

Reducing Class Sizes: Other Things Are Not Always Equal

by *E. Frank Stephenson*

“The art of economics consists in looking not merely at the immediate but at the longer effects of any act or policy; it consists in tracing the consequences of that policy not merely for one group but for all groups.”

—HENRY HAZLITT

One frequently hears economists use the phrase “other things equal.” For instance, other things equal, an increase in the price of gas will reduce the quantity of gas demanded. While this approach is often a useful framework for analyzing the effects of economic events, sometimes one cannot reasonably claim that other things are equal.

Consider the calls for reducing class sizes in government schools. Proposals at both the state and federal levels have called for class-size reductions in an effort to boost student performance. Typically, such proposals have implicitly assumed that teacher quality will remain constant when hundreds or thousands of additional teachers are hired to lead the smaller classes. This assumption is mistaken.

Assume a school district currently has 1,000 students in 40 classes of 25 students each. Suppose the school district reduces the classes to 20 students each by hiring ten additional teachers. Proponents of smaller

classes rarely specify exactly how the reduction is supposed to improve student performance, but common sense suggests the benefit would come from the teachers’ devoting more time to students individually, or perhaps from the teachers’ ability to better control smaller-sized classes. But how much the 20 students benefit is unclear; if one assumes that a teacher spends half of each six-hour school day giving individual instruction, the amount of one-on-one time for each student rises from 7.2 to 9 minutes per day. While the extra attention should help students, the benefit of an extra two minutes per day is not likely to be large.

Lest we forget, there were initially five other students in each class. What happens to them? They get placed in classes with 15 other students and should also be able to receive more personal attention from their teachers. Therefore, at first glance, one would expect these students to benefit as well, though, as discussed, how much is unclear. Note, however, that these students will be taught by the teachers who were hired to reduce the student-teacher ratio. Why should this matter? Because, for reasons I discuss below, the ten newly hired teachers

Frank Stephenson (efstephenson@campbell.berry.edu) is an assistant professor of economics at Berry College in Rome, Georgia.

Effect of Reducing Class Size on Student Performance				
School level	Number of Studies	Significantly Positive	Significantly Negative	Statistically Insignificant
All levels	277	15%	13%	72%
Elementary	136	13%	20%	67%
Secondary	141	17%	7%	76%

Source: Eric A. Hanushek, "The Evidence on Class Size," Table 4.

are likely to be less skilled than the 40 teachers employed before class size was reduced. Thus the students placed in classes with the new teachers may actually be harmed by the reduction in class sizes. And in the aggregate, there may be little effect on student performance; the students with the 40 experienced teachers may benefit marginally but the students with the ten new teachers may be worse off.

Why are the ten new teachers likely to be less skilled than the 40 teachers initially employed by the school system? Simply put, the school district has to hire teachers it would not have otherwise hired. In a typical year the school district may need to hire, say, five new teachers to replace those who retire or resign. Presumably the district does this by choosing the best five candidates based on transcripts, recommendation letters, and personal interviews.

The initiative to reduce class sizes, however, causes the school system to hire 15 new teachers, ten of whom would have been passed over in a "normal" hiring year for having weaker credentials. This reduction in teacher quality might be particularly noticeable in rural areas (where school systems probably have smaller pools of qualified applicants), in fields like science and math, which already have shortages of qualified teachers, and in rapidly growing areas that are already hiring a large number of new teachers to keep up with rising enrollments. (My state, Georgia, recently created a three-

week teacher "boot camp" in part to generate additional teachers to satisfy a state initiative to reduce class sizes; South Carolina recently hired 19 teachers from Spain to help alleviate a teacher shortage.) And, by the way, that teacher licensing does not eliminate the possibility that quality will decrease; just because all teachers are licensed does not mean they are all equally skilled at teaching. (That Massachusetts lowered the passing grade on its teacher licensing exam a few years ago clearly illustrates this point.)

Relationship to Student Performance

Someone once said that an economist is someone who can take something that works and explain why it doesn't. To avert this criticism, I now turn from discussing the effect of class size in the abstract to the relationship between class size and student performance. What do the studies of this issue tell us? Conveniently, a recent paper, "The Evidence on Class Size," by Eric Hanushek of the Hoover Institution, surveys many of them. Hanushek located 277 econometric studies published in books or academic journals. They all controlled for students' family characteristics, an important determinant of student performance. His results are reproduced in the table above. Only 15 percent of the studies found that reducing class size has a statistically significant positive effect on performance. Moreover, almost as many studies (13 percent) found that reducing class size

has a statistically negative effect on student performance. The remaining 72 percent indicate that reducing class size has no statistically significant effect on performance. And, as indicated in the table, the results were similar in the 136 studies of elementary school class size. Only 13 percent of them found that reducing class size increases student performance, and 20 percent indicate that a reduction harms performance. Thus, in the words of Hanushek, "There is little reason to believe that smaller class sizes systematically yield higher student achievement."

Just as proposals to reduce class size remind us of Hazlitt's famous dictum, so too

they remind us of Hayek's warning against the pretense of knowledge. For not only do proposals to reduce class size erroneously assume that teacher quality will remain constant, but the politicians advancing such policies arrogantly presume to possess the knowledge of what is the optimum class size. Since no one is privy to such knowledge, the ideal class size (or sizes) can be determined only in a competitive marketplace in which parents can choose among schools offering classes of different sizes. Hence another rationale for ending the government education monopoly and enacting genuine school choice. □



FEE Undergraduate Seminar in Irvington-on-Hudson March 8-10, 2002

College students are invited to participate in a weekend of lectures, discussion, and ideas. During this three-day program, expert speakers will discuss the basics of economics, economic history, and limited government.

The seminar is free of charge to accepted undergraduates, and all students, regardless of major, are invited to apply. For more information, or to request an application, please contact:



Director of Seminars
Foundation for Economic Education
30 South Broadway
Irvington-on-Hudson, NY 10533

seminars@fee.org
(800) 960-4FEE
www.fee.org