



<http://www.foundationcoalition.org>

### *From Jeff Froyd, Project Director*

Learning, a complex process through which each learner constructs meaning from her/his experiences, interests all teachers. However, exploring learning (what it is, what it looks like, what it should produce, etc.) may be a daunting process since information on learning may be found in educational psychology, cognitive psychology, cognitive science, computer science, neurophysiology, and other fields. One way in which faculty members might learn more about learning is through sustained, facilitated dialogue among faculty members from many different disciplines. At the University of Wisconsin Madison, Creating a Collaborative Learning Environment (CCLE, <http://www.wisc.edu/provost/ccae/ccle/>) has provided faculty members opportunities for interdisciplinary dialogue on learning since 1993. More recently, the University of South Australia and Texas A&M University have offered similar programs. In the Spring semester of the 2002–03 academic year, the University of Wisconsin Madison, in cooperation with the Foundation Coalition, will offer facilitated dialogue on learning for faculty members at several institutions through distance learning technology. Participants will explore **ways of knowing** (theories of learning, learning styles, disciplinary and cultural perspectives) and how they inform **ways of practice** (both teaching practice and engineering practice). Participants will meet face to face at the beginning and end of the program and use communication technologies for interactions in between. More information on the program can be found at [http://fc1.tamu.edu/events/news/learning\\_online.html](http://fc1.tamu.edu/events/news/learning_online.html). If you are interested, please contact Jay Martin ([martin@engr.wisc.edu](mailto:martin@engr.wisc.edu)) or Sandy Courter ([courter@engr.wisc.edu](mailto:courter@engr.wisc.edu)) at the University of Wisconsin Madison.

## Upcoming Events

**Aug 11–16 E-technologies in Engineering Education: Learning Outcomes Providing Future Possibilities** (United Engineering Foundation conference) in Davos, Switzerland.  
E-mail Sarah Pfatteicher at [spfatt@engr.wisc.edu](mailto:spfatt@engr.wisc.edu).  
See [http://fc1.tamu.edu/events/conferences/e\\_technologies.html](http://fc1.tamu.edu/events/conferences/e_technologies.html) for information.

**Sep 16–17 Pedagogical Network for Engineering Education Workshop** in Denmark.  
E-mail Jeff Froyd at [froyd@tamu.edu](mailto:froyd@tamu.edu) or call 979.845.7574.

**Sep 30–Oct 1 Engineering and Computing Education Grantees Conference** in Washington DC.  
E-mail Susan Kemnitzer at [skemnitz@nsf.gov](mailto:skemnitz@nsf.gov) or call 703.292.8382.  
See [http://fc1.tamu.edu/events/news/grantees\\_conf.html](http://fc1.tamu.edu/events/news/grantees_conf.html) for information.

**Nov 6–9 Frontiers in Education 2002** in Boston MA. See <http://www.wpi.edu/News/Conf/FIE2002> for information.

**Mar 16–18 Share the Future IV**, the cross-coalition conference, will be held in the Tempe Mission Palms Hotel, near Arizona State University.

**Spring 2003 On-line Course for Faculty on Learning: Ways of Knowing, Ways of Practice**  
The University of Wisconsin, with the FC, will offer facilitated dialogue on learning for faculty members at many universities. See [http://fc1.tamu.edu/events/news/learning\\_online.html](http://fc1.tamu.edu/events/news/learning_online.html) for information.



# Jay Martin, U. of Wisconsin

Jay Martin's initial Foundation Coalition (FC) experience was "engineered" by John Mitchell, the former FC Principal Investigator at the University of Wisconsin, who asked Jay if he would like to attend an "interesting" meeting. Little did Jay suspect that this meeting was to induct him as a member of the FC's long-range planning committee. The University of Wisconsin has been influenced by many FC products, with the current focus on the concept inventories (<http://www.foundationcoalition.org/home/keycomponents/concept/index.html>). UW engineering faculty members are also working on curriculum evolution and actively disseminating FC materials to their partner (target) schools. Jay says, "By far the most positive thing we are doing is partnering with non-FC schools, having discussions with people from these schools." In addition, "the miniconferences on the freshman year have been really useful to us on what we can use and implement in our school. Also, we utilize some activities from our partner schools. I think the work on the concept inventories is **really** important and is impacting discussions on what students learn and how they learn."

Jay's varied personal history includes co-oping at Inland Steel in Chicago his sophomore year as a mechanical engineering student at Michigan Technological University. The experience led him to change his major to physics and transfer to Indiana University, from which he graduated. A stint in the Peace Corps allowed him to teach calculus and physics in Kenya. "Teaching students in Kenya fueled my interest in education!" he says. Jay then worked at Oak Ridge National Laboratory in Tennessee. He earned an M.S. in engineering science from the University of Tennessee and a Ph.D. in mechanical engineering from the University of Michigan, though his research was in California at Sandia National Laboratories. "My family and I spent a year in Japan, where I was a visiting professor at Hokkaido University in Sapporo for six months. Then I worked at Nissan Research Laboratory for six months in Yokohama," Jay tells us. "This was especially interesting for my kids, who were 7 and 9 and attended Japanese primary school."

For about 15 years Jay worked in combustion and engines and served as director of the Engine Research Center at the University of Wisconsin. After his elder son was injured in a diving accident, the UW-Center on Rehabilitation Engineering and Assisted Technology (UW-CREATe) was established and Jay is the current director (<http://rehab.engr.wisc.edu>). Jay continues to serve as a mechanical engineering professor and an affiliate faculty member in biomedical engineering.

A strong participant in the sustained dialog on critical issues in engineering education that the FC addresses, Jay appreciates the ideas that have come out of the FC, like curricular innovation and predicts the activities of the FC will have lasting impact on curricular evolution in engineering education.