Speaking at a North Atlantic Treaty Organization conference on organizational learning and technological change 10 years ago, National Aeronautics and Space Administration scientist and cognition expert William J. Clancey said, “We inhibit learning when we view people as machinelike, suggesting they follow instructions like a machine, and force them to justify behavior exclusively in terms of previously articulated plans.” Turning attention to the student—rather than the machine—NLII annual meeting conference goers tackled the issues surrounding learner-centered education.

Cognition occupied center stage in a panel discussion on how best to apply known theories of learning to the online environment. Stephen Downes of the Senior Research Office at the National Research Council of Canada joined Lynette Gillis, president of Learning Designs Online; NLII 2001 fellow Helen Knibb; and Utah State University professor M. David Merrill in exploring the relationship between learner centered educational theory and the next-generation technologies currently being tested in North America’s colleges and universities.

“Online learning is 24/7, not course driven,” said Downes, who argued that students drift to online courses for reasons of cost, convenience, and effectiveness. “People learn on Google,” he said. “Students say the university isn’t a good place to study. It’s distracting, time wasting.” Anyone who’s watched exhausted students sacked out in the upstairs lounge of the campus student center can attest to the squandering of resources. The presenters all agreed on the general goal: Empower students to learn as they go, sitting at their computers at 1 a.m. with the instant message screen open, Dogpile poised to fetch, and half a pot of coffee perched atop a pile of printouts from an online database. Create a learning environment that provides them with access and the ability to continually build their knowledge base, and they will likely oblige.

“Information is not instruction,” said longtime educator David Merrill. “Simon Says is not effective instruction and does not teach you how to solve problems. Designing collaborative or open learning environments is much harder than spray-and-pray teaching, and yet we don’t examine how to do that.” Merrill’s hands-on classroom experience was showcased in his presentation as he made the case for online instruction that incorporates the most practical and effective classroom strategies: Stand aside and let students learn by doing. Allow students to solve problems. Meet them where they live. Show rather than tell. Make them do rather than listen. Offer knowledge applicable outside the course.

Gillis used her corporate experience to build on Merrill’s classroom wisdom, demonstrating that people learn most effectively when they can evaluate their own performance as they go. She highlighted a cell phone instructional course that allow trainees to measure their own competency and then repeat the test to hone their skills. Allowing students to refine their abilities is not cheating; it’s sound instruction.

Learner-centered design practices was the focus of Knibb’s research as an NLII 2001 fellow, and she’s finalizing a white paper on the topic that will be the starting point for the research of NLII 2002 fellows Colleen Carmean of Arizona State University West and Jeremy Haefner of the University of Colorado, Colorado Springs. In addition, the NLII is holding a focus session on this topic on May 31 in Vancouver, British Columbia, Canada, under sponsorship from WebCT and the University of British Columbia.