TRANSFORMING LEARNING THROUGH TECHNOLOGY
DEAR ALUMNI AND FRIENDS

As a Jesuit, as a native of West Virginia, as one deeply committed to Wheeling Jesuit for many, many years, and as a person who recalls the founding of our University in 1954, I write to you humbled, honored, and excited about serving with you in partnership as Wheeling Jesuit’s seventh president. I entered the Society of Jesus from here in 1962, and returned to serve on two other occasions as Rector of the Jesuit Community.

While we can all see the many physical changes on our campus, we still ground our Wheeling Jesuit mission and identity in Appalachia, the people of West Virginia, and our region. We enjoy, and work hard to maintain, our growing national reputation for integrating a 450-year Jesuit liberal arts education tradition with modern technology, to prepare our graduates for life, leadership and service, with and among others. Our educational traditions exist side-by-side with the energizing emergence of new learning technologies in our modern facilities. We maximize the technology of the federally sponsored programs to improve K-12 math and science education and teacher preparation programs throughout the country.

We devote this issue of the Chronicle, our magazine for alumni and friends, to our efforts of integrating technology into education.

In the name of the faculty, the administration, and our current students — indeed, our entire Wheeling Jesuit University community — I invite each of you to remain important and involved participants of our community as we celebrate our 50th anniversary next year, providing excellent education in the Jesuit tradition.

May the God Who created us all continue to bless you...

Fr Joseph R. Hacala, S.J.
President
ABOUT THIS ISSUE

Editor's Note: Wheeling Jesuit University enjoys a stellar national reputation with its academic programs that educate the whole person. The University, throughout its history, has been blessed with funding and support from Sen. Robert C. Byrd and Congressman Alan B. Mollohan for programs that are changing the educational experience for students and teachers across the nation.

Our modern facilities and innovative academic programs, the National Technology Transfer Center [NTTC], the Center for Educational Technologies [CET], NASA's Classroom of the Future [COTF], and the Challenger Learning Center [CLC] impact learning around the globe.

These diverse academic and scientific facilities and programs contribute to our growing national reputation, as we integrate a 450-year Jesuit liberal arts education tradition with modern technology, and educate our students for life, leadership and service among others.

In the pages that follow, we capture several of the ways that Wheeling Jesuit University transforms learning, and our world, through technology.
GRADUATES OF NUCLEAR MEDICINE PROGRAMS HAVE A GLOWING FUTURE

Nuclear medicine technologists aren’t feeling the effects of a slow job market. In fact, recent graduates from Wheeling Jesuit University have jobs waiting for them when they leave the classroom.

“Our nuclear medicine students are in demand at hospitals such as The Cleveland Clinic, University of Maryland Medical System and the University of Pittsburgh Medical Center,” says Angela Macci Bires, assistant professor and department chair. “These centers offer them job incentives and often times positions are held for them until they graduate. Wheeling Jesuit nuclear medicine graduates have a 100 percent employment rate.”

Bires added that Wheeling Jesuit’s nuclear medicine graduates are in demand because the program is one of only a few in the region where students earn a bachelor’s of science degree. “Our program is licensed by the Nuclear Regulatory Commission (NRC), which makes us absolutely unique,” she says.

“Wheeling Jesuit University’s nuclear medicine program includes a pre-med core,” Bires says. “Our students receive a greater focus on the hard sciences needed to cover the expanding areas of clinical practice, radiopharmacy and instrumentation that drive the future of nuclear medicine technology.”

BENEFactors ESTABLISH SCHOLARSHIPS

Wheeling Jesuit University students will benefit from several new scholarships totaling nearly $250,000.

“The generosity of the alumni and friends affects those who call Wheeling Jesuit University ‘home.’ Their philanthropic support is vital to continue the quality private education nationally recognized in numerous publications such as U.S. News & World Report,” says Rev. Daniel Joyce, S.J., vice president for Advancement.

Vicky L. DiPiero, a 1965 graduate of Wheeling Jesuit and a resident of Charleston, W.Va., worked within the United States Department of Justice in Charleston. Sadly, DiPiero passed away in 2002 following a long, battle with cancer. To honor her memory, the DiPiero family helped fund the Vicky L. DiPiero, ’65 Diversity Scholarship. This scholarship will assist minority students attending the University.

The Haller family of Pittsburgh established the Leone N. Haller Memorial Scholarship to eternally honor the memory of their mother and aunt. Leone’s son, Daniel L. Haller, ’61, a member of the Wheeling Jesuit Board of Directors, and his wife, Linda, established the fund as a legacy to Leone’s compassionate nature.

Dr. John J. Rakosky, ’66, a native of Washington, Pa., created the Rakosky Memorial Scholarship to forever remember the generosity of his parents, John F Rakosky, Jr and Rita Rakosky, and to assist students from Washington County, Pennsylvania.

The James B. Chambers Memorial Foundation established the Stephen E. Hannig Memorial Scholarship in memory of the Wheeling organization’s long-time executive director Stephen E. Hannig, ’73. Hannig was a Wheeling Jesuit supporter and a resident of Wheeling. As a reflection of his achievements in his career and life, the Stephen E. Hannig Memorial Scholarship will provide aid to students in finance and banking, with an interest in community service.
GRADUATE AMONG NATION'S BEST ON NATIONAL TEST

A recent Wheeling Jesuit University graduate scored among the top seven percent in the nation on a knowledge-based business test.

Justin Zehnder, a 2003 graduate in accounting and a Jefferson Hills, Pa. native, scored in the 93rd percentile on the Educational Testing Service (ETS) Business Test - a mark that places him in the top seven percent of all those tested nationally.

According to Paul Ostasiewski, director of graduate business programs at the University, the business test measures what a student learned in an undergraduate business program. "In most cases, what students know about business is what they learned in the classroom," Ostasiewski says.

DOCTOR OF PHYSICAL THERAPY PROGRAM PREPARES GRADUATES FOR THE REAL WORLD

Wheeling Jesuit University welcomed 24 graduate students into its new Doctor of Physical Therapy program this fall. This is the first class in the new program, which is under the direction of Letha Zook, PT, Ed.D.

Through collaborative and service learning Wheeling Jesuit will prepare the 24 students for the front lines of the health care profession. As rural areas of the country lose more and more doctors, physical therapist are called upon to consult and diagnose cases, says Zook. To meet these demands, physical therapists need additional instruction found only in a doctorate program, she adds.

Wheeling Jesuit's professional doctorate degree prepares entry-level physical therapists to make independent diagnosis and recommendations of patient cases, and establish a treatment plan to coordinate a patient's recovery. The program places students in a team-learning environment engaged in rigorous didactic instruction. Zook says students learn by analyzing complex patient cases, instead of just sitting through lectures.
REFOCUSING OUR CATHOLIC, JESUIT MISSION


The Mass of the Holy Spirit was an opportune moment to re-evaluate and look forward; to re-vision who and why and where we are, and to re-engage Wheeling Jesuit in partnership, trust, hope and service, with the people of West Virginia and Appalachia. Bishop Schmitt and Fr. Brown represent the ongoing, 50-year commitment of both the Society of Jesus and the Diocese of Wheeling-Charleston to the people, this region, and the mission of service and partnership of Wheeling Jesuit University.
PROFESSOR AND STUDENTS STUDY QUASARS AT VATICAN OBSERVATORY

A Wheeling Jesuit University professor and two of his students spent time at the Vatican Observatory studying the brightness variations of quasars.

Dr. Joseph Busche, assistant professor of physics, and students Ben Bepple of Canonsburg, Pa., and Chris Tartamella of Aurora, Ohio, traveled to Arizona in the spring of 2003 to use one of the Vatican Observatory's telescopes to observe quasars. Visible only through a telescope, a quasar is an extragalactic object, star-like in appearance and has spectra with characteristically large redshifts. Quasars are thought to be the most distant and most luminous objects in the universe.

For Busche, researching quasars satisfies his curiosity and helps him better understand the universe. Bepple said the experience allowed him "to take a lot of items that were talked about in theory and bring them into focus. I never thought I'd get the chance to use a telescope. The trip to the Observatory has been a great experience and made the theories we talked about tangible."

GRANT FUNDS NEW EQUIPMENT FOR CHEMISTRY LAB

A grant from the National Science Foundation (NSF) provides new research opportunities for chemistry and technology students at Wheeling Jesuit University.

The University received nearly $103,000 from NSF to purchase a Thermal Gravimetric Analyzer/Fourier Transform Infrared (TGA/FTIR) instrument. Dr. Michael Baird, associate professor of chemistry at Wheeling Jesuit, says students and faculty will utilize the TGA/FTIR to conduct research focusing on environmental and energy concerns.

"The equipment will be used to enhance and broaden the research experiences for undergraduate students in the chemistry and technology programs," Baird adds. "Approximately five to eight students each year will use the instrumentation to conduct research."

The grant was prepared and submitted by Baird; Dr. Ron Breault, assistant professor of technology; and Dr Norman Duffy, professor of chemistry.

RESPIRATORY THERAPISTS BREATHE EASY IN BAD JOB MARKET

Wheeling Jesuit University graduates realize that a degree in respiratory therapy gives them numerous career opportunities, including a wide-open job market.

Respiratory therapy, an allied health profession, cares for patients with problems involving the heart and lungs.

"There are so many job opportunities for respiratory therapists right now," says Allen Marangoni, Ed.D., PT, RRT, respiratory therapy director at Wheeling Jesuit. "Recent graduates are finding employment months before they graduate and are receiving signing bonuses as well."

Currently, there are more than 7,000 respiratory therapy jobs that are unfilled nationwide due to a lack of available professionals. Professionals estimate the need for RT's will increase through the year 2020.
Up, Up, and Away with Technology

Reading, writing and arithmetic will always remain important elements in the classroom, but in today's world, students use technology to learn the three R's. Rebecca Bush, Wheeling Jesuit University Teacher Preparation student, uses technology in the classroom to help elementary and middle school students reach for the stars.

Wheeling Jesuit's Teacher Preparation Program (TPP) integrates technology into all of its courses, allowing students to learn from technology, and, in turn, teach others with technology. In her internship at the Challenger Learning Center (CLC) on the University campus, Bush, a senior elementary education major, uses technology to create hands-on learning tools for students preparing to “fly” e-missions.

“I help create a variety of games and activities for students to use in their classroom before they come to campus to fly a mission,” says Bush. “There are interactive games and lessons plans I have created using Powerpoint, and I am really learning how to develop a curriculum.”

To celebrate the 100th anniversary of flight, Bush developed “Up, Up and Away,” an interactive question and answer game students play to prepare themselves for an actual space mission. “The game is a learning tool for the children. It teaches them the fundamentals of flight and many questions refer to the Wright brothers,” she says. Bush also developed “Space Bingo” and “Moon Madness” for students to use in the classroom before they fly a mission.
Wheeling Jesuit's Teacher Preparation Program (TPP) integrates technology into all of its courses...

The teacher prep students regularly observe CLC operations and fly missions together to get a better understanding of hands-on learning techniques. "We, meaning the teacher prep students, are continuously learning ways in which to keep learning fun and interesting for elementary and secondary school students," says Bush.

"The use of technology is infused into all Teacher Preparation courses, and because the department is located in the Acker Science Center, we are able to use state-of-the-art technology that is integral to the Teacher Prep classroom," says Dr. H. Lawrence Jones, associate professor and director of the Teacher Preparation Program. "Our professors use technology to teach students, thus modeling how it can be effective. Our students are then required to use technology in model lessons and are required to use technology when student teaching."

"When our students graduate they have a portfolio demonstrating their technology-based skills and we have found that the school systems that hire them are thrilled by their technology literacy," said Jones.

Wheeling Jesuit's Teacher Preparation Program believes the profession of teaching contains a body of knowledge best learned through focused observation and supervised practice.
IMPACTING EDUCATION IN CLASSROOMS AROUND THE WORLD

Technology Helps Challenger teach Students Worldwide
The Challenger Learning Center's “e-Mission” programs impact the learning process in classrooms across the world.

“The technology and products we've developed in Wheeling reach 50,000 students in classrooms from coast to coast and three foreign countries,” says Nancy Sturm, education director of Wheeling Jesuit University's Challenger Learning Center (CLC).

The Challenger Learning Center provides two electronic (e-Mission) packages that can link a flight director with any classroom for an interactive learning adventure. Through the use of today's technology, Sturm says, the CLC is able to change “the way teachers teach, and students learn.”

“We provide teachers a new way to teach math and science to their students. Our programs put learning in the hands of the students and makes each student an active learner,” she adds. “Most classrooms now have computers, but many computers are just sitting there because teachers don't have access to educational programs. We supply educators content to engage their students in hands-on learning.”

“E-Missions” allow participants to work as scientists to solve problems in real-life situations. Placing students into the roles of astronauts and scientists makes learning come alive, she adds.

“Teachers are fascinated with how our “e-Missions” get students excited about learning math and science. And what separates an “e-Mission” from other content is that the mission is live. The outcome can be different each time, based on how the students solve the problems they face in their particular mission.”

The Center intentionally developed the first “e-Mission” to give every school in West Virginia, whether they could travel to Wheeling or not, the chance to participate in a simulated space mission. Sturm soon learned, though, that teachers nationwide needed educational content for the unused computers sitting in their classrooms.

Today, the Challenger Center “flies” e-Missions in 27 states, as well as Canada, England and Argentina. This year, Sturm estimates the Center will provide more than 500 e-Missions. In 2003, the Center was recognized for the eighth straight year, as the most visited center in the network. Wheeling's CLC flew nearly 400 on-site missions during 2002-2003.

“E-Missions and other digital learning programs break down the geographic boundaries that hindered learning for thousands of years. Today, our Center can teach a classroom full of students in another county, another state or another country,” she explains. “Thanks to technology, we can integrate digital content into classrooms and improve student performance.”

To learn more about the Center's digital program, log onto http://clc.wju.edu/
A new initiative based at Wheeling Jesuit offers a high-tech solution to help the nation's school districts and curriculum publishers close the achievement gap between disadvantaged and minority students and their peers.

The brainchild of Dr. Steven McGee '00 of the MBA program, the new start-up company also has the potential to add more jobs to the region.
McGee unleashed his entrepreneurial spirit and launched The Learning Partnership™. The company develops Web-based assessment services to address challenges schools and curriculum publishers face from the No Child Left Behind initiative.

"We're creating a new breed of online assessment experience. Our products require students to solve real-world problems and relate the test scores to standard curriculum content," says McGee.

The Learning Partnership™ focuses on enhancing the learning process by providing teachers of grades 5-12 a comprehensive suite of classroom assessment tools delivered via the Internet. The company is developing a method for teachers to grade tests and track students' progress through the Internet using a standard Web browser. McGee will work initially through textbook publishers who will buy and license his service to add value to the textbooks they sell.

As senior educational researcher at the Center for Educational Technologies, McGee brings extensive experience developing classroom assessment techniques that show great promise for helping low-achieving students accomplish greater learning outcomes.

"My high school education was the subject of my high school senior thesis. I wrote a critique of my high school and provided suggestions for improving the quality of education," says McGee. "My entrepreneurial spirit grew over time as I came to realize that educational problems could not be solved through government funding alone. Academia tends to be concerned about how to support student learning without concern for the bottom line. Commercial publishers tend to consider the bottom line over ways to effectively support student learning. We need new commercial ventures that can create high quality curriculum materials that meet market needs at a reasonable cost."

He formed The Learning Partnership™ and the company joined the National Technology Transfer Center's Alan B. Mollohan Business Accelerator. The Business Accelerator assists new or emerging technology-based ventures or existing organizations, and offers, among other opportunities, access to NTTC's network of partners and relationships, the Product Development Laboratory, technology evaluation services and marketing and public affairs support.

McGee adds, "This is an opportunity for me to use technology to help students learn and teachers teach. My training in Wheeling Jesuit's MBA program provided me with a solid foundation for understanding strategic marketing. My participation in the Business Accelerator will enhance my training to build a solid business plan for The Learning Partnership. The resources available through the Business Accelerator allow me to strengthen my marketing and business plan, which helps me grow the company and create more jobs."
An interactive, Web-based learning program at Wheeling Jesuit University offers students a portal to travel back in time and relive the Lewis and Clark expedition across the United States.

In 1803, Meriwether Lewis and William Clark embarked on a quest to explore lands west of the Mississippi River and to determine if there was a northwest passage. The Erma Ora Byrd Center for Educational Technologies® (CET) developed a Web site, built in partnership with the universities of Idaho and Montana, that retraces that journey. Lifelong Learning Online: The Lewis and Clark Rediscovery Project takes visitors along the explorers' trail.

"This Web-based learning package provides a way to get middle and high school students interested in the Lewis and Clark expedition," says Dr. Robert Myers, senior instructional designer at the Center. "The site brings the Lewis and Clark expedition alive, making students draw on the site and other resources to solve the questions and problems we present."

The Web site opens with an interactive United States map of the expedition's route. The map highlights nine "stops"—significant milestones for the expedition. Three additional stops allow visitors the chance to learn about Native American cultures.

Each stop organizes its information in six areas: expedition, culture, geography, people, maps, and nature. Through short videos, text, photos and problem-solving exercises, individuals can gain a better understanding of what Lewis and Clark faced in their travels, as well as the impact of Euro-American migration on thousands of Native Americans.
"There might be a short video that addresses what took place at that site or the historical significance of the location," Myers said. "In the culture section there is information from Native Americans about their beliefs, traditions, education and language."

Development of the program is all a part of the mission of the CET, also home to the Classroom of the Future™ (COTF), NASA's premier research and development program for educational technologies. The CET and COTF develop K-12 curriculum supplements combining teaching methods with technology tools and real-world programs. Through the InStep program, the CET trains nearly 450 elementary, middle school and high school teachers each year to implement technology into the classroom.

"The Lewis and Clark program allows students to be actively involved in learning and become engaged in the process. Programs like this refine a young person's research and investigative skills," Myers notes.
Teachers from across West Virginia can learn new methods to integrate technology into the classroom, thanks to the Center for Educational Technologies (CET).

Four hundred and thirty-two teachers representing elementary, middle, high, and post-secondary schools across the state completed the CET's InSTEP (Integrating Strategies and Technology in Education Practice) 2003 workshops. Through InSTEP, science, mathematics and technology teachers in the Mountain State receive a thorough grounding in problem based/inquiry learning and technology integration. This innovative approach puts learners in the driver's seat.

Jeanne Finstein, acting president of the CET, says, "InSTEP is an extremely rewarding project for the math, science, and technology teachers in the state. Students in classrooms across West Virginia are the real winners. By providing teachers with new strategies to incorporate technology into their classrooms, students become more engaged in learning. And that is our ultimate goal."
“Initial research results have shown an improvement in the comfort levels of West Virginia InSTEP teachers in their use of technology and constructivist teaching strategies,” says Kathy Norris, InSTEP project manager. “Teachers who attend InSTEP are eager to get back to their classrooms to use the skills and strategies they develop over the summer. The teachers have reported to us that their students retain more of what is taught when problem-based/inquiry learning is used, as opposed to, when traditional teaching methods are used.”

InSTEP workshops provide intensive training in problem-based/inquiry learning and technology in classroom instruction, working to energize and encourage teachers to use new approaches to teach more effectively the West Virginia Content Standards and Objectives. Week-long workshops deliver instruction, modeling, and hands-on practice in constructivist teaching strategies and technology use.

Participating teachers receive stipends, technology tools and the opportunity to earn graduate credit from Wheeling Jesuit University. During the 2003-2004 school year, participating teachers will conduct professional development workshops for other teachers in their home regions. On-going support is provided by InSTEP regional coordinators located in the eight Regional Education Service Agencies throughout the state.

Healthcare Leadership Program Provides Pathway to a Degree

DISTANCE LEARNING PROGRAM

Bachelor of Science in Healthcare Leadership Program allows working adults to obtain a bachelor's degree without attending traditional college classes.
Wheeling Jesuit's expanding distance learning programs open doors for allied health professionals seeking advanced degrees. The new Bachelor of Science in Healthcare Leadership program allows working adults to obtain a bachelor's degree, without attending traditional college classes.

"The program's flexible learning format allows students to earn their Bachelor of Science in as little as two years, while maintaining their full-time employment. Wheeling Jesuit delivers a majority of the coursework online, with supplemental materials such as video and CD-ROM. Students also earn credits through community service projects," says Allen H. Marangoni, Ed.D., PT, RRT, director of the Healthcare Leadership Program.

"The program is ideal for working allied health professionals with associate degrees seeking career mobility and professional advancement. This is a realistic way for students to 'attend' classes and earn their degree," he adds.

The University's Distance Learning Office provides students full-time support, access to online library service, personal contact with faculty experienced in developing and offering online courses, technical assistance, and extended in-office hours to serve their specific and special needs.

Marangoni notes the interdisciplinary distance learning program provides a pathway for allied health professionals with associate degrees to obtain their bachelor's degree in Healthcare Leadership.

"I believe each student will benefit from the student-centered focus of this program, because it permits the allied health professional to develop his or her particular interests," says Marangoni.

Marybeth Emmerth, MS, RRT, CPFT, assistant professor of Respiratory Therapy and director of clinical education, knows first hand what it requires to work full time and go to college.

"I obtained my degrees in the traditional way—driving back and forth several times a week for several years to attend classes. I truly wish online education existed 10 years ago. It would have been convenient for me juggling work, home, and family obligations," says Emmerth. "This program will allow more allied health professionals a way to earn a bachelor's degree. We've created a new way for adults to go to college."

To learn more about online programs at Wheeling Jesuit, go to online at www.wju.edu.