

REFEREED ARTICLE

Class Size: Overcoming the Effects on Teachers and Students

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Abstract

A significant amount of research has been devoted to class size, in relation to student achievement. Success in the classroom is not only about increases in attainment. Fulfilment, and well-being, for teachers and students alike, is a more complete evaluation of improved achievement. The cost of reducing class sizes seems to be prohibitive, so teachers have adopted numerous strategies to cope with the increased numbers of students and their diversity. Teachers use educational assistants, resource teachers, specialized liaison assistants, and modern technology adapted for the classroom. Current research suggests that the use of subdued lighting and music can increase student focus. Innovative storage systems reduce congestion. Successful teachers use a combination of these strategies to reduce their own stress and to contribute to the overall achievement of all students in the classroom.

Over many decades, researchers have endeavoured to determine what the optimum class size is for student and teacher success. More recent studies agree that this cannot be measured only in student attainment, but also in developing lifelong strategies for learners and lowering stress levels in educators. Because the cost of reducing class sizes is significant, teachers are adopting varying strategies to assist their work and enable their students to cope with the challenges of larger numbers of students in the classroom. Teachers are also having to adapt lesson plans and classroom management plans to meet a more diverse number of student needs. Overcoming physical constraints with innovative lesson plans, and taking advantage of school and classroom supports, are key to achieving harmony in the classroom. Teachers are also controlling their physical environments to provide a calm and relaxed atmosphere in the classroom, which results in increased focus and improvement of student attainment and teacher satisfaction.

Research Findings

Much research has been done to determine the correlation between class size and student attainment (Blatchford & Russell, 2020). Most studies have focussed on reading and math, with varying results. Some studies concluded that smaller class size increased student attainment in students in the lowest levels of achievement (Bosworth, 2014). However, the results recorded were less than significant. Conversely, other studies concluded that higher achieving students benefitted more from a reduced class size (Li & Konstantopoulos, 2017). Researchers did seem to agree that younger students, i.e., those in the first years of formal schooling, did show more marked improvements stemming from a reduction in class size (Li & Konstantopoulos, 2017).

Creating Lifelong Learners

While student attainment cannot be conclusively tied to smaller class sizes, enjoyment of school and creating lifelong learners can be attributed to the atmosphere created in a classroom with fewer students. Improved learning can be attributed to a higher level of engagement and more satisfaction with the school experience (Gorard & See, 2011). Teachers compete every day with video games and social networking platforms for their students' attention. Creating engaging lesson plans and innovative ways to present knowledge is a challenge teachers must

rise to. Using the most current technology their school can provide, and online resources approved by their school resource department, can help them to reach more students and improve engagement. Students develop a positive attitude toward learning when they feel in control of their environment (Gorard & See, 2011). Establishing daily and weekly routines helps students to feel stable and comfortable. Delegating daily activities to students and avoiding micromanaging is a win/win situation. Producing a task chart increases student capability and lightens the load for teachers. Students develop autonomy, and teachers take tedious tasks off their list. Factors that increase student engagement and enjoyment of school foster a love of learning that can follow students throughout their lifetime.

Small classes are less intimidating and encourage all students to have a voice (Gorard & See, 2011). While reducing student numbers in the classroom is not always possible, there are a few strategies that help each student to feel heard and appreciated. Morning check-ins allow teachers to assess each student's daily needs before instructional time begins. Sticking to routines gives students a consistency that is comforting and improves focus (Wannarka, 2016). Defining clear goals and expectations for acceptable behaviour and conduct gives students control of their outcomes. Making a point of giving individual attention to every student on a rotating basis, not just those in the most need, reinforces each student's self-esteem and importance. Keeping lines of communication open with the in-school team and home forges a positive connection with every student. Identifying each student's situation helps teachers understand the children's challenges and create individual strategies for success.

Using Dollars Wisely

Although at least 80% of states in the USA have adopted some sort of classroom cap, the price is extraordinarily high for modest increases in academic attainment (Lynch, 2017). Comparable increases in student attainment have been achieved by employing more experienced teachers (Kedagni et al., 2021). School boards should be concentrating on retaining skilled educators that bring proficiencies to the table. There must be consideration given to the amount of stress that constantly changing processes and ineffective programs put on already overtaxed teachers. When programs do not work efficiently and teachers are required to duplicate work to complete jobs, this puts an extra strain on their already overcommitted time. Employee assistance programs must be made available to reduce stress. Continued provision of professional development courses and materials must remain a high priority (Ekanayake & Wishart, 2015). Teaching resources are constantly evolving and there is always a new way to spend education dollars. Teachers must find inventive ways to use their resources to stretch those dollars. Making use of modern technology to deliver the most up-to-date knowledge to our students is critical (Ekanayake & Wishart, 2015). Therefore, ongoing professional development is essential to make the best use of education dollars.

Adapting for Students at Multiple Levels of Achievement

Today's teachers are faced with hugely divergent levels of student achievement within each grade level classroom, and are required to develop individualized lesson plans for every ability (Blatchford & Russell, 2020). They may be teaching to as many as four grade levels for each subject. Producing highly adaptable lesson plans and using classroom supports, such as educational assistants, will help them to reach students at all levels of achievement. Preparing individualized student plans is time consuming for educators, but ultimately contributes to the success of these students. Once a plan is in place, all educators have a road map to follow for these students. Within the classroom, creating small groups that concentrate increased efforts for weaker students can achieve higher levels of success for some. Routine withdrawals of students for extra instruction outside the classroom will ensure success for others. School resources, such as literacy or math educational assistants and resource teachers, are available

to provide increased instruction for struggling students. Making use of more competent students to support their classmates reinforces the achievers' knowledge while it encourages less successful students to persevere with their studies (Kedagni et al., 2021). Identifying and addressing the needs of students at all levels leads to increased achievement and enjoyment for all. Teachers must use every advantage available to them to overcome the challenge of larger classrooms. Use of classroom educational assistants to connect with more students and support those who need extra instruction is step one. Using resource educational assistants in math, reading or specialized areas, such as Indigenous liaison or school counsellors, creates one-on-one connections between students and staff and increases the students' levels of achievement and sense of well-being (Dong et al., 2021). Learning to share resources between classrooms at the same level supports weaker students who need additional assistance.

Controlling Physical Space and Conditions in the Classroom

Physical space alone contributes to the success of students (Blatchford & Russell, 2020). Congestion in the classroom can lead to more behaviour problems and inefficient use of time for teachers to manage these problems (Li & Konstantopoulos, 2017). Setting up and maintaining an organized classroom with no clutter creates stability for students and teachers (Wannarka, 2016). Utilizing space outside the classroom lets teachers spend less time on behavioural management. Outdoor lessons, weather permitting, give students some much needed fresh air and more personal space, leading to less conflict between students. Taking advantage of classroom educational assistants to withdraw smaller groups of students working at a similar level reduces classroom congestion, and gives teachers opportunities to engage with more students one on one. Student engagement, and hence achievement, is related to the proximity of the teacher and positive interactions (Dong et al., 2021). These withdrawal opportunities provide each group with an increase of positive interactions. Teachers may also choose to move classroom activities to larger areas within the school, such as gymnasiums or auditoriums, where students get more physical activity and refresh their minds and bodies for learning. With a larger number of students in the classroom comes a decrease in storage space for both personal, and educational resource materials. Employing space-saving storage units and shelving areas can relieve congestion, and also reduce wasted time searching for needed materials. Taking advantage of all opportunities to reduce congestion leads to a more successful classroom for both teacher and students.

Current research suggests that using softer lighting and low-level background music improves mood and readiness for learning. Overly lit classrooms, especially those using fluorescent lighting, can cause headache and decrease performance (Winterbottom & Wilkins, 2009). Lowering lights and using alternate lighting sources can produce a calming effect and therefore improve the behaviour in the classroom. Background music also has a calming effect on students (White, 2007). Music creates a comfortable atmosphere for students and helps to eliminate distractions. The use of background music also aids in cancelling white noise. The classroom contains dozens of hard surfaces that can produce plenty of harsh sounds. Ambient music can reduce the influence of sharp sounds that are often distracting. Soft surfaces such as carpets, curtains and blinds and acoustic wall panels also dampen loud distractions. Computer programs such as Bouncy Balls or Too Noisy are free to use, and present the class with a visual representation of how much noise is acceptable. Students can be involved in setting the limits, and can see at a glance when the noise level is rising too much. Controlling lighting and noise contribute to a relaxed and calm atmosphere wherein students can find success.

Conclusion

Class size has been the subject of debate and research studies for many years. In recent years, we have begun to concentrate not only on student attainment, but also on lowering stress

levels in educators and developing lifelong strategies for learners. Reducing class sizes is not cost efficient, so teachers are forced to use numerous other strategies to help them, and their students, cope. To meet a more diverse number of student needs, educators are also having to adapt lesson plans and classroom management plans. Physical constraints of larger numbers of students in the classroom can be overcome with innovative lesson plans and utilization of school and classroom supports. Controlling environmental factors such as congestion, lighting, and acoustics also contributes to the calming ambience of the classroom. These are key to achieving harmony in the classroom, leading to the improvement of student attainment and teacher satisfaction.

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About the Author

Robin LeBlanc is an elementary school teacher in northern Alberta. Robin taught in her hometown in Ontario before moving to Alberta. Robin is pursuing her Master of Education to provide the best experience for her students. Robin divides her time between the classroom and the ice rink with her two young children.