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December 1995

Basics about Class Size in Oregon

Class size is a perennially controversial policy issue for a number of reasons, all of which center around the question of whether or not the educational benefits of small classes are worth their costs. Common sense would tell us that in smaller classes, students receive more individualized instruction and attention from their teachers, thus improving learning and minimizing student discipline problems. Smaller classes reduce teachers' workloads per class, allowing more time for class preparation and student evaluation. Common sense would also tell us, though, that smaller classes are considerably more expensive to operate due to the salary costs of greater numbers of teachers and the maintenance and/or construction costs of expanded school facilities. The U.S. Department of Education estimates that if, in 1995, the average class size was reduced by just one student for one year, the national cost would be \$5 billion.ⁱ

Research indicates that the relationship between class size and instructional effectiveness depends on many related variables, such as the age of students, the subject matter taught, and the instructional methods used. In general, research findings show that smaller classes are likely to be most beneficial for younger (elementary school) students, socio-economically or educationally disadvantaged students, and exceptional students at both ends of the education spectrum--gifted *and* disabled. Related bodies of research indicate that teacher effectiveness has more to do with student learning (as measured by student performance on standardized tests) than does class size per se, and that spending more money on schools (in absolute terms) does not reliably improve educational quality.

An exclusive focus on class size obscures the question of how limited resources might better be deployed toward improving the quality of education in our schools.ⁱⁱ Other instructional arrangements or resources--such as using teacher aides, or forming small classes in areas where research indicates they would be most beneficial to students--might better address some of the quality-versus-cost issues raised in the debate over class size.

What defines class size in Oregon?

The Oregon Department of Education currently does not collect statistics on class sizes, but rather monitors average student-to-teacher ratios, which have risen since 1990-1991. In Oregon, "student-to-teacher ratio" is defined as the number of students per licensed school staff member. (Licensed staff members are primarily teachers.) The average student-to-teacher ratio is not the same as the average class size. Student/teacher ratios include music, art, physical education, and compensatory education teachers who usually do not teach in self-contained classrooms where one teacher teaches all subjects to the same group of students.ⁱⁱⁱ

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Do we have any way to tell how class size varies by school district in Oregon?

This information could only be determined by contacting each individual school district in Oregon.^{iv} Class sizes vary from school to school and from district to district. Urban schools are more likely to have larger class sizes than are rural schools. The Oregon Department of Education does maintain statistics on the number of students per school building and the number of teachers per school building, but those numbers are general (for example, the Department would know *how many* teachers per school building, but not the number of *second grade* teachers per building.) and thus these statistics are not useful for the purposes of determining class size.

Where does Oregon rank nationally in terms of class size?

The U.S. Department of Education publishes statistics ranking the states by student-to-teacher ratios only. For the 1994-1995 school year, Oregon had a student-to-teacher ratio of 19.9-to-1. (Numbers are for public elementary and secondary schools, and consist of estimates provided by the states.) These ratios range from a low of 13.1-to-1 for the District of Columbia, to 25.1-to-1 in Texas: the national average is 17.1-to-1.^v In comparison, Oregon’s neighboring states have the following student-to-teacher ratios:

- Washington: 20.2-to-1
- California: 24.1-to-1
- Idaho: 19.5-to-1
- Nevada: 18.9-to-1
- Oregon: 19.9-to-1**

According to the 1994-1995 Oregon Report Card, student-to-teacher ratios in Oregon schools have risen over the past five years, due to student enrollments increasing faster than the numbers of teachers available.^{vi} The following chart shows this increase:

SCHOOLS	1990-1991	1991-1992	1992-1993	1993-1994	1994-1995
Elementary	18.7	18.6	20.0	19.1	19.3
Junior High	18.6	18.7	18.8	19.4	19.9
High School	17.7	18.3	18.5	19.5	19.7

What recent studies have been conducted about the effects of class size? Is there a correlation between class size and performance on standardized tests?

The effects of reducing class sizes have been studied since 1893. The first large-scale, “meta-analysis” of the large number of class-size studies was conducted in 1978 by Gene V. Glass and Mary Lee Smith, who used statistical methods to correlate the findings of 80 studies. Their analysis yielded over 700 comparisons of smaller and larger classes with respect to student achievement, classroom processes, and teacher and student attitudes. They concluded that positive correlations could be drawn between small class sizes and all of the variables they tested. Their research was contested by the Educational Research Service, which contended primarily that the conclusions were over-generalized, and secondarily that the educational improvements did not become significant until class sizes fell below 20 students per teacher, a number too small to be financially feasible for most school districts.^{vii}

More recently, the State of Tennessee funded a \$12 million, state-wide longitudinal study of class size and academic achievement, called Project STAR. The study followed more than 7,000 kindergarten through third-grade students in 79 schools and 42 school systems between 1985-86 and 1988-89. Students and teachers were randomly assigned to three types of classes: small (17 students per teacher), regular (22-25 students per teacher), and regular with a teacher and a teacher's aide. Student achievement was measured by three different tests, including the Stanford Achievement Test. According to a review of the project's findings,

“The study’s most important finding was that students in the small classes made higher scores (the difference in scores was both statistically and educationally significant) on the Stanford Achievement Test in all four years (K-3) and in all locales (rural, suburban, urban, inner city).”^{viii}

Other relevant findings were that the greatest gains on the Stanford Achievement Test were made in inner-city small classes, and that a student's economic background figured significantly in that student's performance on standardized tests. In addition, a subsequent Tennessee “lasting benefits” study found that those students who had previously been in the “small” classes showed continued improvement in later grades over those students who had been in “regular” classes.

While most research demonstrates a class-size effect at least in certain circumstances, there are important confounding research findings. Such studies include:

- A 1980 class-size study conducted in Toronto, Canada, on 62 classes of fourth-and fifth-graders. The study found that teachers had definite expectations of class-size effects which they subsequently reported to be confirmed by their experience in the study, but which other study results failed to confirm. The author suggests that class size may make a difference to teachers but not to students (as measured by performance on standardized tests).^{ix}
- A 1991 study published in the Harvard Journal on Legislation examined the broad issue of whether and how money matters in public education. After analyzing a data set from the state of Texas on more than 900 districts and 2.4 million students, the authors assert that “...this Article (*sic*) carefully establishes that good teachers have distinguishable impacts on students' exam scores--effects that are separate from those, for example, of well-educated parents.” They further determined that class sizes of 18 or fewer students per teacher improve student performance in the primary grades.^x
- A 1988 U.S. Department of Education report entitled “Class Size and Public Policy” cites research indicating that in the 25 years previous to the report, both nation-wide class sizes and test scores declined, suggesting that there is no correlation between class size and performance on tests.^{xi}
- Finally, the 1994-1995 Oregon Report Card shows that while student-to-teacher ratios in the state have been increasing over the past five years, *so have Oregon students' scores on the SAT*. Oregon's SAT scores are 20 points above the national average, and greater numbers of Oregon students are taking the test.^{xii}

Are other states addressing this issue? If so, what are they doing about it?

According to the National Conference of State Legislatures, three states have passed legislation concerning class size. The State of **Tennessee**'s "Project STAR" has been discussed above. In 1981, **Indiana** adopted a state-wide program to reduce the size of kindergarten-through-third grade classes. Between 1981-1983, Indiana school districts ran a pilot program to reduce classes to 14 students. Teachers reported higher test scores, improved student behavior, and more efficient classrooms. Subsequent evaluations of the program found a very weak but consistent inverse relationship between class size and academic achievement. *The program's success lay in improving teachers' morale and attitude.* In **Nevada**, the Legislature appropriated \$6 million in 1990 to reduce K-3 classes to 15 students per teacher. Due to budgetary constraints, however, fewer classes were reduced than had been anticipated.^{xiii}

In addition, statutory limitations in the following states include:

- **Illinois**, where the Illinois School Building Commission determines how many classrooms are needed in the state. The Commission also sets the maximum allowable number of students per classroom
- **Kentucky**, where maximum class sizes for academic classes other than music and physical education are statutorily determined.
- **West Virginia**, where maximum class sizes--unless specifically exempted by the Superintendent-- are statutorily determined.
- **Oklahoma**, where student-to-teacher ratios are statutorily determined.^{xiv}
- **New Hampshire**, where class sizes are statutorily determined.

Are there less-expensive alternatives to an across-the-board reduction in class size?

Yes. One author lists four general strategies available to school administrators who wish to modify instructional arrangements: change the distribution of teachers, change the distribution of students, modify instructional methods, or modify "exacerbating factors," such as language barriers.^{xv} Other alternatives to an across-the-board class-size reduction include the use of teacher aides, parent and community volunteers, a staggered schedule, special laboratories or learning centers, team-teaching, extended day programs, cooperative learning, and computers or other individualized instructional aids.^{xvi}

The two strongest conclusions to be found in the recent research on class size indicate that smaller classes (fewer than 20 students per teacher) provide demonstrable, lasting benefits to disadvantaged, young (K-3) elementary school children; and that effective teaching has perhaps the greatest impact on student achievement as measured by standardized tests. Such variables within both states and individual school districts as socio-economic status, race, the education levels of parents, language spoken at home, and other factors serve to confound any broad, across-the-board policy strategy, and suggest that decisions about class size might best be made at the district level on a case-by-case basis.

ⁱ Whitaker, Kim, and Terry Whitney: "Legisbrief: Class Size Reduction." National Conference of State Legislatures, Vol. 3, No. 3, 1995. 2 pp.

- ⁱⁱ Ellis, Thomas I., "Class Size," ERIC Digest, 1984. Eugene, OR: ERIC Clearinghouse on Educational Management. 3 pp.
- ⁱⁱⁱ Oregon Report Card, 1994-1995: An Annual Report to the Legislature on Oregon's Public Schools, p. 16.
- ^{iv} Ibid, p. 16. Confirmed by Bill Milan, Oregon Department of Education, telephone conversation, December 6, 1995.
- ^v U.S. Department of Education, NCES Common Core of Data, 1995.
- ^{vi} Oregon Report Card, 1994-1995: An Annual Report to the Legislature on Oregon's Public Schools, p. 16.
- ^{vii} Whitaker, Kim, and Terry Whitney: "Legisbrief: Class Size Reduction." National Conference of State Legislatures, Vol. 3, No. 3, 1995. 2 pp.
- ^{viii} Pate-Bain, Helen, and others. "Class Size Does Make a Difference," Phi Delta Kappan, November 1992, pp. 253-256.
- See also:* Viadero, Debra, "Less is More," Education Week, July 12, 1995, pp. 33-35.
- Finn, Jeremy D. and Charles M. Achilles, "Answers and Questions about Class Size: A Statewide Experiment," American Educational Research Journal, Fall, 1990, Vol. 27, No. 3, pp. 557-577.
- Nye, Barbara and others, "The Lasting Benefits Study: A continuing Analysis of the Effect of Small Class Size in Kindergarten Through Third Grade on Student Achievement Test Scores in Subsequent Grade Levels: Fourth Grade." Technical Report prepared for the Center of Excellence for Research in Basic Skills, Tennessee State University, Nashville, Tennessee, 1991.
- ^{ix} Shapson, Stan M. and others, "An Experimental Study of the Effects of Class Size," American Educational Research Journal, Spring, 1980, Vol. 17, No. 2, pp. 141-152.
- ^x Ferguson, Ronald F., "Paying for Public Education: New Evidence on How and Why Money Matters," Harvard Journal on Legislation, Vol. 28, 1991, pp. 456-465.
- ^{xi} Mazzocca, D'Ann, "Class Size and Student Achievement," Research Report, Office of Legislative Research, Connecticut General Assembly, November 13, 1989.
- ^{xii} Oregon Report Card, 1994-1995: An Annual Report to the Legislature on Oregon's Public Schools, p. 12.
- ^{xiii} Whitaker, Kim, and Terry Whitney: "Legisbrief: Class Size Reduction." National Conference of State Legislatures, Vol. 3, No. 3, 1995. 2 pp.
- ^{xiv} "A Summary of Statutory Class Size Limits and Student-Teacher Ratios in Selected States," prepared by the North Dakota Legislative Council staff for the Education Services Committee, February, 1994.
- ^{xv} Berger, Michael A., "Class Size is not the Issue." Paper presented at the annual meeting of the National School Boards Association, Atlanta, Georgia, April 17-20, 1982.
- ^{xvi} Ibid.