## Class Size

Kristine Best
ESPY 640
Professor Cox
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What does class size mean and how is it significant? "The evolution of class size within the American educational system has been shown to have a great impact on classroom management, classroom instruction, and student academic achievement and has been documented by empirical research conducted across the nation." (Finn, 1999) It is important to know that class size is different than pupil/teacher ratio and when we think of class size, we are referring to the actual number of students taught by a teacher at a particular time. The student to teacher ratio is always lower than the average class size. The number of students in a class definitely has an affect on how much is learned in a number of different ways. This also effects how students interact with each other and the level of social engagement in a class. Class size also could affect how much time the teacher is able to give to individual students and their specific needs rather than to the full group. Smaller class size also allows teachers to choose different methods of teaching and assessment. "Changes to the class size are considered a potential means of changing how much students learn. Not only is class size potentially one of the key variables in the "production" of learning or knowledge, it is one of the simplest variables for policymakers to manipulate." (Ehrenberg, 2001)
"The U.S hopes to achieve a class size around 18 students in elementary grades. The examination of about 77 studies' in the U.S. achievement decreased." (Hartley, 2004) The U.S. needs to catch up with the international world in terms of reaching academic achievement. "Experimental research into how class size affects achievement gained popularity in the 1920's as researchers tried to determine whether or not saving money by increasing class sizes was affecting student progress. (Biddle \& Berliner, 2002)

This research paper will focus on the key factors that should be considered involving classroom size which include: academic achievement, classroom management, class size reduction, benefits of small classes, benefits and disadvantages of larger classes, and why class size is important.

When looking at class size in relation to academic achievement, it is important to note that students' academic achievement in their early years will set the stage for much that happens in the ensuing years. Reducing class size to increase student achievement is an approach that has been tried, debated, and analyzed for several decades. Research has found that smaller class in the early grades boosts student academic achievement.

Class Size Reduction (CSR) is a policy to help reduce the number of students per classroom. CSR is an incentive program to reduce class size in early grades. It began in California in 1996 and participating schools, which must maintain a ratio of one teacher per group of 20 students or fewer, receive a special allocation of funds from the state. CSR classes must be conducted in separate classrooms to ensure funding and schools may choose to provide either a full day with small classes or a half day (with partial funding).

It is useful to revisit research on the effects of class size on student learning, and to explore what the findings. The most credible studies of CSR have utilized either randomized experiments, in which students and teachers are randomly assigned to smaller or larger classes; natural experiments in which, for example, a sudden change in class size policy allows a before-and-after analysis of its effects; or sophisticated mathematical models for estimating effects that take advantage of longitudinal data on individual students, teachers, and schools.

Despite there being a lot of information on class-size effects on academic achievement, only a few studies are of high enough quality and sufficiently relevant to be given credibility as a basis for legislative action. The pool of credible studies is small and the individual studies vary in the setting, method, grades, and magnitude of class size variation that is studied which proves that no study is without issues and conclusions are uncertain.

It seems that huge class-size reductions, of 7-10 fewer students per class, can have meaningful effects on student achievement and possibly on non-cognitive outcomes. The academic effects seem to be the greatest when presented in the earliest grades and for students from underprivileged family backgrounds.
"Reducing class size has become a perennial education improvement strategy, often popular with teachers and parents for its ability to give teachers more individual instructional time with students. Yet as states and districts struggle with tight budgets, more policymakers and researchers have begun to turn away from straight class-size reduction in favor of other methods to increase individual instruction time, such as restructured class formats, co-teaching, and distance learning." (Biddle \& Berliner, 2002)

Reducing class size is often suggested as an educational intervention holding promise for improving educational outcomes. "Many teachers whose classes have been reduced, even by substantial numbers of students, do not change their teaching techniques to take advantage of smaller classes." (Robinson, 1990)
"Researchers have found that with academically struggling students, the smaller the class size, the more they can achieve. This may be because with fewer individuals in the class, they
don't have to "meet" or reach the higher achievers standards. This may also be because there is more one-on-one time between the educator and the student." (Englehart, 2001)

When discussing classroom management it is important to consider how the number of students in the class affects the classroom management practices. The readings regarding how class size has an effect on classroom management, including student discipline seems to be consistent in its results which shows that as class size increases, time spent handling noninstructional task seems to also increase.
"Researchers affecting their instructional and management practices analyzed approximately 800 teacher surveys regarding how teachers' perceive class size. Teacher survey data suggested that as the number of students increased in the classroom, instances of student 42 misbehavior also increased. Larger classes (31 or more students) were harder for teachers to manage than smaller classes ( 25 or less students). Teachers cited that more student misbehavior occurred in the larger classes, resulting in more time being spent on controlling the students rather than teaching." (Blatchford et al., 2007)

Using class time to deal with student misbehavior could affect student achievement and be a reason against increasing class sizes. Student teachers also mentioned that smaller classes gave them the opportunity to prevent student misbehavior distractions. Teachers have mentioned that in larger classes student misbehavior is harder to manage because there are more instances where students must be corrected therefore there are less academic achievement gains because instructional time is being used to address classroom management issues.

Survey and observation data indicated that student misbehavior occurred more in larger classes than in smaller classes. The more time that teachers had to devote to managing student behavior, the less time teachers had to devote to teaching. This research suggested less time for instruction could result in less academic achievement. In determining whether or not to increase class sizes, the loss of instructional time due to classroom management issues should be considered. Another issue associated with larger class sizes is the lack of physical space and how this affects the classroom environment. (Blatchord et al., 2007).

Researchers have investigated how the number of students in the class affects the classroom management practices. The results are fairly consistent showing that as class sizes increase, time spent handling non-instructional tasks also increase. (Finn \& Achilles, 1999)

Students in smaller classes had less discipline referrals than students in larger classes. More on-task behaviors and less disruptive student behaviors were also observed in the smaller classes. Overall, less discipline issues were observed in the smaller classes, where researchers also noted that student instructional engagement was also higher (Finn \& Achilles, 1999). Having to utilize class time for the handling of student misbehavior could affect student achievement and be a reason against increasing class sizes (Blatchford et al., 2007)

Research on the effects of class size on student's social behavior has focused largely on antisocial behaviors such as disruptiveness and misbehavior. Teachers expressed that children in small classes seemed more willing to take risks themselves, and also encouraged their peers to try, to risk and would not accept a less than good effort from their peers. Teachers expressed that classroom management was much easier with a small class and there were generally fewer behavior problems.

Student-to-teacher interactions are affected by class size, which affects the instruction of students and the classroom management of students. In large classes, teachers are not able to build the relationships that they are able to build in smaller classes. Being able to interact with their students helps teachers decrease the amount of time they have to devote to classroom management issues and increase the amount of time they can devote to instruction. By simply reducing the number of students, educational leaders could enhance the learning process because teachers will be able to devote more time to instruction. (Egelson, 1996)

Effectively meeting the needs of all students within the classroom through instruction and outside the classroom through assessment was cited as being important by all teachers in the study. However, teachers within larger classes (average of 33 students per teacher) noted less job satisfaction than teachers in smaller classes. (Blatchford et al., 2007). The research showed that one reason for this decrease in teacher confidence was recognized as being unable to effectively handle all the non-instructional task that were required.

When comparing larger and smaller classes, larger classes require teachers to devote more time outside the classroom for the completion of non-instructional tasks and smaller classes enable teachers to be able to concentrate on the preparation of the instruction and have greater job fulfillment. For each classroom management problem, time is taken away from the instruction of the students which therefore affects their academic achievement. Larger classes provide social benefits for students, but smaller classes provide instructional benefit.

When looking at the benefits of small classes, there are many factors that prove that they are more effective and improve students' academic achievement. When students are introduced to smaller classes from the start of their schooling, students are able to get more out of their
classroom experience."The benefits of small classes in the primary grades are lasting. The reading and/or math gains students in small classes experience in the primary grades continue or are maintained more than five years later." (Nye, 2001) Creating a more engaging learning environment will allow students to have a more personal connection with teachers and when there are fewer children in a classroom competing for the teacher's attention, students will be able to maximize their learning experiences and teachers can make lessons more personal and meaningful. When class size is reduced the communication between teachers and parents is improved and researchers have noted that parents with children in smaller classes communicate and are much more involved in their child's education. Smaller classes especially benefit children from low-income backgrounds who need more support. "Students in small classes interacted more with their teachers and were more engaged in their learning than students in large classes, who were often observed as passively listening to the teacher interact with other students" (Blatchford et al.,2007) This shows that the quality of teacher and student interactions was is higher in smaller classes and the student in smaller classes were able to initiate more interactions which increases the student engagement in the classroom. These classrooms are able to facilitate learning through interactions which in turn builds closer relationships with the students on an individual level. With this increased individual feedback the teachers are able to create more of a successful learning environment and know students' needs academically as well as emotionally. When teachers are given the opportunity to be able to have quality interactions with their student every day, they are able to plan and implement effective instructional activities. Another benefit of smaller classes is teachers get the opportunity to have more flexible teaching activities which foster to use of more non-traditional activities to better meet the needs
of all students. This individualized attention gives students opportunities to express their ideas and learning and be heard.
"The differentiation of instruction allows the teacher the opportunity to assess the individual achievement levels of the students and to create lessons designed to increase these levels." (Blatchford et al., 2007)

There are also benefits and disadvantages of larger classes. Some of the benefits include schools can enroll more students, more government funding is given to schools with higher enrollment and schools can save money by not having as many faculty to pay. The disadvantages to having larger classes definitely outweigh the benefits. Some of the main disadvantages are there is less interaction concerning individual student's needs, it is harder for teachers to give individual attention, more time is spent on non-instructional activities, and at time classroom management and control can be difficult. With larger classes, the teachers are less likely to be able to differentiate the lessons to satisfy the needs of all students which therefore effects student's academic achievement. Research has shown that, "Students in smaller classes achieved higher marks than students in larger or regular classrooms." (Hartley, 2004)
"For teachers in large classes (31 or more students),questionnaire responses indicated that students who scored above or below the average achievement of the class were neglected during instruction. Teachers planned activities aimed at meeting the needs of the majority of the students and did not have time to plan or implement differentiated lessons." (Blatchford et al., 2007). This shows how the quality of teaching must be adjusted between larger and smaller classes. The number of students in a classroom affects the teachers instructional practices and smaller
class have more frequent and effective interactions between the teacher and students which helps students understand the concepts better and meets their needs.

In smaller classes, teachers felt they were able to provide extensive coverage of the curriculum due to being able to utilize a variety of activities for instruction (Englehart, 2007). So why does class size even matter? Class size is a topic that is not new to educators. The idea that the number of students within a class can affect the student's academic achievement, the teacher's classroom management, and the teacher's instructional methods has been discussed for decades. When we look at class size it is most important to look at the resources that are available to teachers and the effectiveness of teaching in a classroom. After much research it seems that overall smaller class sizes lead to higher grades at every level. It is important to note that as America becomes more competitive in academic success on a global level, America is going to need to make changes before class size becomes a large issue.

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