

Rising scholarship boosts academic profile, strengthens educational mission

A revolution is under way in higher education. Or is it?

In addition to teaching the lasting lessons of the liberal arts, colleges like Whitworth are joining major research universities as significant players in the discovery and dissemination of new knowledge. At the same time, major research institutions are focusing more attention on teaching after being rapped on the knuckles by critics for ceding too much of the responsibility for undergraduate education to junior faculty and teaching assistants.

Upon closer inspection, however, this apparent blurring of roles appears to be as much about revelation as it is about revolution.

“There has always been significant research at liberal arts colleges and there has always been good teaching at research universities,” says Arthur Cohen, professor of higher education at UCLA. “The gap has never been as great as some would like to believe.”

What has changed, says Tammy Reid, '60, Whitworth's vice president for academic affairs and dean of the faculty, is that liberal arts colleges are attracting more faculty with strong research interests and are doing more to support and recognize their faculty's scholarly work.

For example, Whitworth has restructured its grants office and supplied additional matching funds to assist faculty seeking outside support for research and scholarship. The payoff has been impressive. Over the past five years, the number of grants submitted by Whitworth faculty has doubled and the number of grants funded has tripled. In the last year alone, Whitworth professors received two highly competitive research grants from the National Science Foundation, and physics professor Richard Stevens has been included in a NASA program that includes scientists from MIT, Princeton and Stanford.

In addition, the college is showcasing faculty scholarship through news publications and admissions materials, displays in the library and bookstore and presentations at Faculty Scholarship Forum, a monthly luncheon sponsored by Whitworth Trustee and Hope College Psychology Professor David G. Myers, '65, and his wife, Carol, '65. Christian scholars also are gaining influence and visibility in broader academic circles that traditionally ignored Christian voices, according to Reid.

“My conclusion is that not only is our faculty, on the whole, engaged in more scholarly activity,” she says, “but what they are doing is more visible and more widely recognized.”

Reid is quick to point out that Whitworth defines scholarship more broadly than most research universities to include the integration and application of knowledge in addition to the development of new knowledge, and to include the study of teaching and faith-learning integration. Scholarship at Whitworth often is informed by professors' Christian faith, Reid notes, either explicitly in its topic or in its underlying assump-



by Greg Orwig, '91

tions, motivation, interpretation and application. And given Whitworth's educational mission, faculty research generally enhances, rather than competes with, student learning.

This spring the college moved this emphasis on faculty-student collaboration on research to a new level with the introduction of Whitworth's first undergraduate research conference, which will take place April 12. Students from all disciplines will have the opportunity to share their research accomplishments with the college community.

According to a national poll of college faculty conducted every three years by UCLA's Higher Education Research Institute, the proportion of Whitworth faculty engaged in research and scholarly writing is rising at nearly three times the rate of all U.S. private four-year colleges over the past decade. However, the poll also shows that Whitworth professors are more likely than their peers to involve students in their research work and to report teaching as their primary interest. In fact, 100 percent of the Whitworth professors who took the survey in 2001 reported “being a good teacher” as being among their personal goals.

“Doing research makes me a better teacher,” says Michael Tidwell, an assistant professor of organizational communication who joined Whitworth's faculty this year from the University of Kentucky College of Communication and Information Studies, which receives more research funding than any other communication school in the U.S. “If I can go into class having just completed a study on organizational culture, the information I'm able to present will not only be more real for me, it will be more real for the students.”

Having written about many of the college's more familiar senior professors in previous issues of *Whitworth Today*, we introduce here the scholarly activities of six relative newcomers to Whitworth's faculty.

Research

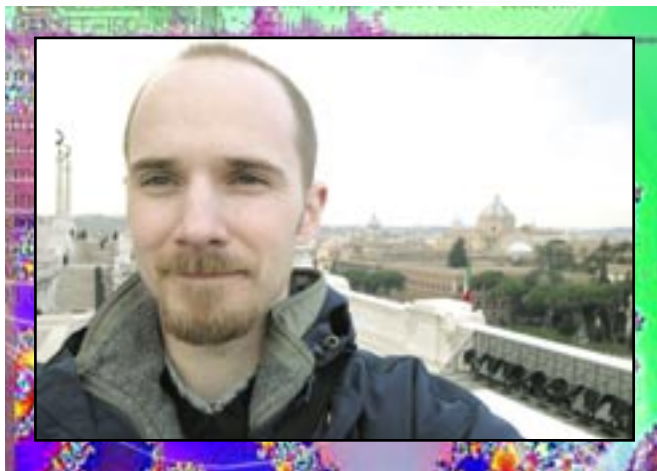
Susan Mabry, Computer Science

Tens of thousands of hospital patients die every year as a result of medical mistakes, according to a recent study by the Institute of Medicine. It's no wonder given the torrent of medical information that doctors have to wade through in order to make sometimes split-second diagnostic and treatment decisions.

To aid doctors, nurses and other medical professionals, Associate Professor of Computer Science Susan Mabry and her students are developing intelligent software agents – or “softbots” – to monitor patient history, vital signs, lab results or other data and then provide diagnostics and recommended courses of action. While the softbots are programmed to gather and evaluate data independently, the goal is to support, rather than replace, doctors.

“We don't see treatment as being automated,” says Mabry, who managed a computer research group at Northrop-Grumman Corp. before joining Whitworth's faculty in 1999. “Rather, we see these agents as an advisory resource in complex healthcare environments where the volume of data can be overwhelming.”

Mabry's team – which she describes as being part of one of the best undergraduate computer-science research programs in the country, with all of her students going on to graduate school – is developing a prototype under a National Science Foundation grant and is now seeking National Institutes of Health funding to develop a model for clinical trials.



Scott Kolbo, Art

Assistant Professor of Art Scott Kolbo says his work often is the result of soaking up the world and getting angry. Most recently, the usually mild-mannered Kolbo is raising his pencil against the injustices of social alienation through a collaborative drawing project with Associate Professor of Art Gordon Wilson. Funded by Whitworth's Weyerhaeuser Center for Christian Faith and Learning, the project has yielded a series of drawings that explore the ways in which one's environment can reflect or contribute to one's sense of isolation.

“Gordon and I are very involved in the psychology and personality of characters,” says Kolbo, who is in his third year at Whitworth. “So, we were both interested in developing characters who are cultural outsiders or outcasts and in exploring some of the implications of where those lines are drawn in society.”

While the artists share a common interest in subject matter, their modes of making art can be radically different. Wilson usually gets to know his subjects and draws pictures to reflect their humanity; Kolbo employs brooding, caricatured, sometimes hysterical-looking figures and a cutting sense of satire to critique society. (See Kolbo's website at www.existentialape.com.) *Naa-man Dirty*, a recent print featuring one of his most memorable characters, was named Best of Show in Printmaking at the 28th annual Bradley National Print and Drawing Exhibition.

Pamela Corpron Parker, English

Literary tourism – visiting the homes and haunts of literary figures – became a common practice in England at the end of the 18th century. Not long after, female authors such as George Elliot, the Brontë sisters, and Harriet Martineau gained widespread popularity in England and abroad.

These two phenomena have provided a wealth of research material for Pamela Corpron Parker, '81, associate professor of English and director of the Women's Studies Program at Whitworth. Under a grant from the Council for Christian Colleges and Universities, Parker and her colleagues have visited landmarks and analyzed materials ranging from train schedules and postcards to newspaper articles and guidebooks for a forthcoming book tentatively titled *Literary Tourism and the Victorian Woman Writer*.

What they found, Parker says, is that literary sites of male authors more often displayed relics related to the subject's professional life while relics of female authors tended to reflect the subject's personal and domestic life. For example, curators of Charles Dickens' home display the author's library and writing desk whereas curators of the Brontë Parsonage must contend every year with requests to display the authors' undergarments.

"It has to do with how the 19th century viewed female writers as primarily private figures, even if they outsold their male peers," says Parker, who joined Whitworth's faculty in 1997. "While writers' homes and relics frequently provide insight into their lives, they often create myths that distort literary history, too."



Michael Tidwell, Communication Studies

Michael Tidwell, an assistant professor of communication studies, is exploring connections between church members' values and their commitment to the church as reflected in attendance, volunteering, tithing and satisfaction with the ministry.

The project grows out of research in the private sector, which found a strong association between an employee's disconnect with the values of an organization and the employee's intention to leave the organization. As a result, corporations have focused more heavily on communicating their values in recruiting, hiring and training in order to boost employee satisfaction and productivity and to decrease turnover.

Tidwell, in his first year at Whitworth, believes that churches and other non-profits can learn similar lessons. He plans to survey members of several Spokane-area churches in an initial study that he hopes will yield results that lead to a larger national study.

"If my hypothesis is validated, it may mean that pastors and other church leaders need to take more time to affirm the values, mission and vision of their ministries," Tidwell says. "If people know that their values are shared and affirmed, they may be more inclined to invest themselves in the ministry of the church."



Frank Caccavo, Jr., Biology

Assistant Professor of Biology Frank Caccavo, Jr., and other researchers are racing the clock to keep radioactive wastes in southeastern Washington's groundwater from reaching the Columbia River. Carried by a slow-moving aquifer, these toxic leftovers from atomic-bomb production at the Hanford Site in Richland, Wash., could reach the Columbia within 30 years and wreak ecological havoc downstream.

Caccavo and his students, along with research partners at Pacific Northwest National Laboratories in Richland and at Montana State University, are exploring a technique called bioaugmentation that uses bacteria to neutralize pollutants. Caccavo's team is studying the *Shewanella* alga organism, which metabolizes toxic metals dissolved in water and converts the metal molecules to a state where they bond to solid particles. Attached to solids, the pollutants' migration is significantly slowed if not stalled.

"The engineers at Hanford believe the metals, if undisturbed, would remain in that state for several decades and would represent a much less immediate threat to the Columbia," says Caccavo, who joined Whitworth's faculty in 2000.

With a grant from the M.J. Murdock Charitable Trust, Caccavo's research team conducted experiments that confirmed the *Shewanella* algae can survive in the Hanford aquifer, if provided with a particular nutrient, and would not significantly affect the local ecology. They also discovered that the bacteria don't survive in high numbers, so Caccavo is seeking new funding to explore techniques for increasing the survival rate.



Betty Williams, Education

School teachers across the country are questioning how to meet tough new student-learning and accountability standards. And Professor of Education Betty Williams may have found an answer in the medical profession.

Williams, who has, since arriving in 1997, helped to build Whitworth's special-education program into the envy of many other schools, is becoming a leading proponent of a new evidence-based practice approach to education that she has adapted from fields such as medicine, psychology and social work. The new approach involves researching the best method for teaching a student, then gathering evidence to evaluate whether the method is working and making adjustments as necessary. Though this approach is straightforward, teachers aren't necessarily being given all the tools they need to use evidence-based practice.

"We need to train teachers in how to find evidence in research literature and how to take data when working with children to assess whether teachers are being effective or not," says Williams, who has been invited to present her work on evidence-based practice at the annual conference of the International Association of Behavior Analysis in May. "We're really helping them develop a scientific attitude and approach to their teaching."