

What Happened to Mark Hopkins and the Log?

Since the time when Mark Hopkins at one end of a log and a student at the other constituted the perfect university, changes have occurred in education. Most of the changes are good; for example, in many parts of the world almost everybody can read. But every now and then we see changes that we think should be reversed.

The teacher, for example, is much farther away from his student than a log length. The pressures of his important research, large classes and reports to government funding agencies leave him little time to perch on a log and chat. To the student we suppose he must appear mainly as a setter of standards and a writer of tests.

We often wonder whether teaching and testing, performed by the same person, are compatible. Does one of them require sympathetic cooperation between student and teacher? Does the other create an unavoidable antagonism? Can you ask a student, for purposes of learning, to bare his ignorance to the teacher who next day will be testing him to find out what he knows?

Perhaps today's Mark Hopkinses have found this incompatibility frustrating and turned away from teaching to more rewarding activities like writing plays, editing magazines and staffing government agencies.

The student, too, has changed. The kind of individuality that used to make him a fit companion for Mark Hopkins has largely disappeared, submerged in a multitude of faceless look-alikes. In most discussions of educational programs, the student appears mainly as a passive organism that can be expected to provide a known response to a standard stimulus. The achievement of uniformity simplifies the task of educating him. The formula is simple: a course, embodied in a text, fed at an appropriate rate until an

appropriate challenge can be met and endured.

Any very forceful individual response on the part of the student would offer serious difficulty to the formula, which does not make allowance, for example, for the student who might read another book along with his textbook. The formula would not expect the teacher-tester to find out what the student had learned by doing so. The teacher is entitled to use the time that is saved by application of the formula for more important matters.

The log, like archaic things, has disappeared. It was really too expensive an item for an affluent society.

Nowadays the student-teacher relation must meet the challenge of students by thousands, huge campuses and multicampus universities. The new man in Mark Hopkins's place would like to sit down on a log or have a soda at the campus cafeteria. But he is very busy. Sitting on logs does not keep the modern university solvent.

The articles in this issue of *PHYSICS TODAY* show that many people are concerned about the problem. Perhaps they have not found the best substitute for the log, but they are actively looking for it. Recognition of a problem is a big step toward solving it.

Times change and old Mark Hopkins, once the foundation of our society, has left his log for better things. The log rots in the forest, and the student who used to sit on one end now has a seat in a lecture hall with 200 others. He is lucky enough to hear a noted physicist who steals three hours a week from his important research to start novices on his own successful path.

Times change and education improves. Sometimes we miss Mark Hopkins and the log.

—R. Hobart Ellis Jr