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## Reflections on Class Size and Teacher Quality

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# Reflections on Class Size and Teacher Quality

*Jennifer Buckingham*

Reducing class size is one of the most widely known and intuitively appealing school reforms. It is also one of the most hotly debated.

Jennifer Buckingham of the Australia/New Zealand-based Centre for Independent Studies reviewed the research on class size and student achievement, summarizing her results in “Reflections on Class Size and Teacher Quality” (March 2003). She found that the large majority of studies showed no significant relationship between class size and student achievement, and the remainder showed only a small increment of improvement. In a given classroom, teacher quality has a far greater influence on achievement than the quantity of students.

Among the several large and small studies that did find achievement associated with smaller class size, Buckingham identified a number of methodological issues that raise questions about the results. Many of these studies were poorly designed. For example, reforms such as curriculum changes were introduced at the same time as class size reduction, making the effect of class size alone impossible to determine. Moreover, in most cases, the persons participating in the experiment were cognizant that they were under scrutiny and motivated to produce positive results—the so-called “Hawthorne Effect.” In addition, teacher and student assignments were not fully randomized, many of the studies were simply too brief or too small, and few were independently evaluated.

## **STARs in Their Eyes**

Among the most important studies examined by Buckingham is Tennessee’s Project STAR (Student Teacher Achievement Ratio). It is frequently cited as proof that smaller classes are beneficial. However, even STAR’s principal researchers attached several caveats to their findings; among them, the above-noted “Hawthorne Effect.” In other words, the teachers and students knew they were part of an experiment. In addition, the schools that agreed to participate apparently tended to be the ones with an unusually high interest and enthusiasm for such reforms, perhaps inflating the results.

Buckingham also points to certain unanticipated negative effects created by the class size reduction mandates that followed Project Star. In California, for example, attempts to mandate class size reduction forced school districts to hire under-qualified teachers. In Florida, a mandated reduction created an as yet unresolved budget crisis. Buckingham indicates that class size reduction would cost New Zealand an estimated NZ\$113 (US\$63 million) per year to reduce the pupil/teacher ratio by one student.

One of the most prominent features of Buckingham's report is her analysis of the long-running debate between researchers Eric Hanushek of Stanford and Alan Krueger of Princeton. Despite Krueger's contentions regarding certain research methodology issues, the data clearly supports Hanushek:

“... even when estimates are weighted and manipulated so as to avoid perceived bias toward studies showing no effect of class size-arguably creating bias in the opposite direction-the statistics do not show the ‘systematic evidence of a relationship between class size and achievement’ claimed by Krueger.”

As Buckingham makes clear, even if one accepts Krueger's most optimistic assumptions, Hanushek correctly finds that two-thirds of the studies show that smaller classes produce no effect on achievement or a negative effect (i.e., the smaller classes had lower achievement).

Moreover, the debate between researchers like Hanushek and Krueger is mainly about whether studies show “statistically significant” effects, i.e., whether the achievement gain was due to class size or just a chance outcome. Statistical significance is the minimum necessary for scientific credibility. More relevant to the interests of policymakers and the public is practical significance, i.e., the matter of whether class size reduction yields an achievement gain that is worth the time, effort, and cost of producing it. As Buckingham makes clear, the tiny gains and high costs associated with class size reduction make it a very cost-ineffective way of improving student achievement.

### **Class Size Conflicts of Interest**

Buckingham's analysis is particularly useful because she unravels the technical arguments that interfere with lay policymakers and the public arriving at an informed judgment. It also is a refreshing departure from the many studies reported by researchers whose work is supported by and/or written for an audience that has a stake in a particular outcome.

Class size reduction may have only a small effect on achievement, but that is not its only impact. Teachers find it appealing because it lightens their workload and eases classroom management-particularly when students are little interested or badly behaved. Teacher organizations like smaller classes because they increase the number of teachers. And parents find class size reduction appealing because it permits more individual attention.

However, compared with the achievement gains that can be produced by variables under teacher control, class size is a trivial factor. As Buckingham puts it:

“Only one thing comes through loud and clear from all of the research: what goes on in the classroom is more important than how many children are involved.”

*The Education Consumers Consultants Network is an alliance of experienced and credentialed educators dedicated to serving the needs of parents, policymakers, and taxpayers for independent and consumer-friendly consulting. For more information, contact J. E. Stone, Ed.D., at (423) 282-6832, or write: professor@education-consumers.com*