LETTERS

A dedicated teacher . . .

I read your March issue on physics education and the letters it generated with great interest. As a sophomore physics major, I feel your articles and the resulting letters left out the most important aspect of learning physics. A dedicated teacher can make physics exciting and easy to learn regardless of the textbook or general approach.

A teacher who is genuinely interested in teaching and willing to spend time will get his material across. A teacher who looks upon teaching as an interruption from his research will not teach well no matter what the approach. I feel that with two equally good teachers someone who took "conventional" physics would know as much as someone who took "new" physics.

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Selling high-school physics

How encouraging it was for me as a high-school physics teacher to read Mark Zemansky's comments on the new college physics programs in the March issue (page 71)—particularly his statement that he met a good part of the material in Edward Purcell's book for the first time in graduate school. I must humbly confess that occasionally my students ask me about things I encountered not only for the first time in graduate school but also only after I had been teaching physics for several years.

Finally after nine years of teaching high-school physics, one academic-year institute (at Harvard), two summer institutes (one under August C. Helmholtz at Berkeley) and two local in-service institutes (all through the courtesy of the National Science Foundation), I feel moderately well prepared to teach a good solid high-school physics course, mostly PSSC. But during those years while I was acquiring competence, how many poorly prepared high-school students did I turn out into colleges over the United States? I was not a physics major, but perhaps in that way I am typical of most high-school physics teachers; for very few of them *do* have a major in physics—at least the ones in Idaho don't. Would it have been better if physics hadn't even been offered in our school until I had adequate training, or is a course taught by a poorly prepared teacher better than no course at all? This is a problem that has to be faced in many schools—including some colleges—whether the professors are willing to admit it or not.

In view of the declining physics enrollment over the US, it might be of interest that in our school (about 750 students), the physics enrollment is finally beginning to climb. This is due not to a change in the course or the teacher but primarily, I believe, because I enlisted the coöperation of our counselors and got them to "sell" physics to the students. Let's face it—the counselors have tremendous control over what courses are chosen, and in some schools can literally break or make a department by guiding students away from or into those courses. The physics teacher must work harder to build up his department than the chemistry or biology teacher even if all three courses are electives; for the very name "physics" sounds harder than "chemistry" or "bio" and many are scared away. I have a pet theory that if we changed the title of the course to something like "Physical Science 10" this change would also increase the enrollment.

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High-school physics enrollments

For some time I have been gathering data concerning enrollments in high-school physics, particularly with regard to the acceptance of PSSC. I am primarily interested in obtaining an accurate picture of how any innovation in physics is accepted. These data are summarized in a paper recently completed, which is not likely to be published for several months.