

Yes, students in this chemistry class at the University of Nebraska-Lincoln do still raise their hands — but it's to use their hand-held, wireless transmitters to log their answers into a computer.



KENT SIEVERS/THE WORLD-HERALD



UNL students are increasingly clickish

By BILL HORD
WORLD-HERALD BUREAU

LINCOLN — Chemistry lecturer Bill McLaughlin asked his students to calculate the molecular density of a chemical solution.

Out came the clickers.

Click. Click. Click.

Click button 1 for answer No. 1, click 2 for answer No. 2 and so on. Each response was to be beamed to one of three sensors located around the room.

In less than a minute,

McLaughlin's computer collected 170 answers, tabulated them and displayed the results on a big screen and five monitors.

The hand-held, wireless transmitters — routinely called clickers — soon will transform lectures across the University of Nebraska-Lincoln campus from monologues to two-way interactions.

After two semesters of trial runs, UNL is converting 20 large lecture auditoriums at a cost of about \$2,000 each. Students buy their own clickers, which work in

any of the classrooms, for \$30.

"Faculty are extremely excited about this," said Gail Latta, associate vice chancellor for academic affairs. "They want to get on the list where it will be installed."

Some of McLaughlin's students will demonstrate the clicker system Tuesday for UNL faculty members who have yet to try the system but may be doing so next year.

The use of remote clickers for classroom interaction has been
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Clicker: Lectures are transformed into interactions

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tried for several years around the United States, but it is now gaining wide acceptance.

"Professors all across the country are seeing the vision," said Rob Meissner, a spokesman for GTCO CalComp Inc., which won the contract for UNL classrooms. "They see it changes their relationship with the students where there is more of a dialogue."

GTCO's business more than doubled in the past year and is expected to double again this year, Meissner said.

Use of wireless remotes in university classrooms was pioneered about 10 years ago, said Roger Kirby, chairman of the Department of Physics and Astronomy at UNL. Physics lecturers at UNL began using remotes about five years ago, but the department has maintained possession

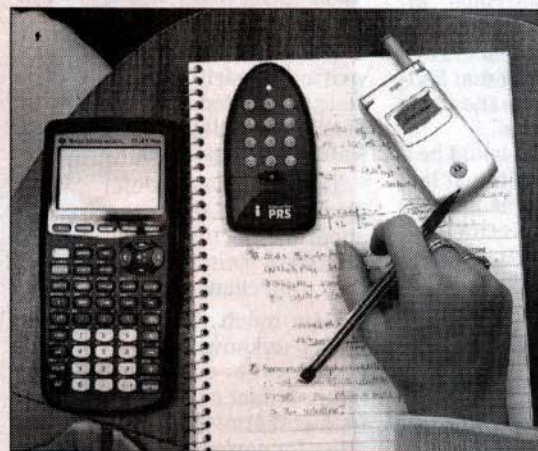
of the clickers. Students pick them up at the door and leave them at the end of the class period.

Creighton University has a physics classroom equipped with a wireless system and uses two portable systems for training. In these cases, the clickers are distributed to students at the beginning of a class period.

Under the new system at UNL, however, a student will buy a clicker at the bookstore during freshman year and keep it, registering the device's code number with classes that are equipped for the technology.

"This definitely makes paying attention in class worthwhile," said Jeff Watton of Eagle, a freshman engineering major in McLaughlin's chemistry class.

McLaughlin was pleased with the technology but more pleased with the results of his class ques-



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The calculator and cell phone are givens. Now, the arsenal of the well-equipped scholar — such as this student in a chemistry class at the University of Nebraska-Lincoln — includes a wireless transmitter.

tion, displayed on the monitors: Ninety-five percent of the students answered correctly.

"I'm impressed that you know how to do that," he told the 170 freshman and sophomore students. "Good job."

Another question brought another flurry of clicking and 96.9 percent correct responses.

"If you're going to be here," Watton said, "you might as well stay awake to answer the questions."