

# Voices from the Classroom

## The Effect of Class Size on Teaching and Learning

Representative Carol Spackman Moss

*Teachers are expected to reach unattainable goals with inadequate tools. The miracle is that at times they accomplish this impossible task.*

Dr. Haim Ginott – teacher and child psychologist

Strolling into third period French class, 42 high school students, shoulders bent from carrying backpacks bulging with books, notebooks, lunches, CD's, iPods, cell phones, and writing utensils, move cautiously down narrow aisles to their seats. Their classroom, originally designed to accommodate 30 desks, now has 42 desks, wall-to-wall, each one filled nearly every period. Once everyone is seated, the aisles are no longer navigable. For the teacher, Mme. D., walking to a student's desk is like negotiating a minefield. After the bell rings, she starts directing questions in French to various students.

As most people know, to successfully learn a foreign language, a person needs to practice conversing in that language. In a class this size, for the teacher to question each student for **even two minutes** would take 84 minutes of a 90-minute period. Then add time for grammar instruction, history, culture, or geography. If you include time for students to ask questions, check on missing assignments, pass back tests or hand in assignments, one can see that this highly qualified, well-organized, enthusiastic teacher may not be able to meet the goals she has for her students: to speak, write, and read French.

In Mme. D.'s French class and in countless classrooms throughout Utah, individualized instruction, the opportunity for a teacher even to make eye contact with each student, has become nearly impossible. Sadly, her class is not the exception; rather, it is the rule. Mme. D. has 38-42 students in each of her six classes. Additionally, because of the demand for foreign language classes, she gives up her consultation period each day to teach two additional sections. Her total enrollment: over 300 students.

In most of Utah's high schools and junior highs, the average class size increase in the past six years has been 7 to 10 students **per class**. This includes required subjects like English, history, math, and science, as well as elective courses like foreign language, art, and music. Currently, it is not uncommon

for English and history teachers to have total enrollments of more than 200. Furthermore, for many science teachers, it is nearly impossible to conduct labs because the rooms were designed with 25-30 lab stations; too few to accommodate the 38 plus students enrolled in most science classes.

Down the hall from the French class are two math classes—calculus and basic math. The calculus class has 46 students, basic math has 42. The two math teachers, like the French teacher, have outstanding reputations for successfully working with students of wide ranging abilities. While the calculus class has highly motivated, competitive students, basic math has students who struggle to learn computational skills or to balance a checkbook. Many simply hope to pass the class, or at the very least, pass the math portion of the Utah Basic Skills Competency Test (UBSCT) in order to receive a "basic high school diploma." Still, in both courses a number of students require individual help, want answers to questions, and time to work problems under the teacher's supervision. With more than 40 students, even in a 90-minute period, the time is insufficient to engage in the detailed, one-on-one instruction necessary for students to master even simple math concepts, much less complex ones in calculus or trigonometry.

Because of the crowded conditions, the calculus teacher told me, "I am certain if the state fire marshal were to do an inspection he would shut down my classroom or demand removal of at least ten students since the lack of space between rows would prevent a safe, orderly evacuation in an emergency." In fact, one junior high in Granite District has, for safety purposes, banned backpacks from classrooms altogether.

Sadly, the scenarios I have described exist in schools throughout the state. In my own teaching career, in conversations with countless teachers and students, and in visits to many schools, I have found that overcrowded classrooms are the norm. While the most crowded classrooms can be found

in suburban schools along the Wasatch Front, I have also heard reports of similarly large classes in some small rural schools.

The most serious consequence of large class sizes is that they determine the teaching methods teachers use and dictate the way students learn, often with negative consequences. For example, large classes inevitably lead to more direct instruction, i.e. lecture, and note-taking. While lecturing is often appropriate or necessary, when it becomes the only teaching method, students with different learning styles suffer. Teachers use the lecture method more often with large classes because of the difficulty of directing a discussion with 40 students. In large classes fewer students ask questions and those who do are typically the more aggressive ones who often dominate the discussion. Additionally, teachers with large class loads will, out of necessity, assign fewer essays or research papers, give more multiple-choice tests, avoid group work, and assign fewer student presentations. Most difficult of all, though, is the overriding issue of discipline and behavior management in a large classroom of students.

One 7th grade teacher told me how class size limits her teaching style: "First, I don't have enough space in the room for students to work in groups of three, plus the noise level is too high with that many talking at once. Second, because we have to spend so much time preparing for all the state and federally mandated tests, I have precious little time to have students do creative, team-oriented assignments like class presentations."

Another teacher with 31 students in her 6th grade class said, "Every teacher, every parent, and every principal can tell you that kids can't learn in classrooms that are bursting at the seams from overcrowding. When will our legislature address this serious problem?"

If classes were smaller, how might instructional strategies change and how would students benefit? First, teachers would assign more projects requiring creative thinking and production of a product. Given the freedom to do creative work, many students display remarkable talent, especially in their use of technology. For example, many teenagers have the capability to produce power point presentations and make videos, complete with music and sophisticated editing. Also, portfolios of student work which include a variety of assignments over time, give better assessments of student progress than standardized tests. Yet, since portfolios take much longer to grade than objective tests, teachers are more inclined to choose the tests for evaluating student progress.

A 2006 *TIME* cover story cautioned that our American schools have not kept pace with the skills students will need in the global economy which demands not only competence in traditional academic disciplines, but also what might be called 21st century skills. Some of these skills include:

- Knowing more about the world, being conversant in other languages, knowing geography and global trade issues.

- Cultivating creative and innovative skills, seeing patterns or trends, thinking across disciplines.
- Understanding new sources of media and more importantly, learning to interpret, evaluate, manage, and act on them.
- Developing good people skills. Emotional intelligence or EQ has been cited as being as important as IQ. "Most innovations today involve large teams of people," says former Lockheed Martin CEO Norman Augustine. "We have to emphasize communication skills, the ability to work in teams and with people from different cultures." (Wallis & Steptoe, 2006).

For students to acquire 21st century skills, they need to learn in a variety of ways, not simply through note-taking and memorization of facts. While the federal No Child Left Behind Act (NCLB) has put renewed emphasis on reading and math, the required assessments determine little more than basic literacy skills, not higher-level thinking skills. But these higher-level skills do not come naturally; they are learned. Critical thinking skills are taught through rigorous assignments, lively class discussions, and most importantly, through written responses, essays and research papers which require a student to organize ideas, focus on a thesis, and defend it with multiple means of support. Writing, combined with close reading, is among the most valuable aspects of schooling. (Schmoker, 2006). As the National Commission on Writing tells us, writing "requires students to stretch their minds, sharpen their analytical capabilities, and make valuable and accurate distinctions" (2003).

Even though most teachers have the desire and ability to teach creatively and make challenging assignments, many have gone into a pure "survival mode" given the difficulties of managing huge numbers of students and grading an overwhelming number of tests and written assignments. For instance, if an English teacher with 200 students assigned one essay per week, and spent only 5 minutes grading each paper, it would take over 16 hours to complete one set of papers. That's two hours every day of the week, in addition to the time spent teaching, preparing lessons, and fulfilling a required extra-curricular assignment. A popular high school English teacher and cancer survivor who is retiring this year told me, "I had planned to teach a few more years to make it to 30 years, but it has simply gotten too hard with the huge class loads we carry."

Another warning of today's educational shortcomings came from Bill Gates in February of 2005 when he delivered the keynote address to the nation's governors at the National Education Summit on High Schools. His thesis: America's high schools are obsolete. "They were designed," Gates said, "to meet the needs of another age" (Gates, 2005). He went on to say that only one-third of our students graduate from high school ready for college, work, and citizenship. Here in Utah we should be proud that the dismal figures Gates speaks of are not yet the norm for our high school graduates. Yet

more and more of our low-income, minority kids are not getting the education that will prepare them for even a living-wage job. Central to the redesign Gates proposed were three principles that should be applied in every school—the new three R’s.

- The first R is Rigor - making sure all students are given a challenging curriculum that prepares them for college or work;
- The second R is Relevance - making sure kids have courses and projects that clearly relate to their lives and their goals;
- The third R is Relationships – making sure kids have a number of adults who know them, look out for them, and push them to achieve. (Gates, 2005)

The three R’s Gates speaks of are unquestionably easier to accomplish in smaller classes and in smaller schools. I believe the optimum size for a high school is 1300-1500 students with class sizes of 25-30. Such moderate-sized schools can offer a rich and varied curriculum, including a number of Advanced Placement courses, an International Baccalaureate Program, Concurrent Enrollment Courses, and vocational and technical courses as well.

The *third R*, forming relationships, can only occur in smaller classes which allow teachers to create an environment of trust and encouragement. Small classes can prevent students from “falling through the cracks” because a teacher is able to address their individual needs and handle problems before they escalate. Student motivation and satisfaction increases in smaller classes. A student recently told me the best thing about her small creative writing class, compared to her other classes of more than 40 is “The teacher knows me.” Not surprisingly, parents who send their children to charter schools or private schools tell me they do so for three reasons: (1) smaller classes, (2) more individualized instruction, and (3) more attention on core classes like English, math, science, and history. Should not public schools be able to provide the same advantages to the 96% of our students who attend public schools?

Can our public schools, originally designed years ago to educate workers for far less technical jobs, make the necessary shifts and prepare students for a technologically-based, global world? Only if we make a strong commitment to creating smaller learning environments which will allow teachers to foster the kind of collaborative learning that prepares students with 21st century skills. Public education in Utah will not, however, be able to meet these challenges if policymakers do not respond to the significant concerns of parents and teachers to unreasonably large class sizes. Since the late 1990s the combined effect of increased student enrollment, the impact of budget cuts, or budgets lacking enough funds to accommodate growth, and resigning or retiring teachers, have dramatically increased class sizes, which have now reached intolerable levels.

One reason for the inaction on the part of policymakers is that local districts report Utah’s class size average as 28 in

high school and junior high and 22 in elementary. These averages, with some exceptions, are **NOT** what teachers and students experience every day. Why is there such a disconnect between reporting and reality? Because most school districts compute average class size on a formula that includes special education classes which are typically small, ESL classes, also usually small, and library and office aides which may number two or three. Some districts also include teacher’s consultation periods in the count when, in fact, they have no students at all. By averaging these small classes, along with the classes of 40 or more, the numbers look much smaller than they actually are.

These unrealistically low numbers, when reported in news stories and in legislative committee meetings, have resulted in some lawmakers drawing conclusions that class size complaints lack merit. My response to legislators is simple: visit classrooms, and visit many of them. Spend an entire day with a teacher or teachers and see for yourself. Legislators might then learn that the teacher shortage results from a combination of dimly low salaries, the increased burden on teachers’ time, and decreased satisfaction in the classroom, causing teachers to be overwhelmed with classroom management issues, in particular, discipline and the basic necessity of keeping large numbers of students “on task.”

Because teachers have a responsibility, as well as a desire for the success of all children, they need the best possible learning environment to accomplish their objectives. Smaller classes make a significant improvement in this environment. (Alberta Teachers’ Association, 1998). Unfortunately, in Utah the push for funding class size reduction has collided with the view of many lawmakers that they can address only one education problem at a time. For example, in the 2007 Legislative Session, the primary funding focus for public education was teacher salaries. Some legislators asked teachers and education representatives if they wanted higher salaries or lower class sizes. What an impossible choice! The two issues are inseparable. A 7th grade Utah History and English teacher recently said to me, “Give me the salary I am getting now and reduce each of my classes by five to ten students and I could address the needs of all my students. Plus, it would reduce the time I spend grading papers, enhance the type of assignments I give, and reduce classroom management issues.

Teachers of smaller classes, some who have fled Utah to teach in other states, or to teach in private schools, speak confidently about their teaching, their pupils’ progress and their ability to reach those with special needs, ranging from those with disabilities to the highly gifted.

Parents also see the benefits of smaller classes and are very eager to have their children in smaller classes, believing that disruptions will be minimized and individual attention maximized. Recently, a parent told me his son was in a first-grade class of 31 children, and the first-year teacher, according to the father, “has her hands full and seems overwhelmed at times.” Though parent volunteers provide some assistance,

the ultimate responsibility for the students' achievement, particularly in reading, lies with the teachers and their ability to teach every child in that class.

When many states have class size standards for kindergarten through 3rd grade of 20 or below, it is unrealistic to expect Utah teachers, with much higher numbers, to accomplish the objectives set by state and national standards, particularly if they also have large numbers of non-English speaking students. For the past two years the Utah Legislature has failed to fund a class size reduction bill for \$30 million which would have reduced classes in K-3 to 20 students per class. Even though funding is available in these times of record tax surpluses, it has gone for other priorities, the biggest one being transportation.

The recent passage of a voucher program to subsidize private school tuition, if enacted, threatens to further divert money away from public schools, pushing class sizes even higher. For example, if 25 students were to leave a public elementary school for a private school, the public school, according to current staffing ratios, will lose one teacher, causing an increase, not a decrease in class sizes as the voucher proponents claim.

These are critical times for public education in Utah with a burgeoning young population to educate and a looming teacher shortage. Yet the future of a successful community and state rests on the quality of education provided for its children. School district officials and state legislators must listen to the "voices from the classroom" and work together for a long-range funding plan to correct the serious problems of overcrowded classes. From many studies we know that teaching itself trumps all other factors affecting school and student performance, and if the shortcomings of most instruction are correctable, then bold steps must be taken to correct the damaging trend of "stacking them deep, and teaching them cheap." Further studies are not needed to understand that to make unprecedented improvements will require that we make unprecedented changes in priorities and allocation of resources. The stakes are too high for us to fail. The financial journalist and founder of *Forbes Magazine*, B.C. Forbes aptly expressed how important the stakes are when he said, "Upon our children—how they are taught—rests the fate—or fortune—of tomorrow's world."

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