guiding philosophy is to meet the needs of the learning community at NC State, both faculty and students.

"We strive to identify and address needs within the community, as well as standards of reliability and efficiency, enabling instructors to effectively teach their classes," said Dr. Marty Dulberg, learning management system coordinator.

By meeting needs we mean a wide range of needs, some of which users rarely think about. Of course, we aim to provide tools that are easy to use, widely

accessible, flexible and well supported. Then there's the less exciting set of behind-the-scenes requirements we attend to: security, reliability and storage capacity. In FY 2012-13 we took measures to address

these needs in our major tools: Moodle, Mediasite, WolfWare and Blackboard Collaborate.

Perhaps the most visible change in DELTA's learning technologies in FY 12-13 was the move to Moodle 2 in the spring and summer of 2013. Because developers in the Moodle community were no longer supporting Moodle 1.9, our previous version, we upgraded our open source LMS to Moodle 2.3. The upgrade provided our users in more than 7,000 course sections with new features, a more modern interface, increased reliability, and improved scalability for our growing community. Plus, with the upgrade, Moodle became mobile, allowing students to easily access course materials on a mobile

device on the go. DELTA staff created a course copier in Moodle 2.3, which allows faculty to copy courses from one semester to the next with ease. Throughout the upgrade, we provided support resources, workshops and help desk assistance to create a smooth transition.

Moodle wasn't the only tool that went mobile last year. The Mediasite classroom capture tool upgrade in spring 2013 enabled mobile video playback on any newer Android or iOS mobile device. The upgrade from Mediasite 5.5 to 6.0 required a change in file formats from WMV to MPEG files, which made mobile playback possible. In addition, changes made during the upgrade increased security of our course materials and decreased the amount of storage space required per file, which is crucial given that instructors create roughly one terabyte of Mediasite data per month. With more than 800,000 views of NC State Mediasite recordings during FY 12-13, these tool improvements impacted a significant number of students and their access to course materials.

While managing the major upgrades to Moodle and

Mediasite, DELTA smoothly transitioned synchronous learning management systems from Elluminate Live! to Blackboard Collaborate and made minor interface improvements to WolfWare, our primary access point for NC State learning technologies.

-Dr. Marty Dulberg

"We strive to identify and address needs

ple to effectively teach their class."

within the community, as well as standards

of reliability and efficiency, enabling peo-

All the while, we kept the needs of the community as the top priority.

"We welcome suggestions from anyone with an NC State ID," Dulberg said. "Students, faculty, administrators and staff are all welcome to provide feedback. We want to hear what everybody has to say."

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"I would have never experienced or

learned many of these online learning

the support I've received from LearnTech

management technologies without

and DELTA at NC State."

### Examining One Instructor's Experiences with Instructional Support Services

NC State faculty are world-renowned experts in many areas, but they are not always familiar with using learning technologies. That's why they turn to DELTA's Instructional Support Services (ISS) team for help. This team of instructional technologists helps build instructors' skills and confidence as they incorporate technology into their teaching.

ISS assists hundreds of instructors each year through DELTA's services, including workshops and seminars, the LearnTech Help Desk and one-on-one instructional consultations. Dr. Mark Keen, teaching assistant professor of microbiology, began attending DELTA workshops during DELTA's 2010 Summer

Institute, and he keeps coming back for more.

"Sometimes I attend the same workshop two or three times," Keen said. "I think we're all on a learning curve and I am always learning something new at DELTA."

What Keen has learned from attending DELTA's workshops allows him to more efficiently manage his large general microbiology courses, which generally run between 200 and 300 students per semester. With the experience he gained from Moodle workshops, Keen has greatly improved his efficiency using Moodle's grade book and quizzes. Through Moodle, his students can easily access their grades in real time. Keen has implemented exams and quizzes online, which has eliminated the need to organize, print, grade and return hundreds of paper microbiology tests.

Keen also learned to use Blackboard Collaborate through one of DELTA's workshops, which was taught remotely through Collaborate itself. He found DELTA's instructional method—teaching end users a new technology by completely immersing them in it—to

be extremely effective. Now, Keen uses Collaborate to host question sessions for his students prior to exams. Previously, question sessions were held on campus in classrooms reserved on the evening prior to the exam. These classroom sessions restricted the number of participating students and restricted access to many due to time and travel conflicts. Implementing Collaborate sessions provides Keen with a more accessible and inclusive real time method to address students' questions online the night before an exam.

Stacy Gant, director of DELTA's ISS team, said the workshop and seminar series is continuously evolving to best serve our faculty's needs.

"We are constantly adding to our workshops—

improving our classes by updating content to reflect new features and adding new seminars each semester to reflect emerging technologies and hot topics in higher education." Gant said.

-Dr. Mark Keen

education, Gant said.
In addition to attending

DELTA workshops and seminars, Keen frequently consults DELTA for support through the LearnTech Help Desk. When setting up the Moodle grade book for his courses, Keen requested an instructional consultation with a DELTA staff member to resolve his questions. Keen believes the support he has received from ISS has enhanced his effectiveness as a large course instructor.

"I'm a lot luckier than my colleagues who teach at smaller colleges," Keen said. "They just don't have this kind of support service for learning management software. I would have never experienced or learned many of these online learning management technologies without the support I've received from LearnTech and DELTA at NC State."



# Recording Distance Education Courses-From a Distance

When faced with a 20 percent increase in demand for their Distance Education (DE) classroom recording services, Tony Pearson and his team in DELTA's Video Communications Services (VCS) refused to choose between strong customer service and scalability. Instead, they found a way for their team to serve more instructors and students with the same commitment to service that this group has provided for more than 30 years.

"Our forte is to provide customer service behind the scenes," said Pearson, DELTA's associate director for VCS. "We want to be there for the faculty. We want to let them focus on pedagogy, and we'll focus on the technology."

When an instructor walks into a DE classroom, VCS staff are dedicated to making that day's class recording process smooth and seamless. The instructor can concentrate on his or her lecture, the students in the room can focus on learning, and the DE students around the globe can be guaranteed that the course lecture will be uploaded fifteen minutes after the live class ends.

With a little vision, creativity and planning, VCS devised a plan for controlled growth in classroom recording services: the central control room (CCR) model.

In spring 2012, VCS launched production with the CCR, which allows classroom support technicians to remotely monitor and control classroom recordings around campus from their office in Ricks Hall. This new model replaces the previous practice of stationing one technician in a control room at the back of each DE classroom. Not only does the CCR allow a single technician to monitor production quality in multiple classrooms simultaneously, it also frees up physical classroom space for additional student seats.

After launching the CCR, VCS recorded more than 11,000 hours of classroom instruction in FY 2012-13 in their nine DE classrooms, supporting between 60 and 70 DE courses each semester. While this seems like an enormous load, VCS is prepared for even more.

To date, only five DE classrooms have been refurbished to integrate with the CCR; by summer 2014 a total of eight classrooms will be operated remotely. And this doesn't even begin to approach the 24-classroom capacity for the CCR.

"DE enrollment growth means increased demand for video recordings that support online instruction and downloads to mobile devices for anytime, anywhere access to course content," said Dr. Rebecca Swanson, associate vice provost for Distance and Distributed Education. "Only by optimizing DE classroom capabilities can we meet the unprecedented demand for video recordings."

With technicians removed from the classroom, you might expect customer service to suffer. Not so. Pearson has measures in place to guarantee excellent instructor support on a larger scale. For example, a technician serving as a runner arrives at the beginning of each class meeting to make sure that the recording is running smoothly. After the runner moves on to the next class, a remote technician is available at the touch of a help button. And in case some equipment fails, each classroom is equipped with a backup recorder poised to capture the classroom experience.

"We pride ourselves on having a lot of redundancy in place," Pearson said. "I can count on one hand the number of sessions that we've lost in the last 30 years. That gives us the quality of service to say to our faculty that you're going to get what you're promised."

This promise of quality service keeps the DE instructor-student experience focused on teaching and learning—not on the technology that makes it all possible.

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"When people think of education videos, they

# Transforming Educational Videos to Engage Students

Sarah Egan Warren, assistant director of the English department's Professional Writing Program, struggled to convince her students that what they learned in her class mattered. These future engineers could easily see how they would benefit from strong math skills or a foundation in engineering principles, but they didn't always recognize the value of taking an English course. After all, they weren't training to be writers. Why were they required to pass the professional writing course, English 331: Communication for Engineering and Technology?

While Egan Warren knew the answer to this question, She needed some help getting her message across. She and Sarah Glova, fellow lecturer in the Professional

Writing Program, wanted to make videos of professionals in the field discussing how being good communicators can help them professionally. They came to DELTA and asked for help in executing their plan.

When members of

DELTA's Video Communication Services (VCS) team began working with Egan Warren and Glova, they considered ways to film this series of videos that would capture the students' attention and drive home their message. Drawing inspiration from the works of filmmaker and designer Hillman Curtis, VCS's Arthur Earnest and John Gordon imagined a way to bring these videos to life that went beyond the traditional educational video.

"When people think of education videos, they think of those dry, 16mm cheesy videos from the old times," said Earnest, DELTA technology support technician. "But we have the ability now, and if we have the inspiration, we can make it very cinematic. It doesn't have to be boring."

The result was Cube Talk, a stunning series of five

videos that captured three local professionals talking about the impact of solid communication skills on the job. Filmed in a small conference room in an urban office space, the professionals casually chatted about their communication experiences in the workplace, reflecting themes taught in the course. The setting, combined with a modern style of shooting using a digital cinema camera, was designed to help the student audience engage in what seemed like an intimate conversation.

"The videos help 'sell' the importance of this course," Egan Warren said. "When students hear from professionals in their field that communication, collaboration and appropriate use of technology are all important to being successful in the workplace, it seems to carry more weight than if they are only hearing that message from the instructor."

Egan Warren and Glova have shared the Cube

Talk videos with 11 instructors in the Professional Writing Program, and the videos are being incorporated into three courses in the curriculum. Because the videos were edited

think of those dry, 16mm cheesy videos from the old times. But we have the ability now, and if we have the inspiration we can make it very cinematic. It doesn't have to be boring."

-Arthur Earnest

in a simple, clean manner, they are flexible enough to allow each instructor to customize how they use them in their course. According to their students, the videos are having an impact on how they value the course content.

"Overall, the theme that effective communication is a vital aspect of the workplace helps me understand the relevance of this course and makes me appreciate the material covered throughout the semester," a Professional Writing Program student said after watching the Cube Talk videos.

## **Sharing Best Practices**

The word is out: NC State has a reputation for quality online education and the innovative use of learning technologies. As part of a leading research university, DELTA staff members are motivated to keep up with the top-notch faculty we support. For us, that means staying abreast of trends in learning technologies and online education, being leaders in those communities, and sharing best practices. DELTA staff are helping other universities improve their online instruction, one conference presentation at a time.

In FY 2012-13, our staff presented at regional, national and international conferences, sharing with peers the results of our experiences at NC State. Explore our presentation topics. View some of the materials. Discover how we are shaping the educational landscape.

#### Course Redesign

#### "Measuring Student Success in Blended Learning Environments after Course Redesign"

Author: Dr. Traci Temple

Conference: EDUCAUSE Learning Initiative (ELI)

Annual Meeting 2013 Date: February 2013

#### "Assessment of Learning Outcomes in Blended Learning Environments after Course Redesign"

Author: Dr. Traci Temple

Conference: Lilly Conference on College and University

Teaching

Date: February 2013

#### "Impact of Course Redesign on Student Success at NC State"

Author: Dr. Traci Temple and Cassie Kozyrkov Conference: Lilly Conference on College and University

Teaching

Date: February 2013

#### **Instructional Tools**

#### "Innovative Tools for Learning"

Author: Cathi Phillips Dunnagan

Conference: 2013 New Media Consortium Summer

Conference Date: June 2013

#### "Designing Mobile Learning Experiences for Higher Education"

Author: Amanda Robertson, David Tredwell and

Cathi Phillips Dunnagan

Conference: EDUCAUSE Learning Initiative (ELI)

Online Seminar

Date: September 2012

### "Top Five Challenges for Putting Science Labs Online for Distance Education"

Author: Lee Ann Gillen and Cleo Magnuson Conference: EDUCAUSE Learning Initiative (ELI)

Annual Meeting 2013

Date: February 2013

### "Putting Science Labs Online for Distance Education: Challenges and Solutions"

Author: Lee Ann Gillen and Cleo Magnuson Conference: 29th Annual Conference on Distance

Teaching & Learning Date: August 2012

#### "Google Apps for Educators"

Author: Lee Ann Gillen and Yiling Chappelow Conference: Sloan Consortium 6th Annual International Symposium for Emerging Technologies for Online Learning

Date: April 2013

#### "Google Apps and Maps for Use in Blended and Online Courses"

*Author:* Lee Ann Gillen and Cleo Magnuson *Conference:* 29th Annual Conference on Distance

Teaching & Learning Date: August 2012



#### "Making Moodle Work For Everyone"

Author: Dr. Marty Dulberg and Lou Harrison Conference: Moodle Moot West Coast Date: March 2012

#### "The Importance of Governance: Ongoing Engagement with the Campus Community around the LMS"

Author: Dr. Marty Dulberg Conference: SALT 2013 New Learning Technologies Conference Date: March 2013

#### "An Introduction to the Moodle File API"

Author: Glenn Ansley
Conference: Moodle Moot West Coast
Date: March 2012

"People Matter: Engaging, Developing, and Retaining Great People in Not-so-Great Times"

Author: Dr. Donna Petherbridge and David Howard Conference: EDUCAUSE Mid-Atlantic Regional Conference

Date: January 2013

"A Small Team has Broad Impact by Leveraging Partnerships, Strategic Innovation and a Faculty Awards Program"

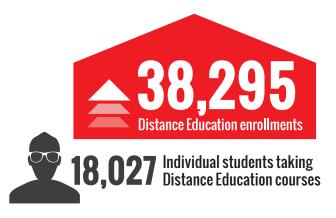
Author: David Howard, Lee Ann Gillen and Amanda Robertson Conference: EDUCAUSE Mid-Atlantic Regional Conference

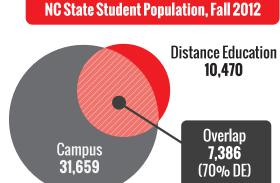
Date: November 2012

## By the Numbers

DELTA's wide range of services impacts more and more NC State faculty members, staff and students each year. A quick glance at our FY 2012-13 stats demonstrates the scale of our services in distance education, instructional support and production, and enterprise learning technologies.

### **Distance Education at NC State**





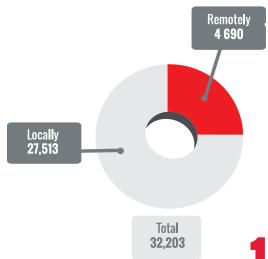


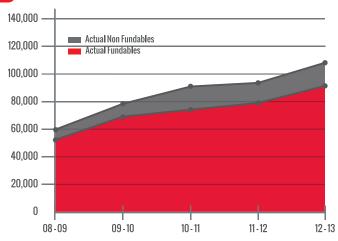




#### **Proctored Distance Education exams**

#### Distance Education Student Credit Hours 2008-2013





average annual growth in distance education student credit hours

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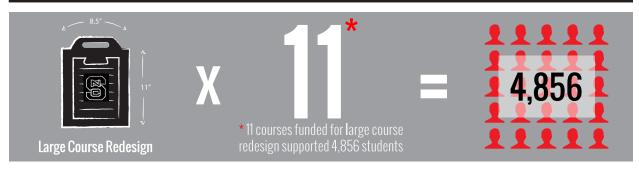
## **Instructional Support**





1,089 Workshop and seminar participants

### **Instructional Production**



DE courses received production support or consultations	36
Student enrollments supported by DELTA video production	11,374
Hours of professionally-recorded classroom instruction	11,189

## **Enterprise Learning Technologies**

**90.2**%

of NC State students use at least one of our learning management systems



828,840

views of lecture





7,052 course sections use Moodle



**5,239**virtual meetings held in Blackboard Collaborate

2,843
course sections
use WolfWare Classic

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## **Looking Forward**

"DELTA means change" is something we often hear around our organization. And in a field that relies heavily on technology, that's no surprise. Part of our responsibility to NC State is to look ahead at changing trends in learning technologies and online education and to make smart choices that will benefit our students, our faculty and the citizens of North Carolina. Get a glimpse of some changes we're exploring.

## **Learning Analytics**



Big data is impacting every industry, and higher education is no exception. DELTA is excited to join campus partners in exploring how learning analytics—the collection, analysis and reporting of student data—can improve student learning outcomes at NC State. In particular, learning analytics could give instructors and advisors the tools to identify struggling students in time to provide additional support.

#### Non-Credit Distance Education



In today's budget climate, our faculty are searching for ways to increase revenue with existing resources. Our citizens are seeking continuing education and professional development to boost their careers. Put them together, and you have a natural boom in demand for non-credit distance education courses. DELTA is exploring how we can apply our experience in distance education course management and delivery to the non-credit market. Working together with partners across campus, we are investigating the technical infrastructure and the administrative and financial models needed to make this emerging area a success.

### **Blended Learning**



The terms "course flipping," "course redesign" and "blended learning" speak to the same general concept: making the best possible use of face-to-face time with your students and using effective tools to deliver content outside of class. While DELTA has been experimenting with these concepts for years, we've focused on remedial, large enrollment courses. It is becoming widely accepted that blended learning models are successful across disciplines and class sizes. We're excited about upcoming opportunities to extend blended learning into more courses and programs, providing tools, support and consultations to help faculty think about their courses in new ways.

## **New Distance Education Courses and Programs**



As the economy continues to rebound, North Carolinians are looking to NC State to help them put their careers back on track through online degree programs. Consequently, DELTA has received a steady stream of requests from departments for new graduate-level Distance Education courses and programs, primarily in the STEM disciplines. Currently, 11 initiatives are in the discussion phase, and some of them are part of a new classification of interdisciplinary programs on the rise: Professional Science Master's degree programs.

## **Desktop Recording and Media Management**



DELTA has been offering video services for more than a decade, but in the upcoming year we're taking video to a new level by placing it in your hands. Using My Mediasite, a new service from Mediasite, we have begun beta testing desktop recording and personal media management. From a personal computer faculty members will be able to capture presentations, upload previously recorded video, and edit and manage media. This new service will allow faculty to update course materials on the fly without overhead for production time. Faculty will value the convenience, and students will appreciate the fresh, up-to-date course materials.

