Thank You, Mr. Lincoln

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Changing Times Influence Educational Thought

Our current educational system is highly fluid. A system which had an uphill fight in the last part of the nineteenth and early part of the twentieth century seemed to settle into an acceptable and stable pattern following World War I. It is again facing a vigorous challenge and a state of flux. The dynamics of the current situation are triggered by an expanding population, a mushrooming enrollment in primary and secondary schools which soon will reach the colleges, intense competition with the Soviet Union in research and technology, a rising business volume and continuing prosperity in all areas except agriculture, an agricultural production which continues to outrun demand, a rapid increase in the size of farms, and a rapidly decreasing farm population. These factors are having a strong effect on educational thought.

Increasing Enrollments Put Emphasis on Economy

The expanding population and expected increases in college enrollments are changing the emphasis from recruitment to screening and a search for efficiencies which will effect savings.

There is emphasis on better use of classrooms, more solid scheduling, afternoon classes, night classes, and twelve-month instruction with three full semester offerings.

Large Classes—Larger classes are being proposed. This brings varied reactions based on our individual experiences. In my own experience as student and teacher I have observed extremely effective use of the small class of less than 40 students, but only by teachers highly skilled in winning well-balanced and significant class participation. The problem-solving laboratory technique developed by the Botany Department of Iowa State University which combines discussion with experimentation under the leadership of a competent teacher is an example.

Research on classroom size shows about equal performance on identical tests by students in large classes and in small classes. Care must be taken in generalizing from such studies, however. The performance of a single class is conditioned by the residual effects of teaching techniques in earlier classes which have influenced the students' level of motivation and self discipline. It is possible that it is much more difficult to develop proper motivation and certain beneficial attitudes favorable to learning in large classes than in small ones. It is also possible that a certain amount of exposure to effective small sections expertly handled by competent scholars is necessary to complement the large classes. They may be the means of conditioning the immature students to self-reliance and thus of saving them from becoming scholastic casualties.

It is doubtful that comparisons have been made wherein the opportunities of small-class instruction were maximized as completely as were those of the large classes. Comparisons between good lectures presented to large groups with similar lectures presented to small groups would not be expected to have noticeably different effects. It is much easier to find excellent lecturers at the college level who can make the most of expository presentation before large groups than to find instructors who can maximize the opportunities for individual participation offered by the small class rather than simply lecture to his small group in the same manner he would adopt before several hundred students.

Interestingly, although the testing techniques do not reveal differences in quantity of learning by the two methods, the brighter students generally express a preference for small classes after the trial.

I am not pleading for small classes per se, but do urge caution in too hastily generalizing that small classes are intrinsically no better than large ones. I am more concerned about what a general shift to very large classes may do to the teacher-student ratio than I am about the effectiveness of the large sections. I do believe that students, particularly those in the first two years, need access to competent educators. In our field these men must be scientists as well as educators. In any field they must be men to whom students look with respect and admiration.

Television—Another economy measure being proposed is the use of closed circuit television. Television has a great potential for improving the effectiveness and economy of teaching. Minute details of a specimen or activity in a small area, such as a demonstration of the components of a wheat flower, can be shown to more students and with revealing magnification. Demonstrations of techniques can be set up in a review room so that students can return several times at their own convenience to review a process.

1 Contribution from the Department of Agronomy, Purdue University, Lafayette, Indiana, Presidential Address, American Society of Agronomy, November 18, 1959, Cincinnati, Ohio. Journal Paper No. 1536, Purdue Agr. Exp. Sta.

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