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Research at the Finish Line

At the Powell Student Research Conference, months of hard work culminate in a single day.

Story by MAC McCORMICK '04



Heather Kwoka '06 (above left) presents her study on how perfectionist tendencies develop in adolescent boys and girls. David Hibbard, visiting assistant professor of psychology, was her advisor on the project. (Photo by Marc Featherly)

Everyone is up early, for a Saturday. At just before 9 a.m., a lot of tired-looking people in nice clothes have filled the atrium of the Center for Natural Sciences. Many, if not most, are busy making last-minute changes to the posters they've propped up on easels, trying to find a shaky truce with gravity so they actually stay up. Some of these were finished hours ago, others have been ready for weeks. Some — more than you might expect — are awaiting some finishing touches.

The John Wesley Powell Student Research Conference can be likened to many academic rites of passage. The SAT. The GRE. Final exams. The processes are all the same, more or less: prepare for weeks, stay up late cramming, and get up early on that special morning, eyes fuzzy and fingers a little numb, hoping you have just enough energy to get you through until it's over.

After this day, for some, it really is over. Finals can't compare, since the exams only cover a single semester. For many seniors, this is the culmination of all four years. Countless hours have been spent researching and working closely with faculty members as they put together their one, big project. Needless to say, there's a little pressure.

The presentations have changed a bit since the conference was founded in 1990. A look around the hall reveals an enormous variety, not only in academic discipline, but in approach.

Economics Professor Mike Seeborg, who was on the 2006 planning committee and served as its chair in the past, explains that when the conference started out, "it was science majors, mostly. Then social sciences and humanities started getting more involved — so (now) science is just one of the disciplines." Alongside the academic presentations, the students of the Ames School of Art now give talks about their senior exhibitions in the afternoon, while the official end of the conference is a performance of seniors' work at the School of Music. "That's my favorite part," Seeborg says. "They have three composition students who come in and talk about their original compositions, and then they have them performed — usually for the first time."

The approach has changed, too. While many students stick to the traditions of the conference — hard, scientific research; hard, scientific presentations — others have been more playful. A poster on animal behavior is shaped like a dog. Another poster — an anthropological study of exotic dancers — is a sultry silhouette of a woman in a Bettie Page pinup pose.

With the expansion of scope comes the expansion of the conference, as well. "Our numbers are up considerably this year," says Seeborg, "largely thanks to Mike Theune." Assistant English Professor Theune, who chaired the planning committee for 2006, has brought a new energy to the conference that translates to bigger numbers: 147 participants signed up to present this year, topping last year's record by more than a third.

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At 9:15 a.m., the first session of poster presentations is underway. Students stand near their projects, waiting for curious visitors — often parents, and faculty from other departments — to ask questions. Everything goes smoothly, for the most part.

One presenter, Adam Miller '06, has a poster on a topic to which everyone can relate today: stage fright. With all of the pressure involved, it's understandable that students would be a little nervous. Miller, whose project compared the stage-fright levels of students who seek out theatre projects to students who are not theatrically inclined, asked his study's participants to rate their own stage fright on a scale from one to six.

From looking around, it's clear almost everyone at the conference is spiking high on this anxiety scale.

And where is Miller on the scale? "I'm at about a two right now. For me, this is a conversation. I have conversations every day. ... The big fear (for people) is messing up," he adds.

Could it be that the level of participants' fears correlates with how much time and energy they put into their projects? Though Miller hasn't made a study of it, it seems like solid thesis. If true, it's a safe bet that those experiencing the most stress at the moment are the ones presenting research honors projects.

As the University's course catalog states, "The University encourages qualified (seniors) to pursue projects of original research under the guidance of a faculty member." Many posters and oral presentations given at the Powell conference come from these honors projects, a process that is a huge time commitment both for students and faculty.

To qualify for research honors, a student's project requires not only a faculty advisor, but a panel of faculty members who critique the thesis. As Seeborg describes, students doing an original research project will "form a committee of four people, and work with that committee toward research honors during their senior year. Most of the work is done with the chair of the committee, but there's a lot of one-on-one commitment." To help give the project an interdisciplinary aspect, one of the panel members must be from outside the department of the student's major.

While candidates for research honors usually meet at least once a week with their advisors, non-honors students who present at the conference can set their own schedules, and the nature of each mentor-to-student relationship is very individualized.

Miller recalls his relationship with his advisor, Education Instructor Leah Nillas: "She was an excellent sounding board for my ideas."

Bridget O'Connor '06 had similar support from Associate Professor of English Mary Ann Bushman, who advised O'Connor on her honors project, entitled "The Ghost of King Hamlet: Catholic in Purgatory or Protestant from Hell?"

"(Her) role was directional in the sense that every time we met, she would come up with new ideas, new areas to research, and almost brand-new theses," O'Connor says. "Dr. Bushman provided feedback on my work and ... advised me in a way to make sure I did not miss any important areas of research, and kept me thinking about (*Hamlet*) in different ways."



Professor of Economics Mike Seeborg (shown above right) advised several students on their projects and served on this year's conference planning committee. The event's namesake, John Wesley Powell, taught at IWU before leading historic research expeditions, many involving students. (Photo by Marc Featherly)

In other instances, particularly in the sciences, professors will invite students to work on their own research, which leads to valuable experience for the student, and an able assistant for the professor. "Students sometimes will present joint research, says Seeborg. In some instances, this can lead to publication in academic journals and other professional outlets, which is considered a remarkable achievement for an undergraduate.

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As the first poster session continues, a larger-than-usual poster teeters and falls under its own cumbersome weight. Its owner makes a dive to save it. "We have other easels," Theune offers.

Theune stands near the food table, sipping crucial coffee. On Miller's anxiety scale, he's probably around a 3. There's not a lot to do now, but there's always the chance that something will go wrong. Still, thanks to the many staff members who helped out with the process, there's room for him to relax. Theune is particularly grateful to Pat Neustel, administrative assistant to the provost, who helped coordinate a long list of details. "It would have been impossible without her," says Theune.

Aside from the occasional toppled poster, the scene is tranquil. The poster session is wrapping up as professors pose some last-minute questions to participants, who seem more relaxed than they

did a few hours ago. "The way everything is coming together has me feeling good," Theune says with a smile. Then he moves to the microphone to make an announcement: it's time for the first round of oral presentations. Tension returns.

While the poster presentations offer more flexibility for students to stretch their legs or take a restroom break, the oral presentations are more formal — and more nerve-wracking: 15 minutes each, just the presenting student and his or her audience, with communication exclusively oneway.

Oral presentations give students the chance to go into much greater depth in explaining their research. Big projects with complex findings are par for the course, and while much of the work was born in study carrels and labs, others found themselves doing research in more exotic settings.

For example, anthropology major Adam Cannon '07 spent several weeks in rural Belize studying two Mennonite communities: one that had chosen a more traditional, aesthetic lifestyle and the other a more progressive, modern way of life. To better relate to the members of the first community, Cannon grew a beard, helped to clear brush by hand, and got a chance to try out their traditional transportation methods: "They travel (to town) by horse and buggy," he explains. "It takes about three hours — I had the pleasure of experiencing that.

"It was fun," Cannon sums up his experience — a reminder that, for all the tedious aspects involved in doing first-rate research, the thrill of discovery is often more than adequate compensation.

At the conclusions of the morning's oral presentations, professors, students, and guests convene at a luncheon in the Memorial Center's Main Lounge. For the morning presenters it's a time to finally relax; their afternoon counterparts will soon be on the hot seat. Amid the hum of conversation and clinking silverware on china, Professor Theune takes the microphone once more to introduce both President Wilson and the conference's keynote speaker, Robert Sternberg, dean of the School of Arts and Sciences at Tufts University.

"I think this is an aptly named conference," President Wilson tells the gathered crowd during his brief remarks. "John Wesley Powell came to Illinois Wesleyan as a young faculty member right after the Civil War. ... He, too, was a great mentor and collaborator with his students. In 1867 he took three students on an expedition of the West, which was the *first time* undergraduate students accompanied a professor on field research."

Perhaps some of the students only know of Powell from the seated bronze sculpture in his likeness that sits in The Ames Library rotunda, but they nod as they listen to Wilson's account of the historic trip. It was Powell, they learn, who came up with the University's motto, "Scientia et Sapientia," which translates from Latin as "Knowledge and Wisdom" — a reminder that the two aren't the same, but that the former is needed to achieve the latter.



Lauren Couch '06 (above) displayed and spoke about her artwork at the School of Art's B.F.A. Senior Critique Honors presentation. Senior music compositions have also been included among the conference events in recent years. (Photo by Marc Featherly)

In its 17th year, the conference has come a long way. Looking at the brochures from previous years, one can see a physical manifestation of its growth — from the slim pamphlet of its inaugural year to this year's heavy, book-length program, which is actually thicker than the campus directory. How much bigger will it get, though?

"I have the feeling the conference will grow a bit more, then find its level," says Theune. With this growth, however, comes the problem of finding room for all of the presenters. With this year's crowd, the science center's atrium is nearly full. Too many more may require a change of venue.

Even with a successful playbook in hand, there are always ways to improve the conference. "We're thinking about changing the format and bringing in alumni who have gone out and done interesting things," says Seeborg. However, "we (don't) want to keep it focused on external researchers; we want to keep it focused on the students."

In the end, the John Wesley Powell Student Research Conference gives students a chance to show each other and their professors what, exactly, they've been laboring on for all these months. It brings together all of their hard work, their time spent researching alone and with faculty members, and gives them a taste of what they might expect should they choose to pursue graduate school. "Even if they don't, it's a great culminating experience where they pull everything together into a single project," says Seeborg. "For most students it's sort of the 'last hurrah' of their undergraduate research."

At day's end — after the second set of poster presentations are finished, after the art students present their exhibitions and the music students' compositions are performed, and as parents take their exhausted sons and daughters out for a celebratory dinner — there is a feeling of finality. Not the end of the story, but an important chapter.

As Robert Sternberg said earlier, during his keynote address, "If you really want to do something, the chances are pretty good that you can do it. There are always stumbling blocks along the way ... but if you want to do great research, or if you want to do great in life period, the lesson is finding what you love to do matters." The students who presented at this year's John Wesley Powell Conference may not yet have found what they love to do — at least not precisely — but their direction toward that goal has grown a little clearer on this day.