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These teachers about to become obsolete

Some teachers worry about becoming obsolete, but there is a Livonia resident who is actually planning on it.

Dr. Richard Dahlke of Livonia and Ronald Morash of Ann Arbor believe such "planned obsolescence" is a key to their success as mathematics professors at the University of Michigan-Dearborn campus.

THE TWO PROFESSORS are teaching calculus through the "Keller Plan," a program of individualized instruction which Dahlke describes as "self-paced, mastery-oriented and student tutored."

"Our major educational goal with the Keller Plan courses is to prepare students to learn on their own," explains Dahlke.

As a result, students enrolled in the two courses at UM-D. Calculus I and II, don't attend lectures or turn in specific homework assignments. Instead, they proceed at their own pace through a series of 14 units, which must be completed to pass the course.

EXAMS ARE a basic part of the Keller Plan, but they are exams with a difference — no stigma is attached to failure.

"Because we base our course on 100 per cent mastery of each unit, the student can keep taking the unit exam until he or she passes it, and then move on to the next unit."

As might be expected, most students who actually complete the course receive an A or B for their efforts, which is just fine with the mathematics educator. "I want students to be more concerned with learning than with grades."

STUDENT TUTORS play an important role in the Keller Plan, which was originally designed about seven years ago by Fred Keller, a psychologist at University of Arizona.

"While we are on hand during each class to oversee the general working of the course and to confer with stu-

dents and tutors, it is really the tutors that the students have the closest contact with," says Morash.

The tutors grade the unit exams and answer exam-related questions and problems. "They really have to know what they are doing," adds Morash.

One tutor is Doug Clark of Livonia. Although he thinks the plan "isn't for everyone," Clark also calls his Keller calculus courses "the most satisfying I've ever known."

Clark completed the calculus classes under the Keller Plan before becoming a tutor in the program. He notes that "students aren't afraid to approach me with their problems." He also finds the teaching experience is helpful in other classes.

Clark and other tutors taking Calculus III have designed their own "Keller Plan" to make studying easier and more interesting for the advanced course which is taught in the regular manner.

THE KELLER PLAN isn't without flaws, though.

"It isn't of much value at this point for non-math oriented students — some persons can't get the concepts fast enough to finish all 14 units during the semester," admits Morash.

Early discouragement is another major problem. Almost all of the students in Calculus I are freshmen, and some find the difficulties of coping with the first year of college plus a new concept of teaching a bit too much. "We have to find a way to reduce the frustration and fear that hits some students," says Morash.

The survivors, however, generally find the experience worthwhile. Clark, for one, appreciates the independence that learning how to read math gave him. "I don't need to be spoon-fed anymore."

DAHLKE, who holds a doctorate in math education, believes the long-range benefits of the material and techniques in the plan can be trans-

ferred by students into their courses and into their daily lives.

"The lecture methodology will probably achieve short-range objectives better for some students, but, in the long-run, students will gain the most who learn how to learn."

Dahlke regrets the limited relationship with students he is afforded by the plan but says "you cannot go half-way with individualized instruction." He spends considerable time meeting and working with student tutors, and he and Morash have written about 500

pages of special material for use as "study guides" in the courses.

Dahlke thinks the concept can be easily utilized in many courses, "especially those which involve considerable factual material."

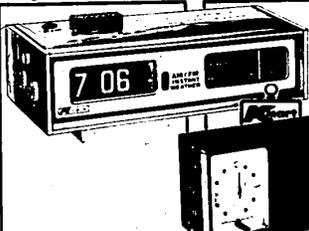
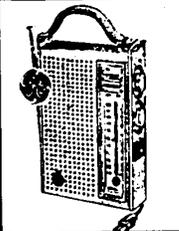
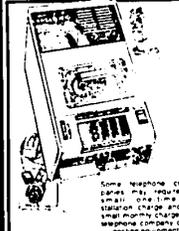
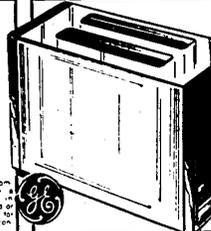
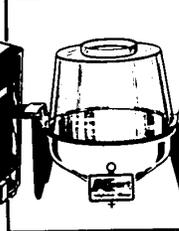
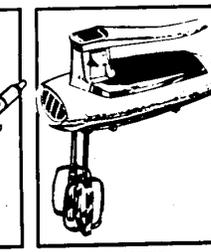
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State study to refute federal railroad plans

A just-completed study of Michigan's railroad needs is expected to help the state fight a federal plan to abandon almost one-third of the lines in the state.

The "Michigan Railroad Needs Study" provides an overview of all operating railroads in the state, more as an integrated system than as 23 separate railroads.

Although couched in terms of "developing the required assistance for a healthy and effective railroad transportation system," the study is obviously an effort to counter a federal preliminary plan to cut rail service in the state.

The U.S. Railway Association (USRA), created by 1973 federal legislation to reorganize railroads, is scheduled to issue its preliminary system plan on Feb. 25. Five months later, a final plan will be presented to Congress for implementation.

The USRA plan is expected to detail an integrated railroad system for the northeast quarter of the nation, including abandonment of low density and unprofitable lines, some in Michigan.

Earlier plans by the U.S. Department of Transportation (DOT) recommended abandonment of more than 15,000 miles of track in the area affected by the federal law—more than 2,000 miles, or one-third of all the track, in Michigan.

Interstate Commerce Commission hearings on the DOT plan indicated "Michigan must be prepared to plan with federal authorities for service retention and improvement later this year," according to John P. Woodford, director of State Highways and Transportation and chairman of Gov. Milliken's Interagency Railroad Task Force.

Five public hearings on the state's study have been scheduled out state to drum up support.

"We hope railroad user groups, communities and businesses dependent on rail service, and the railroad industry itself, will demonstrate interest and support for Michigan railroads by participating in the February public hearings," Woodford said.

The hearing schedule, with times and dates to be announced, is: Feb. 14, Escanaba; Feb. 18, Traverse City; Feb. 19, Saginaw; Feb. 21, Grand Rapids; and Feb. 24, Adrian.

Information on the reports is available from Edgerton W. Bailey, Manager of the Railroad Planning Section, Department of State Highways and Transportation, Lansing 48904.

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