

Psychologists welcome age of computers

By BILL LINGLE
Of the Emerald

Imagine that you and Bugsy have just robbed a bank. The police say if you testify against Bugsy, you won't have to go to jail. They've told Bugsy the same thing.

You'll both get five years if you testify against each other. If neither testifies, you'll both get only two years. But if only one testifies, the "squealer" gets off free and the other draws 10 years.

You and Bugsy can't talk to each other. How do you decide what to do?

That's a real problem... even if you're not a criminal but an undergraduate psychology student who's just been given the "Prisoner's Dilemma," a tool to demonstrate strategies of cooperation and non-cooperation.

The dilemma is an old one, but the University's psychology department is using it, and other learning devices, in a new way — with computers in an individualized learning program called Inquiry Training.

The independent undergraduate study program is characterized by Robert Fagot, psychology department chairman, as "one of the most exciting educational ventures we have attempted."

"It allows even first-year students to get actively involved in the learning process in a way that can't be done in conventional classes," Fagot says.

Students check out and work with individual learning "modules" — small computer programs — designed to be run on PDP-10 and PDP-15 computer terminals in the psychology department.

One such program is "Mouse." The "mouse" is a dot of light which moves randomly on the cathode ray tube. The student can "teach" the mouse to move one way or another by reinforcing its correct moves. The student can then plot the mouse's learning curve.

"Mental arithmetic" is a program that explores what goes on in the mind when two small numbers are added together. The student gathers data by watching a

rapid flashby of 132 simple addition problems on a video display terminal. Computer analysis at the end of the experiment allows the student to draw conclusions about conflicting theories.

"Computer-assisted learning is more than an audio-visual aid," says Michael Posner, head of the Psychology Undergraduate Education Committee and coordinator of the Inquiry Training Program. "It is an effort to make experimentation available 'ad lib.' It's like a library. It's not just an aid to a lecture; it's an aid to inquiry."

Posner says it is rare for a system like the Inquiry Training Program to be available to undergraduates. He says only a few universities, including Dartmouth College and the University of Illinois, have followed this approach.

"The program gives students a chance to ask questions that haven't been asked before," he says. "The whole idea is to try to free students early in their college careers to make their own deci-

sions and ask their own questions."

John Winkelman, who earned his Ph.D. in psychology at the University and recently served as director of the Inquiry Training Program, agrees that it serves a "dual instructional and exploratory function."

"Mouse, for example, is primarily instructive," explains Winkelman. "The student learns for himself how reinforcement modifies behavior. With another module, a student could run the experiment on different people in different mental states and find out how long it takes them to begin responding in the correct way."

Such experiments have practical application, Winkelman says.

"Take the example of parents who build up screaming behavior in their children," he explains. "Even a very thin schedule of reinforcement can build up powerful behavior patterns. The experiment might show that the more random or infrequent the reinforcement, the more effective it may be. This certainly would have

a bearing on how to go about changing the screaming behavior."

Rod Carter, a junior in psychology from Albany, assists in running the program. Carter thinks another benefit of the experiment is that it gets students to "break down the barriers many people have against the computer as a learning tool."

The new learning approach, which already offers modules in experimental and social psychology, has vast potential application. Clinical modules are now being constructed.

"The computer can provide a 'patient' for the student to try out various techniques for modifying behavior," Carter says.

Posner says the psychology department is applying for federal funds to develop the program. He anticipates that the Inquiry Training Program will expand in accordance with the psychology department's focus of "giving undergraduate students more individualized learning situations and laboratory classes."

N-plant technicians failed deliberately?

RICHLAND, Wash. (AP) — The idled nuclear reactor at the Hanford Nuclear Reservation could be restarted by Wednesday if 18 technicians pass a safety test, a spokesman for the operators said.

United Nuclear, which operates the kilowatt-producing reactor, closed the plant Friday after 18 of 19 operating technicians taking a routine recertification test had failing grades, United spokesman Lynn Watson said.

"We feel the failure of 18 of 19 of those taking the test to pass was deliberate," Watson said.

Watson said the technicians had given a tipoff of what was to come when they signed a letter saying they would refuse to take the test while wage negotiations were pending.

But Thomas VanLear, a union shop steward for the Nucleonics Alliance, attributed the low examination grades to a lack of training by United Nuclear and the turmoil created by the contract negotiations.

"Some of us got the 26 hours of retraining we were supposed to, and some got very little," he said.

VanLear, whose union is affiliated with the Atomic Metal Trades Council, added "it's difficult to buckle down and study as you should when your wages are being threatened."

Watson said United Nuclear's position is that ample retraining was provided for all operators. "If they really need retraining the contract says they can get up to or more than 60 days of it, but only when the company deems there is a need," Watson said.

Watson said the operators are "highly skilled," and the test will be administered again Tuesday.

"If they pass the test, and we won't know until Wednesday, we could start up the N Reactor immediately," Watson said.

If those taking the test appear to genuinely fail the second time, they could lose their nuclear operation certification, Watson said.

The recertification test is required every two years under a contract between the firm and the federal Energy Research and Development Administration (ERDA).

ERDA spokesman Tom Baumann of Richland said, "to the best of our knowledge no ERDA nuclear installation has even been shut down before by those kinds of test failures."

PROPOSED AMENDMENT

PROPOSED AMENDMENT TO THE ARTICLES OF INCORPORATION UNIVERSITY OF OREGON BOOKSTORE, INC.

ARTICLE VIII IS HEREBY AMENDED IN ITS ENTIRETY TO READ AS FOLLOWS:

(a) The Board of Directors shall consist of ten (10) members of the Corporation as follows:

All candidates shall, at the time they stand for election, be Undergraduate Students, Graduate Students, or members of the Faculty, respectively. Five (5) members shall be Undergraduate Students; one (1) member shall be a Student-at-Large, either Undergraduate or Graduate; two (2) members shall be Graduate Students; and two (2) members shall be from the Faculty.

(b) Except as provided in paragraph (c) below, all members shall be elected to serve a term of two (2) years, and the membership shall elect one (1) Freshman each odd-numbered year, two (2) Sophomores each year, one (1) Student-at-Large (either Undergraduate or Graduate) each even-numbered year, one (1) Graduate Student each year, and one (1) member of the Faculty each year.

(c) Upon the years indicated below, Board Members shall be elected for terms as follows:

FRESHMEN

1976	one member — 1-year term
1977	one member — 2-year term
1978	None
1979	one member — 2-year term
Thereafter	one member — each odd year for a 2-year term

SOPHOMORES

1976	two members — 2-year term
1977	two members — 2-year term
Thereafter	two members — each year for a 2-year term

STUDENTS-AT-LARGE

1976	one member — 1-year term
1977	one member — 1-year term
1978	one member — 2-year term
1979	None
1980	one member — 2-year term
Thereafter	one member — each even year for a 2-year term

GRADUATE STUDENTS

1976	two members — 1-year term
1977	one member — 1-year term*
1978	one member — 2-year term**
Thereafter	one member — each year for a 2-year term

FACULTY

1976	one member — 2-year term
1977	one member — 2-year term
Thereafter	one member — each year for a 2-year term

*Candidate receiving second highest number of votes cast.

**Candidate receiving the highest number of votes cast.

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