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

Experts in improving learning and reducing cost in higher education.

The Learning MarketSpace, October 2005

A quarterly electronic newsletter of the National Center for Academic Transformation highlighting ongoing examples of redesigned learning environments using technology and examining issues related to their development and implementation.

....

TABLE OF CONTENTS:

....

1. THE CAT VIEWPOINT

Perspectives on issues and developments at the nexus of higher education and information technology.

Information Technology: A Problem or a Solution for Underserved Students

Within the higher education community, there are a number of assumptions about underserved students and technology use, which can be summed up as, the two do not mix. These assumptions relate to both access — the have and have-not issue — and use: that underserved students do not like to use technology or that use of technology is an obstacle to student success.

As reported in the July 2005 issue of *The Learning MarketSpace*, NCAT recently conducted an in-depth study to determine how redesigning introductory courses can contribute to the success of traditionally underserved students (students of color, low-income students and adult students.) The focus of the study was a sub-set of 15 institutions with high percentages of the target student populations that participated in the Program in Course Redesign (PCR.) All 15 institutions increased student success and retention, while simultaneously reducing instructional costs. Since the use of information technology was a cornerstone of the course redesigns, clearly, they could not have achieved the level of success that we report if the common assumptions about underserved students and technology use are correct.

When many of the projects launched their redesigns, they were concerned about underserved students' access to technology. IUPUI, for example, reported some initial concerns that low-income students would have difficulty because of access; The University of New Mexico (UNM) reported the same concerns about Hispanic and Native American students. Others echoed those concerns. All of the projects reported that, in practice, these concerns were resolved over time.

An ever-increasing proportion of underserved students have personal access to the technology that is required to participate in redesigned courses, and for those who do not, the easy availability of campus labs can address the problem. As more and more students at a given campus own personal computers, lab space and time have become increasingly freed for those who do not. This is not to say that access should not be a concern—it should be—but an effective solution is to provide access via on-campus labs for those who need it.

When the access issue was handled properly, faculty participating in the PCR received no complaints. The key was to make sure that campus labs were open a sufficient number of hours to meet students' needs. The University of Tennessee-Knoxville (UTK) reported that early in the redesign some low-income students, who comprise 41 percent of the student body, complained about having to do parts of the course online, but those objections diminished over time. UTK's language lab is now open from 8 a.m. to 8 p.m. , and this wide span of hours has helped reduce complaints.

Campus labs should not be sterile spaces but ones in which help is available. At Riverside Community College — where 32 percent of the freshmen are Hispanic and 13 percent are African-American — students liked using instructional software in a lab environment to learn math. Many students were concerned about taking math, but using the software helped them overcome some of their fears. They welcomed the individualized assistance that was available in the lab and commented that they would have much more difficulty learning math without the combination of software and personal assistance that supported them in their studies.

A second area of concern among the projects was the need for adequate bandwidth for students who accessed the course from home or work. Rio Salado reported that the need for adequate high-speed access to use course software resolved itself over time. Adequate bandwidth used to be a problem, but it no longer seems to be an issue. More than 60 percent of Rio Salado students have high-speed Internet access. At IUPUI, there were a few problems with access — especially with greater reliance on OnCourse, the campus course management system. Students were expected to post one response the night before each class and could dial in. The quizzing feature of the course, however, was more functional with high-speed access and became problematical if students had dial-in access only.

Awareness of bandwidth issues and careful planning of all elements of course delivery can overcome most problems. UTK, for example, experienced initial difficulties regarding the variety of modem connection speeds and/or computer configurations from which students were accessing course materials. Based on feedback received from students, the project team reviewed all of the more than 400 graphic, audio, and video files utilized in the course and optimized them for efficient download speed. A tutorial was developed to provide students with clear instructions on how to download the players needed to access the course audiovisual files and how to configure those players for their connection speeds.

A third area of concern involved adequate training and support to make sure that students were able to access and use the technology easily. This is an issue for *all* students—not just those who are underserved—when institutions offer online courses or courses with online components. Technology support personnel at Florida Gulf Coast University (FGCU) reported there was no consistent pattern of people who needed help based on age ; questions usually related to mechanical issues of logging on or dealing with pop-ups. Thirty-seven percent of FGCU students are older than 25, and 33 percent are part-time. At Southern Miss, there was some suspicion that low-income students had initial difficulties with the technology, but the school added training, which helped resolve the problem.

Generally, there did not seem to be a difference in student reaction to the technology aspects of the redesigned courses based on students' underserved status, as reported by the project leaders. Both Southern Miss and FGCU conducted follow-up surveys that confirmed these anecdotal impressions. At Southern Miss , there was no significant difference between student responders who received financial aid and those who did not in terms of their reaction to the course on such variables as perception of course difficulty, value of online materials, quantity of work, and use of online materials in other courses. Of the adult students responding to an online survey of FGCU students at the end of the fall 2004 term, 85 percent said they experienced no significant technological problems while taking the course, and 85 percent agreed that the online learning materials helped them work on the course whenever they wanted.

In addition to demonstrating that access to technology was not a problem, the NCAT study also revealed that both faculty and students identified a number of benefits of using technology that are particular to underserved students.

For adult working students, the most predominant benefits were the convenience and flexibility that technology-enhanced approaches provide. In response to an online survey at Southern Miss , where a large percentage of the students are both low income and adult, 97 percent of the students indicated that the online materials helped them work on the course whenever they wanted; 91 percent said they found these materials helpful; 85 percent disagreed or strongly disagreed with the statement, "I missed the chance to attend lecture on a regular basis"; and 94 percent indicated they would like to see the online features incorporated into other courses at Southern Miss . Students liked the ability to organize their study hours around their other obligations.

Adult students at FGCU have a hard time scheduling work and classes. The redesigned fine arts course allowed them to work from home, and students appreciated the flexibility and convenience of being able to do so. UNM adult students echoed this view: they liked being able to do much of their work at home. Since lectures

are optional in UNM's redesigned course, students could adjust their study schedules if needed. UTK reported that 53 percent of students in the redesigned course had a job of more than 20 hours per week and that online learning resources benefit those who work because they can have access at any time. If Tallahassee Community College (TCC) students had to miss a class because of work or family obligations, they knew what was covered by what was posted on the course Web site and they did not fall behind on their assignments. At IUPUI, the forums and discussion groups were particularly important for working adult students since IUPUI is a commuter campus.

These reports are consistent with the literature on distance and adult learning, yet only three of the 15 projects (and only five of the 30 PCR projects) were fully online. The majority of the redesign projects blended online elements with face-to-face experiences on campus. Nevertheless, students consistently cited the convenience and flexibility provided by the technology as the most beneficial aspects of their course experience. The lesson for other institutions is that even if they do not want to offer a fully online course, they can still add convenience and flexibility — so appreciated by students — to on-campus courses by taking advantage of the capabilities of information technology.

It is difficult to separate the benefits that technology-enhanced approaches offer for adults, low-income students, and students of color since these categories of students tend to overlap: students of color tend to be low income; adults tend to be working students, as do low-income students; and so on. There is no indication that students of color had anything but positive attitudes toward the use of technology in the redesigned courses. In some instances, they appear to have had more-positive attitudes than white students did.

At Southern Miss, African-American students ranked the redesigned course higher than white students did in terms of student satisfaction. On the 8 to 10 questions on student surveys that ask about discrete elements of the course (presentation, instructors' ability to explain, attitude toward students, and so on), African-American students routinely gave the course higher marks than white students did. Explaining the satisfaction difference is difficult. African-American students were just as likely as white students to attend the live presentations, to take mastery quizzes multiple times, to use the tutors to get help with writing assignments, or to have a part-time job.

TCC may have an explanation for the higher satisfaction ratings among African-Americans. The TCC faculty believe that the use of technology in the redesigned course provided a more-open, more-democratic environment and greater inclusion of all students. Previously, students of color would not speak out in class, but in the redesigned course they were more than willing to "speak up" while online. Both adults and students of color used the online resources for self-remediation — probably, the faculty surmise, because no one knew they were doing so. Rather than feeling stigmatized when seeking help, students could find what they needed on their own time and without anyone's knowing. The learning environment at the University of Alabama , where students received individualized assistance in labs was much friendlier to students seeking help than the traditional classroom was, and it led to higher performance among African-American freshmen.

Faculty members at Fairfield University commented that the use of visual aids and online demonstrations of biological concepts increased options for students for whom English is not the first language, since they needed to rely less on verbal explanations. While this change helped all students, Hispanic students at Fairfield have commented on how helpful they found these computer-based learning resources.

What the PCR institutions have in common is a commitment to ensuring learner readiness to engage in technology-based courses. Learner readiness involves more than access to computers and to the network. It also involves access to technical support as well as other forms of student support —such as help in using navigation tools and course management systems — and to processes that enable students to gain literacy if they do not already possess it.

Our experience in the PCR has promising implications for institutions seeking to increase student success. Information technology can be a solution rather than an obstacle to increasing success for underserved students. This means using information technology to support good pedagogical practice rather than using technology for technology's sake. It also means making sure that learners have access to the necessary technology and know how to use it comfortably. In each instance, redesign teams have given careful consideration to how technology can best be used to support student learning and have taken into account the specific needs and interests of students.

A PDF version of the NCAT monograph, *Increasing Success for Underserved Students: Redesigning Introductory Courses*, which fully describes the study, is available at http://www.thencat.org/Monographs/IncSuccess.htm.

--Carol A. Twigg

. . . .

2. WHAT'S NEW

Featuring updates and announcements from the Center.

Twigg to Participate in Lumina Summit

On November 2, 2005 , Carol Twigg will participate in the "College Costs Invitational Summit" sponsored by Lumina Foundation for Education and the James B. Hunt, Jr. Institute for Educational Leadership and Policy to begin a national dialogue on the issue of college affordability. Dr. Twigg wrote a policy paper titled *Improving Quality and Reducing Costs: The Case for Redesign* that will be part of a series of constructive, cost-effective

solutions to the problem of college costs based on evidence and experience. This series will focus on innovative policy solutions that provide a range of options for policy makers and will be published by Lumina in conjunction with the Summit . Lumina Foundation has also produced a related policy brief, " Collision Course: Rising College Costs Threaten America's Future and Require Shared Solutions," which identifies potential strategies to consider in addressing the problem. Lumina Foundation, a private independent foundation, strives to help people achieve their potential by expanding access and success in education beyond high school.

Institutions Pursue Redesign to Address Campus Challenges

Three institutions are using NCAT's approaches to initiate redesign programs on their campuses and have invited NCAT staff to their campuses to provide assistance. At the **University of North Texas** (UNT), faculty and administrators have identified redesign as a focus for the institutional self-study they are conducting as part of their re-accreditation. The UNT Quality Enhancement Plan (QEP) seeks to transform instruction and student learning outcomes in large-enrollment undergraduate courses by enhancing overall instructional quality, improving student access to courses, and strengthening the efficiency of the learning/teaching process. To learn more, contact John Todd at todd@unt.edu. **Calhoun Community College** has received a Title III grant to redesign 36 courses over the next five years to improve the quality of student learning while containing the costs of instruction. As part of orienting faculty to redesign, NCAT led a series of faculty development experiences including sessions with adjunct faculty and a three-hour seminar for the redesign teams. For more information, contact Randy Cox at rlc@calhoun.edu. **Boise State University** (BSU) is organizing redesign efforts to address the problem of bottleneck introductory courses. BSU is considering offering a series of grants as well as holding a campuswide conference in spring 2006 to provide more information about the NCAT redesign process. To learn more, contact Ben Hambleton at bhambelton@boisestate.edu.

Reminder: Bookmark the New NCAT Web Site

Remember to visit the new NCAT site to see the new look and to bookmark the new URL www.theNCAT.org. If you try to access the old site www.center.rpi.edu, you will automatically be redirected to the new one. Please update your links. You may need to use the new site's search function to find a particular item. All of the valuable information from the old site is still available in a new, easily accessible format for your continued use. We welcome your feedback!

Tip: New Newsletter Format

Thank you to everyone who provided us with feedback as we launched our new newsletter format in July. If you would like to forward this newsletter to a colleague (and we hope you will) please use the "Forward" link on the bottom of the newsletter itself rather than the forward button on your e-mail program. This way, the software can determine compatibility with the users' e-mail program and can format the newsletter correctly.

. . . .

3. CENTER CHRONICLES

Featuring initiatives to scale course redesign through state- and system-wide redesign programs.

University of Hawaii Kicks Off Second Round of Redesigns

In partnership with NCAT, the University of Hawaii System (UH) launched a second round of its systemwide redesign initiative this fall. The first workshop for Round II will be held on November 18 th, and faculty and administrators from all 10 campuses are invited to participate. The three campuses participating in Round I are currently piloting their redesigns in psychology, information science and ethno-botany; assessment results will be available after the first of the year. For more information about the UH initiative, contact Hae Okimoto at hae@hawaii.edu or see http://www.thencat.org/States/Hawaii_System.htm.

Preliminary Results from the Ohio Learning Network Initiative

Two of the nine institutions funded as part of the **Ohio Learning Network's** (OLN) Technology Innovation Course Redevelopment Grants have completed their pilot terms. **Central Ohio Technical College** (COTC) redesigned Human Anatomy and Physiology I (HAP1), and initial results indicate that the redesign is working well. During the summer pilot term, 21 students registered for the traditional in-class section while 69 registered for the redesigned sections. COTC had to cancel a traditional section and add a redesigned section, making a total of five sections (one traditional and four redesigned.) Students in the redesigned sections so enjoyed the wide selection of online learning materials that they shared their access to the course web site with friends in the traditional section, thus causing some confounding in the learning outcome comparisons. During the pilot, the Drop-Failure-Withdrawal rate for the traditional section was 29 percent compared to 9 percent for the redesigned sections. During the fall 2005 term, students who had taken the redesigned HAP1 also signed up for a redesigned subsequent course: Human Anatomy and Psychology II. In addition, many who took HAP1 in the traditional model have selected the redesigned model for the second course, necessitating the addition of a redesigned section and the canceling of three traditional sections. To learn more, contact Margaret Trim at mtrim@cotc.edu or Aimee Wagner at awagner@cotc.edu.

Bowling Green State University (BGSU) redesigned a graduate level course titled Curriculum, part of a number of graduate education degrees. The pilot was very successful: 40 students completed this graduate-level, online course, producing comparable artifacts to their face-to-face counterparts. Grades for the redesigned course in the summer were comparable to those in traditional sections in the previous spring term. The new format allowed BGSU to include students from across the State of Ohio more cost effectively and ensured that all students who needed this course could take it. The faculty team continues to refine the course

assignments and analyze the extensive qualitative data they collected in the redesign pilot. For more information about the BGSU project, contact Savilla Banister at sbanist@bgnet.bgsu.edu.

To learn more about this statewide initiative, contact George Steele at gsteele@oln.org or see http://www.thencat.org/States/Ohio_Learning_Network.htm.

NCAT's Approach to Scaling

NCAT continues its three-pronged approach to scaling the successes of the Program in Course Redesign and the Roadmap to Redesign, working with leaders who recognize how course redesign can ensure greater student success and reduced instructional costs. First, NCAT is working with a number of national organizations such as the Education Trust and The League for Innovation in the Community College to open a national dialog on improving college access and success through course redesign and to devise course redesign programs that address their constituents' particular issues. Second, NCAT is talking with regional higher education compacts to develop regionally focused course redesign programs. Carol Twigg will make a presentation to the **Western Interstate Commission for Higher Education** (WICHE) commissioners on November 2, and Carolyn Jarmon has just returned from a preliminary meeting with the **Midwestern Higher Education Compact** (MHEC) policy staff. Third, NCAT is targeting specific states to replicate and improve upon the statewide course redesign programs that have been launched in Ohio and Hawaii. Conversations are in progress in California, where a number of foundations are interested in course redesign for California's community colleges; in Virginia, where Carol Twigg will be a featured speaker at an invitational meeting in Richmond on November 15 organized by the higher education community, the business community and state government; in Tennessee, where policy makers are looking for alternatives for increasing success in remedial courses; and in several other states that are looking for data-driven approaches to increasing access, success and cost-effectiveness. For more information about how your state or consortium might work with NCAT, contact Carol Twigg at ctwigg@theNCAT.org.

. . . .

4. THE ROADMAP TO REDESIGN (R2R)

Featuring progress reports and outcomes achieved by the Roadmap to Redesign.

Most of the Roadmap to Redesign projects are fully implementing their redesign plans this fall. Several are conducting a second, larger pilot and plan to fully implement in the spring. To read abstracts describing the projects, see http://www.thencat.org/R2R/R2R_ProjDiscipline.htm.

Calhoun Community College's incorporation of online quizzing in its redesign of statistics is going very well. Students seem to like having the opportunity to improve their scores as they master the material. As hoped, the positive effects seem to be strongest for weaker students, who are less likely to keep up with their work in a timely manner. To learn more about the project, contact Randy Cox at rlc@calhoun.edu.

Full implementation of the psychology redesign at **Chattanooga State Technical Community College** (six sections enrolling 489 students) is off to a good start. The team is experiencing fewer design glitches, better student participation, and lower faculty and student frustration this term. Based on the pilot experience, several changes have been made. Course content has been modified and reorganized, and the web site has been aligned with these changes. The team has added an assignment to help students identify their learning preferences using North Carolina State's *Index of Learning Styles*. At the beginning of the semester, the team met with Advising Center staff to explain the redesign so they can better represent the course to registering students. The semester schedule and online registration system informed students that WebCT use was mandatory. To ensure that students stay informed and to increase retention, the team sends them a weekly informational email about video viewing times, use of PowerPoints, faculty office hours, and assignment due date reminders. During the third week, faculty called all students who had not logged on and suggested they log on or drop the course immediately. Overall, these changes have resulted in the course running more smoothly and successfully. The team continues to be challenged by workload distribution issues and different teaching styles; however, the benefits of the redesign for both students and the psychology department are clear. To learn more, contact Donna Seagle at donna.seagle@chattanoogastate.edu.

The fully implemented introductory psychology redesign at **Eastern Washington University** is underway, and all major challenges have been met. All seats are full: 512 students in two large lecture sections and 16 students each in 32 seminar-style break-out sections. All positions are staffed: a new instructor is teaching one of the large lecture sections; each of the two main instructors is assisted by a teaching assistant and 16 peer mentors. Peer mentors are enrolled in a three-credit independent study course so that they can be trained and supervised. In addition, the team has introduced scaffolding to address the problem of non-participation. Students who do not take a mastery quiz in the first week are required to attend a workshop to determine the nature of their problem--technology, internet access, misunderstandings, illness--and staff help them solve the problems. Students who do not log on during the second week are referred to their academic advisors for counseling. Students who do not log on by the third week are told that they will receive a failing grade if they miss another week without taking a quiz and are asked to sign a contract agreeing to complete all remaining mastery quizzes. By the third week of the term, only 3 percent of the students were classified as non-participants. To learn more, contact Bill Williams at bwilliams@mail.ewu.edu.

A second pilot (one large section taught by the professor who conducted the spring 2005 pilot) of **East Carolina University's** psychology redesign is off to a good start. The team has addressed a number of problems encountered in the initial pilot. In-class registration for *MyPsychLab* on the first day of class removed much of the confusion experienced in the spring. The number of discussion groups has been reduced but

scheduled for maximum use, and the discussion group leaders are better trained than in the spring. Surveys of spring students indicated that while students believed that the mastery quizzes were one of the most helpful strategies for succeeding in the course, they didn't always take advantage of this useful tool. The grade value of the mastery quizzes has been raised to encourage student participation. Most importantly, the course schedule now has a longer master lecture and breakout sessions at the same time on the second day, making the course structure easier for students to follow. Initial review of performance on the first test indicates that students are performing at or above the class average last spring. To learn more, contact Dorothy Muller at mullerd@mail.ecu.edu.

At **Georgia State University**, full implementation of the redesigned College Algebra (19 sections) and Precalculus (15 sections) courses is underway. The semester began with two workshops for faculty: one focused on the *MyMathLab* software and the other on what the 50-50 split between class time and the Mathematics Interactive Learning Environment (MILE) means for teaching and course administration. Five Graduate Learning Assistants were hired to work in the MILE, and a workshop was held to familiarize them with the lab, the software and their responsibilities as they provide one-on-one assistance to students. Instructors also provide two office hours each week in the MILE to assist students. At monthly meetings, faculty members discuss and assess the project's progress and student performance. Overall, this project is off to a great start. Students are attending class and the MILE on a regular basis. Students are active in class discussions, and they work together and discuss their homework well in the MILE. To learn more, contact Margo Alexander at malexander@gsu.edu.

The fall 2005 semester started smoothly at **Louisiana State University** on August 22 with 880 students enrolled in redesigned sections of College Algebra using the new 116-seat computer lab. On August 29 th, Hurricane Katrina caused catastrophic damage to south Louisiana. Classes were cancelled at LSU for one week. The math lab was "borrowed" for 12 days and used to register the 3721 displaced students that LSU admitted from New Orleans universities. For six days, math students shared lab space across campus with students taking music and chemistry tests. Classes have been extended for another week into December. The lab has been returned to the math department, and students and teachers are trying to get back on track. Over 450 new students from New Orleans enrolled in College Algebra alone, and faculty are attempting to help the students catch up. Hopefully, the data gathered at the end of the semester to compare delivery methods will be meaningful. To learn more, contact Phoebe Rouse at prouse@lsu.edu.

Seton Hall University (SHU) is now in the full implementation phase of its developmental mathematics program redesign. SHU has extended use of *MyMathLab* to the Pre-Algebra course so that both courses use consistent approaches. The team has been working closely with Prentice Hall to integrate *MyMathLab* with the SHU local Blackboard server. The goal is to make the transition to the online course material seamless and easy for students both in and out of class. The results of the first round of tests were very successful with more than 90 percent of the students achieving at least 70 percent. The students enjoy using the software for their homework and have commented that they like the immediate feedback and availability of help when they need it. The students also receive drop-in tutoring and one-on-one assistance in the lab. Team meetings to review the performance of the students and address issues that have come up have been invaluable in refining the redesign and in providing professional development. The team encountered a challenge when the Mathematics Learning Lab was moved in August. The majority of the sections are run in the lab, but a few sections meet in regular classrooms with students using their laptops. Overall the team believes that the redesign is a success; it will be fine-tuned as needed over the semester. To learn more, contact Wendiann Sethi at sethiwen@shu.edu.

During fall 2005, **Texas Tech University** (TTU) fully implemented its redesign of Comprehensive Spanish Review First Year. Thirty-six sections enrolling 720 students use the replacement model; 60 students are enrolled in a redesigned section using the supplemental model. The latter version is used to train new TAs under close monitoring and mentoring. TTU is collecting survey and performance data similar to that collected in the pilot studies. The team is also developing new testing protocols for Listening Comprehension, Speaking, Reading , and Writing derived from ACTFL standards and operationalized as subjective protocols for Speaking and Writing and objective protocols for Listening and Reading . These will be validated as to reliability and construct validity during the semester. TTU has adopted a new coordination structure with an Executive Coordinator and five others broken into teams for coordinating in-class, language lab, online, and testing/assessment components of the course. The team held a four-day workshop to train teaching personnel before classes began and holds weekly meetings with the instructors as well as a weekly coordination team meeting. Three graduate research assistants are assigned full-time to the project as well as faculty members from Spanish and Applied Linguistics and the Department Chair who is also the Executive Coordinator. Thus far, the full implementation is working very smoothly with no significant redesign problems. In November a section of the ACTFL meetings will be devoted to this R2R project and its findings. TTU is planning a similar replacement model redesign of second-year Spanish and will pilot it in spring 2006. For more information, contact Fred Suppe at frederick.suppe@ttu.edu.

Responding to the need to accommodate more students while using the same available resources, the **University of Alabama** (UA)has redesigned three Spanish Introductory level classes. After a pilot of one section each in the spring 2005, the redesigned program has launched full-scale implementation in fall 2005. The redesign is already paying off by accommodating more students (70 more than in fall 2004) in smaller class sizes (from an average of 30 to 22.) The smaller class size conforms to recommended limits and will lead to improved student learning even as more students are being accommodated overall. The redesigned program features four in-class days and one virtual day for the first two terms, and three in-class days and two virtual days for the final term. Virtual days provide information and practice with mechanical/guided activities as well as with more creative, meaningful activities. Self-tests allow students to check their comprehension of the grammar, vocabulary and cultural sections. All activities are integrated in the syllabus so that in-class tasks build on the work done on Virtual Days. For more information, contact Alicia Cipria at acipria@bama.ua.edu.

The redesign of general psychology is off to a strong start this semester at the **University of Arkansas-Fort Smith** (UAFS.) After a difficult spring spent struggling with a publisher's course materials, web site and quizzes that were not specific enough for the course, the team decided to conduct a second pilot of the redesign using the supplemental model in three sections with three traditional sections serving as the control. Over the summer, the team improved the supplemental course materials and improved the web delivery system. The team abandoned the publisher's web site this fall and moved the technical support materials to the campus WebCT server, thus providing less complicated access for students. The course supplements and options are much more limited but students are less likely to get lost or frustrated by viewing materials that are not related to course objectives. The new web site includes three types of course materials for student use: 1) twenty-question, mandatory quizzes that students may take as many as three times, recording the highest score, are required before the student is allowed to take the unit test; 2) online discussions, covering information that was traditionally covered in class lectures, enable students to discover the concepts on their own through discussion; and 3) optional audio PowerPoints provide slower learners and audio learners access to lectures that reinforce text material. The team has improved in-class, group activities by using notebook computers with wireless access to the Web that involve students through simulations and hands-on experiences to stimulate interest and application of concepts. In one recent activity, students accessed online IQ tests and identified the mental skills being assessed by each test and then discussed the general definition as opposed to the operational definition of intelligence. Overall, the course is going well with improved attitudes from both students and faculty. If things continue to go well, UAFS will expand the redesign in spring 2006 to include all courses taught by full-time faculty and some of the adjunct instructors. As needed, the team will modify and improve course materials during the summer to be ready for full implementation by the following fall. For more information, contact Karen Stauffacher at kstauffa@uafortsmith.edu.

The redesign of College Algebra at the **University of Missouri–St. Louis** started its first semester of full implementation in the new Math Technology Learning Center (MTLC.) The term is moving along well as the team learns what needs to change and what can remain the same. The passing rate in the first exam was about 75 percent, which is promising. The students start each week by receiving their reading assignments, a worksheet and homework assignments for the following week. To better understand the class material covered on Monday, students are encouraged to read and start their homework during the weekend. The 50-minute Monday classes cover some of the problems that are assigned for the week. A large number of students have suggested a longer class time, and the team is planning to change it to 75 minutes next semester. Besides the Monday classes, all students attend two, required 120-minute labs, Lab A and Lab B. In Lab A, on Wednesdays, students continue with homework and ask questions. In Lab B, on Thursdays or Fridays, students complete their homework and take a 20-minute quiz. Students are encouraged to do all homework in the MTLC to obtain help from the teaching assistants if needed. While many students claim that they have completed all of their work and want to take their quiz and leave early during Lab B, the team plans to keep the weaker students for the duration of the lab and try to work more with them. To learn more, contact Teresa Thiel at thiel@umsl.edu.

University of North Carolina–Chapel Hill (UNC-CH) has moved to full implementation of its redesigned Precalculus Algebra course comprising more than 200 students. While the team has encountered some problems with *MyMathLab* such as sluggishness during peak access periods in the afternoon, they have developed a number of work-arounds that seem to be resolving the issues. Unfortunately, this has necessitated moving to pencil and paper for *MyMathLab* tests. UNC-CH's use of *iLearn* is proving to be more successful in their pilot redesigned sections of Precalculus Mathematics. The team is encountering far better access, and student scores appear to be higher than those in the *MyMathLab*-based pilot. Students are expressing enthusiasm for the course structure and materials and have expressed their pleasure at being able to see their test scores immediately. For additional information, contact Charlie Green at green@unc.edu.

Wayne State University is starting its second year of full implementation of the redesign of precalculus math. This semester the team added Intermediate Algebra to the courses taught in the Mathematics Computer Lab. There are 1,000 students registered for Beginning Algebra and 90 for Intermediate Algebra, which makes the lab a very busy place. It is open seven days a week for a total of 79 hours. The team has assigned different due dates for each of the 12 sections to encourage students to "spread out." So far, this approach seems to be working very well. There are occasional lines, but they move quickly so students never have to wait more than 10 or 15 minutes to get on a computer. The team also added a Lab Availability chart that lets students know when the lab has been very busy and when the lab has been very slow to encourage students to rearrange their schedules to come when the lab is least busy. The team is currently looking at options for expansion for the fall 2006 semester and hopes to move to a new space that would house 160 computers and allow the addition of at least one more course. First year results show a pass-rate increase of 8 percent over the traditional lecture/workshop method. This semester the team changed the grading system from S/U to ABC/U in an effort to motivate students to work for the A. They also instituted a 60 percent minimum final exam score requirement in order for students to pass because analysis showed that those who scored less than 60 percent on the final exam had a 90 percent chance of failing the next course. Because too many students were not learning good work habits, students now must show all work in anotebook before requesting help. These improvements are designed to further increase the student success rate. To learn more, contact Patty Bonesteel at patty@math.wayne.edu.

. . . .

5. CORPORATE CONNECTIONS

Linking content and software providers with leading edge institutions.

Des Moines Area Community College Partners with Thomson Learning Labs

Des Moines Area Community College (DMACC) is engaged in a course redesign project in partnership with Thomson Learning Labs, Microsoft and NuSoft Solutions. DMACC is developing online courses that make learning available to students anytime, anywhere, on any device. The project's first phase rolled out this fall: a completely online criminology course that combines course management via DMACC's Connected Learning Framework with tightly integrated html content from *Criminology, 9 th Edition*, a test bank and web resources delivered through Microsoft's SharePoint portal server. Instructors can use WebParts to customize content and facilitate interactive learning. Already in use are Thomson Learning's *Chapter Navigation, Resources, Content Viewer*, and *eCommerce WebParts*. Both instructors and DMACC's mostly commuting students are extremely enthusiastic about the flexibility offered by the new format. A second online course, Law Enforcement, will roll out in spring 2006. For more information on incorporating Thomson Custom Solutions in your course redesigns, please contact molly.reese@thomson.com.

Pearson Workshops Feature Course Redesign

In partnership with NCAT, Pearson Education has been conducting a series of course redesign workshops featuring NCAT staff and projects. On August 11 and 12, Pearson hosted a seminar for faculty in math and psychology in Boston , MA . Among the speakers were faculty project leaders from the **University of Alabama** and **Louisiana State University** . On September 23, Pearson hosted a seminar focused on redesigning Spanish and other languages on the campus of Georgia Perimeter College , where NCAT staff presented techniques that have been successfully used in redesigns. A third seminar was held on October 27 and 28 in Phoenix , AZ for faculty from Spanish, Math, Psychology, and English. Among the speakers were faculty from **Georgia State University,** the **University of Idaho ,** and **Wayne State University** . At each of these seminars, faculty learned about the process of course redesign and the contribution of *MyMathLab* and other learning options developed by Pearson Education. To learn more about these seminars, contact Karen Silverio at Karen.Silverio@awl.com.

. . . .

6. COMMON GROUND

Reporting on initiatives that share the Center's goals and objectives.

When Do Students Need Help?

Providing help when students need it is key to increasing student success, and students often need help after office hours are over or tutoring centers are closed. The online tutoring service, SMARTHINKING, has data to show that students need help when most traditional institutions do not provide service: weekends and between 6 PM and 8 AM . During the fall 2004 and spring 2005 terms, 77 institutions used SMARTHINKING's services; 55% of 13,000 live tutoring sessions took place during non-business hours: 6% during weekends and 49% during weekdays between 6 PM and 8 AM. SMARTHINKING provides online tutoring, online writing services and homework help services that help students succeed. Tutors are available up to 24 hours a day, 7 days a week in a variety of subjects. For more information about providing high quality, on-demand tutoring, see www.smarthinking.com.

Education Trust Launches Online Tool To Compare Graduation Rates

The Education Trust recently launched College Results Online, an interactive Web tool that challenges the conventional wisdom about college-graduation rates. The online tool, found at www.collegeresults.org, allows users to select any four-year public or private nonprofit college or university in the country and see how its graduation rates compare with similar institutions that serve similar student populations. It also allows users to examine graduation rates broken down by students' race, ethnicity, and gender. This information reveals significant gaps in graduation rates between white students and students of color at most colleges and universities. The Education Trust is a non-profit organization that works for the high academic achievement of all students at all levels to close achievement gaps that separate low-income students and students of color from other youth. To learn more, see http://www2.edtrust.org/edtrust.

. . . .

7. SUBSCRIPTIONS, SUBMISSIONS, ARCHIVES, REPOSTING

The National Center for Academic Transformation serves as a source of expertise and support for those in higher education who wish to take advantage of the capabilities of information technology to transform their academic practices.

- To **subscribe** to *The Learning MarketSpace*, click here.
- To submit items for inclusion in this newsletter, please contact Carolyn G. Jarmon, cjarmon@theNCAT.org.
- Archives of this newsletter are available at here.
- This newsletter is a merger of *The Learning MarketSpace* and The Pew Learning and Technology Program Newsletter.
- Archives of *The Learning MarketSpace*, written by Bob Heterick and Carol Twigg and published from July 1999 – February 2003, are available here.
- Archives of The Pew Learning and Technology Program Newsletter, published from 1999 – 2002, are available here.
- You are welcome to re-post *The Learning MarketSpace* without charge. Material contained in *The Learning MarketSpace* may be reprinted with attribution for non-commercial purposes.