

CUR Focus

A Rising Tide Floats All Boats: Organizing and Implementing a Statewide Undergraduate Research Conference

Undergraduate researchers find presentation opportunities at national venues such as the National Conference on Undergraduate Research (NCUR) and the Council on Undergraduate Research’s Posters on the Hill; many also present at their own campus’s celebration of undergraduate research. The importance of having an intermediate opportunity for students within the Beehive State became apparent to the undergraduate research directors at Utah’s public and private institutions in 2006. This, then, is the story of how they created the Utah Conference on Undergraduate Research (UCUR), and of how state leaders came together to build upon a national movement—undergraduate research—and capitalize on its momentum to enhance students’ participation in research and creative endeavors both on individual campuses and statewide.

The Context

Since 2001, the state’s two public research universities—Utah State University and the University of Utah—have hosted an undergraduate research day at the state Capitol early in the legislative session. This event was designed specifically to overcome a mistaken perception in the media that research universities do not view teaching and learning as important. Having students share their projects with lawmakers did the trick. Staff of the undergraduate research programs at the two research universities were heartened when a key senator eventually noted that “no one would doubt the value of research to an undergraduate.” The research universities had demonstrated that they cared deeply about undergraduate education and that they deliberately immersed their students in engaged learning.

Considering the increasing interest in student research among Utah institutions—evidenced in part by their students’ participation at NCUR, particularly at the 2003 conference hosted at the University of Utah—there seemed to be an opportunity to develop a statewide NCUR-style event rather than expanding the event at the Utah Capitol. The space for posters in the Capitol’s rotunda was limited, and

the purpose of that event focused on marketing a message about research universities. The state needed a different venue in which students experienced the feel of a professional conference. Our analysis indicated that we were on the cusp of seeing undergraduate research become progressively more important on all campuses.

Utah State and the University of Utah took the lead in bringing the issue to the attention of the chief academic officers of the Utah System of Higher Education (USHE) and found a champion in the assistant commissioner overseeing academic affairs. The state of Utah enrolls about 200,000 students within its institutions of higher education. The state system comprises the public institutions in the state, but the privates also needed to be brought on board. (See Table 1 for a list of participating collaborating institutions.) That, in fact, happened quickly.

With support from all institutions, the undergraduate research directors and other campus representatives met in Salt Lake City to begin face-to-face discussions about a new

Table 1. Utah Institutions Collaborating on UCUR

Public:
University of Utah
Utah State University and its regional campuses
Weber State University
Southern Utah University
Utah Valley University
Dixie State University
USU: College of Eastern Utah
Salt Lake Community College
Snow College
College of Applied Technology (2006 only)
Private:
Brigham Young University
Westminster College

Table 2. UCUR Venues

2007 University of Utah
2008 Utah Valley University
2009 Westminster College
2010 Southern Utah University
2011 Weber State University
2012 NCUR Hosted at Weber State
2013 Utah State University
2014 Brigham Young University

event to provide more of our students with the fundamental experience of presenting their research (a term that also is meant to encompass scholarship and creative activity.) Because we wanted the steering committee to be inclusive, membership was open not only to directors of undergraduate research programs but also to faculty and staff on campuses where the infrastructure for student research might be less developed. Because some institutions are more complex—such as the land-grant university, which has regional campuses—additional representatives served on the committee from branch campuses. When a particular campus hosted UCUR, two or three lead organizers would be added to the steering committee. The state’s director of Campus Compact was also invited as we anticipated that community-based research might be a vibrant thread in the state conference.

Reviewing the Literature

At the time of the initial discussions, little was known about other state undergraduate research conferences. Cherry (2001) described a similar effort in Oklahoma in which its regional universities came together, beginning in 1999, to highlight research in predominantly undergraduate institutions. The *CUR Quarterly* featured undergraduate research celebration days in two special themed issues in 2002 (June and September). We were also familiar with the Southern California Conferences on Undergraduate Research (www.sccur.org), initiated in 1993 at Caltech. Massachusetts also hosts an undergraduate research conference for students at its public institutions of higher education (<http://webapp.comcol.umass.edu/msc/about.aspx>). Through word of mouth, we learned about the success of North Carolina in hosting a statewide conference. The State of North Carolina Undergraduate Research and Creativity Symposium (<http://www.sncurcs.org/>) began in 2005 following a student-

Figure 1: UCUR Logo

initiated Triangle Undergraduate Research Symposium in 2003, which brought together the three universities in that area. The late George Barthalmus of North Carolina State University shared information on how to pull off such an event, and organizers of our Utah state conference have drawn heavily on his advice. Each piece of information about state or regional conferences increased our confidence that such an event was doable.

First Decisions

What should the statewide conference be called? Although several names were suggested, it made sense to continue in the NCUR mode, so we named it simply the Utah Conference on Undergraduate Research (UCUR). The name also helped the group to coalesce into the UCUR Steering Committee. The next decision was more troublesome: when to schedule the conference. The discussion divided between those who wished for fall (primarily the research universities) and spring (mostly the primarily undergraduate institutions and two-year colleges). A compromise resulted in a February date, perhaps not the best time for travel in what is a wintry state, but not in conflict with the various campus spring breaks in March. The University of Utah was selected to host the first statewide conference since it had hosted a very successful NCUR in 2003. Co-chairs for the conference came from the two research universities.

How many participants might be interested in a statewide conference? We didn’t know. At one point, we even thought of a limit on attendance per institution but decided that



Members of the UCUR Steering Committee at the inaugural conference.

due to varying institutional missions and enrollment levels among institutions, restrictions did not make sense. The steering committee estimated that between 200 and 400 students might participate, which made planning for venues and room reservations somewhat easier, and, in fact, each of the five annual conferences to date have drawn between 300 and 400 participants.

The Importance of a Timeline

Laying out tasks and creating a timeline were to be significant in the success of the inaugural conference. Our launch date of February 2007 required building a calendar of important dates backward from that time. The elaborate timeline developed ranged from twelve months out to “day of” items such as having room signs and schedules displayed, staffing the registration table, and guiding moderators to their sessions.

The steering committee met monthly to ensure that both major and minor issues were addressed. One of the first tasks was to build a website—www.ucur.org—so that information about the event would be readily accessible to students and faculty. One institution volunteered to build and host the website, and that spirit of volunteerism permeated the group’s activities. Another institution took on branding of UCUR, designing the look of the graphic, which naturally included mountains to suggest literally and figuratively the “peak” experience of undergraduate research (Figure 1). Another institution worked on “swag”—t-shirts and other items to promote the event. The marketing of UCUR involved posters, stationery, and save-the-date cards, as well as no-cost e-mail messages.

Naturally, budget was a prime concern. The committee estimated an overall budget of \$10,000, and to meet immediate expenses, each institution donated \$150 in start-up funds. The host institution was also generous in providing conference venue rental, reception catering, office supplies, interns, and administrative support staff. The spreadsheet that follows (Figure 2) details the budget for each of the first three years of the statewide event. The cost for UCUR ranges from about \$17,000 to \$20,000; however, much of that is recovered through registration fees. Participating institutions, of course, bear other costs, such as transportation for students to the conference, poster production, and hotel accommodations if needed. As the budget spreadsheet details, costs vary from year to year. For example, only in the second year of the conference was a speaker external to the state invited; in subsequent years, the costs of an external speaker were avoided. Likewise, the first UCUR did not serve breakfast to participants, whereas that became more important as the venue moved to campuses not as central as those in Salt Lake City, where overnight accommodations were necessary. In recent years, advertising costs for the conference have been shifted away from the host institution to individual institutions as each prints its own posters. This approach has also reduced mailing costs. Since the inaugural event, approximately \$3,000 has been carried over annually to help the next host with start-up costs.

Other early decisions focused on keynote speakers—whether to have them and, if so, who they would be. We thought first of the governor of Utah, then Jon M. Huntsman, Jr., and the governor’s office was very helpful in offering to declare the week of the conference in 2007 as Undergraduate Research and Creative Activity Week for the state (Figure 3), a practice continued with the subsequent governor.

The Student Participants

Developing the selection process for participants was the most intensive part of planning the first conference. An application form was created, and then submissions were solicited and logged in a central database. Each institution took responsibility for overseeing the quality of abstracts submitted by its students. Some institutions relied solely on faculty certification of the quality of a student’s research while others used committees to select participants. Invitations

Figure 2. Three-Year Budget Summary

UCUR Expenses	2007		2008		2009		Generic
Host	U of U		UVSC		Westminster		
Date	2/2/2007		2/29/2008		2/20/2009		
No. attending (estimate)	400		400		400	Cost per person	Total
Facilities & staff							
Rental of space		\$ 1,510.00		\$ 734.00			\$ 1,000.00
Tech services		\$ 507.00		\$ 60.00			\$ 1,100.00
Clerical help		\$ 640.00					\$ 500.00
Parking services		\$ 446.38					\$ -
Photographer		\$ 331.00					\$ -
Conference services		\$ -		\$ 1,822.00			\$ -
Website devel.		\$ 240.00					\$ -
Other personnel costs							
Food:							
Breakfast & coffee		\$ -		\$ 1,611.50	400	\$ 4.00	\$ 1,600.00
Lunch	400	\$ 3,120.00		\$ 3,776.43	400	\$ 10.00	\$ 4,000.00
Closing reception		\$ 2,421.00		\$ -	250	\$ 6.00	\$ 1,500.00
mailing		\$ 50.00		\$ 76.95			\$ 100.00
Printing/supplies:							
Programs		\$ 2,943.00		\$ 3,132.00	450	\$ 6.20	\$ 2,790.00
Certificates for part.		\$ 200.00					\$ -
Posters	500	\$ 700.00	450	\$ 522.00	300	\$ 0.35	\$ 105.00
Postcards			750	\$ 358.00	0	\$ 0.50	\$ -
Tshirts		\$ 767.00		\$ 1,660.75	375	\$ 5.00	\$ 1,875.00
Banners		\$ 277.00			3	\$ 100.00	\$ 300.00
Signage				\$ 80.00			\$ 100.00
Other printing				\$ 1,088.00			
Other supplies		\$ 100.00		\$ 722.42			\$ 500.00
Keynote Speaker							
Speaker costs		\$ -		\$ 870.51			
Speaker honorarium		\$ -		\$ 1,000.00			\$ 600.00

were sent to students whose proposals were accepted with information on how to register for the conference.

After the presenters were selected, the host institution could build the program, which required significant investment of time. Setting up the program is one of the most time-consuming parts of UCUR, and the process goes more smoothly when abstracts are well written and edited. The oversight at the student's home institution proved to be crucial. Moderators—typically from the faculty of the host institution—were identified and matched with sessions focused on their expertise.

Entries for posters, oral presentations, and creative performances meant ensuring that the appropriate space and equipment for each type of presentation were available. Dance performances are typical at UCUR, for instance. The 2011 UCUR included 200 posters, 150 oral presentations, and three creative/arts presentations.

As UCUR has developed over its first five years, additional information has been added to its website, most of it providing guidance for students: sample abstracts, poster design, and presentation guidelines. The UCUR Steering Committee, conscious of opportunities to promote student development, has included focus groups at lunch sessions (e.g., getting into medical school, information about the NSF REU program); an alumni panel talking about how undergraduate research affected each speaker; and a panel of current student researchers from various fields presenting a summary of their research and its impact. Graduate schools from the state provide information about their programs for UCUR participants. The conference concludes with a reception where participants can celebrate and also network with others. At some UCUR events, the host institution has provided printed certificates to student presenters.

An evaluation of the conference is particularly important, not only to the current host, but also to the future confer-

Thursday program							
Dinner					30	\$ 15.00	\$ 450.00
Reception					30	\$ 10.00	\$ 300.00
Misc.:							
Promotional items		\$ -		\$ 634.64			\$ 100.00
Telecom service		\$ 120.00					\$ -
Carryover to next year		\$ 2,816.88		\$ 2,984.00			\$ 2,984.00
Total costs		\$ 17,189.26		\$ 21,133.20			\$ 19,904.00
Income:							
Carryover from prior		\$ -		\$ 2,816.88			\$ 2,984.00
Institutional contributions		\$ 2,725.00		\$ -			
Registrations: Fri		\$ 9,797.00		\$ 10,894.00	400	\$ 35.00	\$ 14,000.00
Thursday dinner					30	\$ 15.00	\$ 450.00
Total income		\$ 12,522.00		\$ 13,710.88			\$ 17,434.00
Amt donated by host institution:		\$ 4,667.26		\$ 7,422.32			\$ 2,470.00



Governor Jon M. Huntsman, Jr. signs Declaration for Undergraduate Research and Creative Activity Week for the State of Utah with UCUR Steering Committee Members Kinkead, Palmer, Baeder, and Roens.

ence hosts. A survey is sent to the participants, faculty and students alike, and those results are reviewed by the UCUR steering committee, which adds its impressions of what worked and what needs work. From our evaluations, we learned practical lessons like not scheduling faculty-development sessions concurrently with student presentations. Assessment also resulted in UCUR developing much more directed information about standard conference behavior to make the experience more transparent to novices. One of the primary goals of establishing UCUR as a presentation venue for students was to help them develop professionally, and most of the students are novices in terms of expectations for conference behavior. For instance, students needed to be advised that they remain in their sessions until everyone has presented. The idea that presentations offer an opportunity to form a community of researchers and scholars and to engage in question-and-answer with people with similar interests was often a foreign concept. Some institutions developed guidelines or contracts with their students to articulate expected behaviors (Figure 4).

Enhancing a Statewide Culture of Undergraduate Research

When the members of the steering committee successfully pulled off the inaugural conference, it became clear that we had a vibrant and energetic group with mutual interests. It was not surprising then to find that UCUR had wide-ranging effects. Members of the group made joint presentations at national conferences, collaborated on research projects, and bid for CUR and NCUR sites. Bringing national events in student research to the state is a good way to elevate the role of student research at institutions in Utah. CUR's national conference convened at Weber State in 2010, and the campus hosted NCUR 2012. In 2009, the Association of American Colleges and Universities (AAC&U) designated Utah as the fifth official state partner in its continuing national initiative, Liberal Education and America's Promise (LEAP): Excellence for Everyone as a Nation Goes to College. A key factor in that designation was the state's track record of promoting undergraduate research, a recognized high-impact practice, in addition to other statewide activities (Jones 2011).

UCUR's steering committee members also worked together to submit a proposal to CUR's NSF-funded system/consortia initiative. While not funded in the final round, the UCUR steering committee benefitted not only as a group but also at individual campuses because the application process prompted assessment of current processes and programs as well as new thinking about the next stages required to move the undergraduate research enterprise forward.

The institutions involved in UCUR were at different points in their development of undergraduate research when the steering committee first began meeting in 2006, but each institution has moved its student research agenda forward since then. For example, at Dixie State College (DSC), an undergraduate research program was established in 2007 as a result of undergraduate research's growing impact in the state of Utah. Participation by Dixie State students from a variety of disciplines in undergraduate research conferences has grown steadily since then. Student government at Dixie offers travel support to students presenting at professional conferences, and conference attendees also receive partial funding through the undergraduate research budget. The DSC administration has funded faculty members' attendance at several undergraduate research seminars in the past, including CUR faculty development institutes. As a sign of the growing importance of undergraduate research at DSC, the college inaugurated an annual Student Research Day to promote and celebrate undergraduate research on campus and in the community. Undergraduate research is currently overseen by a faculty committee, but as the program expands, future aspirations include establishing an office of undergraduate research and choosing a director.

Westminster College established an office of undergraduate research in 2007, in part to help coordinate hosting UCUR in 2009. It hired a director and increased the funding available to students and faculty for summer research grants, supplies, and conference travel. The college was fund-raising to build a new science center (completed in 2010) designed

Figure 3. Governor's Declaration of Undergraduate Research and Creative Activity Week in Utah in 2007

The Honorable Jon M. Huntsman, Jr.
Governor, State of Utah
DECLARATION

WHEREAS, *Utah's undergraduate students are the leaders of the future who will be responsible and accountable for devising new ways of living and working in industry and in government; and*

WHEREAS, *Utah's higher education community is composed of some of the finest researchers, scholars, and artists in the United States who have created and developed far-reaching knowledge bases spanning the disciplines; and*

WHEREAS, *Utah has shared with the larger world intellectual products which have arisen from creativity, innovation, systematic procedures of scientific thought and innovative artistic approaches and which include but are not limited to: the artificial heart, computer operating systems, premiere dance companies, ground-breaking artists and public officials;*

NOW, THEREFORE, I, Jon M. Huntsman, Jr., Governor of the State of Utah, do hereby designate January 30, 2007 through February 5, 2007 as

UNDERGRADUATE RESEARCH AND CREATIVE ACHIEVEMENT WEEK

in Utah, and encourage all citizens to embrace the results of our undergraduate students' research endeavors and their creative achievements.

to facilitate undergraduate research in the natural sciences, and was looking to increase student participation in undergraduate research activities. UCUR offered an affordable way for Westminster students to present their research in a prestigious venue.

Utah Valley University made the transition from a state college to a university early in UCUR's history and, at this writing, is moving to make undergraduate research a priority. Further, for a mature campus such as Utah State University, where undergraduate research was institutionalized in 1975, UCUR has meant greater connection with its regional campuses. Students representing four Utah State campuses presented at the 2010 UCUR, evidence of increasing attention to research at these regional sites. Lianna Hatfield Etchberger, a biology faculty member at the Uintah Basin regional campus, found that UCUR provided a low-cost opportunity to implement the final stage of an authentic science experience by allowing students to present their results to a broader community. Carrie Young, an Etchberger student who focused her research on white-tailed prairie dogs, was named the university's Undergraduate Researcher of the

Figure 4. Institutional Agreement for UCUR Participants

Congratulations on your invitation to present at UCUR! This will be a terrific professional experience for you—one that will go on your resume and also help prepare you for other professional conferences. The Undergraduate Research Office funds the expenses for students whose work is accepted for presentation. This financial support carries with it some obligations.

- Students will present their best work in a professional manner. On the day of presentation, business dress is required.
- Students will support the entire university team by attending presentations and posters of others on the program.
- Students will attend plenary sessions and be present throughout the conference. (Hint: look for presentations in your field of study.)
- Students will attend on-campus orientation sessions, “dry runs,” and budget sessions as scheduled.
- Students will respond quickly to requests from the Undergraduate Research Office as there will be times when decisions need to be made quickly. This is particularly true with the budget wrap-up post-conference.
- Please share any photographs or “stories” with us for press releases and web updates. Upload them to our Facebook site and share!
- Following the conference, we’ll ask for an evaluation of the experience so we can improve our processes.

UCUR is a professional and personal development opportunity that can only be fully achieved if the student participates fully. UCUR provides an excellent opportunity to network with other students, to explore other institutions for graduate study, and to meet faculty at other institutions.

I have read the above list of responsibilities and agree to them:

Name

Date

E-Mail: _____

Year in 2010, testament to a vision of undergraduate research for all students in the USU system.

With five years of data from student participation, we know that campuses that host UCUR see an upswing in student and faculty participation in undergraduate research. We anticipate further follow-up assessment activities to track students in more intentional ways. For instance, does participation by two-year college students at UCUR help them move to research positions when they transfer to four-year institutions? Does UCUR encourage students to pursue graduate studies? Does presentation at UCUR mean that students are more likely to later submit proposals to NCUR or discipline-specific conferences? Do faculty members at UCUR host institutions increase their interest in undergraduate research as a result of the conference? Our state system

office can provide assistance through a data clearinghouse to track the careers of student participants.

The mission of the Utah Conference on Undergraduate Research (UCUR) is to promote undergraduate research, scholarship, and creative activity done with the mentorship of a faculty member or other experts. Steering committee members have found unity and camaraderie through our mutual interest and passion for helping our students develop and excel. Undergraduate research is an educational practice that engages students in active learning. It is, in essence, a rising tide, and through the UCUR experience, we believe that each of our institutions has benefitted significantly.

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The Steering Committee of the Utah Conference on Undergraduate Research

The following individuals have served or are serving.

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Greg Benson, College of Eastern Utah

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**Indicates members of the inaugural UCUR Steering Committee.*