

Edmonton Public Teachers Local No 37 of  
the Alberta Teachers' Association

# Longitudinal Class Size Study

RESEARCH REPORT



# ACKNOWLEDGEMENTS

This report would have been impossible to prepare and the voices of these educators would have gone unheard if not for the efforts of the Edmonton Public Teachers Local No 37 executive committee who initiated the class size study in the fall of 2001, as well as the Economic Policy Committee and local staff who coordinated the collection of data from 2002/03 to 2014/15. In addition we would like to recognize the work of the founding committee members: Shane Dzivinski, Ken Saik, Jim MacLaren, Deb Davidson, Ross Tyson, Janice Baker, Karen Beaton and Bea Ceretzke. Thank you to Jim MacLaren and Denis Chalifoux for reporting on the data gathered on the first Wednesday of each December and finally to our researchers Brent Bradford, Concordia University of Edmonton, and José da Costa, University of Alberta, who provided invaluable support, helped organize and manage the data, and provided virtually all statistical analyses throughout the report.

Most important, we would like to extend our sincere appreciation to the thousands of dedicated educators who took time from their full professional lives to complete the survey; without you we would not have a report.

# PREFACE

In Alberta, kindergarten to Grade 3 class sizes have grown by over 9 per cent in the past five years according to data posted to the Alberta Education website (<https://education.alberta.ca/>). The collection of school jurisdiction averages for 2014/15 shows that only 5 out of 61 jurisdictions are meeting the targets set out by the Alberta Commission on Learning (ACOL) in 2003. Since 2008, unpredictable, unstable and inadequate funding for school boards has resulted in a steady growth in Alberta's class size. Further, 70,000 more students have been added to Alberta's education system, but the size of the teaching force has not kept up. In comparing student growth to teacher growth, the Alberta Teachers' Association (ATA) has found that only 1,300 new teaching positions have been created since 2008 and that 3,000 more teachers would be needed to bring class sizes down to 2008 levels. The current average K–3 class size of 20.2 students is 3 higher than the target of 17 established by ACOL. The Grades 4–6 average of 22.7 is at the target of 23, but 16 jurisdictions exceed the target (ATA 2015). A table of 2015/16 class size averages can be found on the Alberta Education website (<https://education.alberta.ca/class-size/averages/>).

The purpose of the *Longitudinal Class Size Study* was to gather information about class sizes and composition in the classrooms of the Edmonton Public School Board (EPSB) and to track changes to teaching and learning conditions. Longitudinal studies of this nature provide the necessary data, directly from classroom teachers, to help inform discussions and deliberations regarding changes to teaching and learning conditions. We hope this data and these findings will help us make our schools great places to work and learn where every student in our care can reach his or her maximum potential and leave with a lifelong love of learning.



Nels Olsen

President, Edmonton Public Teachers Local No 37

# EXECUTIVE SUMMARY

The intent of this study was to delve into class size data collected from all teachers in the Edmonton Public School Board (ÉPSB) from the 2002/03 to 2014/15 school years. In addition to the class size data (ie, student count), the number of students with special needs and accommodations (ie, student levels) were also collected for each class. This information, along with the number of support staff working in each class, was collected and analyzed to help understand issues concerning class size and class composition.

Growing class sizes in schools is a primary variable policy-makers can employ to control spending on education. Alternatively, reducing class sizes is often cited as a means to increase student achievement. These approaches, and many variations of them, have been tried, debated and analyzed for several decades (Filges, Sonne-Schmidt and Jorgensen 2015). Barnett, Schulman and Shore (2004) contended that smaller class sizes can increase educational effectiveness, disadvantaged students benefit from smaller class sizes, and teaching young students requires immense energy and relentless attention. Although the literature states that smaller class size is better for student learning (eg, Project STAR), Blatchford, Bassett and Brown (2011) contended that it may be more insightful and valid to employ naturalistic studies within which “real world” class sizes vary, and which therefore allow estimates of effects across the full class size distribution.

As is often the case with data originally generated for nonresearch purposes, the data set in this study drew on categories and methods originally intended for establishing school funding levels. As a result, throughout this study we were well aware that categories used to describe class composition (eg, students levels) were not always mutually exclusive nor were they necessarily consistent (eg, some categories included students who were cognitively challenged along with students who were cognitively gifted; see Appendix C). Hence, when the class size data set was organized into 14 geographic school zones across the school district in order to calculate school zone class size means and standard deviations, the research team agreed to not place a high level of attention on the student-level information. Our analyses focused on level 1 students (ie, students identified as not having special needs [uncoded students]).

In a study such as this, it is important to spend ample time on the design so that the original intent of the study can be met. In terms of data analyses, the data collected for this study lends itself mostly to a class size study as opposed to a more detailed class composition study as (mentioned above) each specific student level described too many special needs who, presumably, would call on extra effort from teachers during classes. Although a class composition study is worthy of attention, such a study will require varying considerations during the research design to ensure that interpretable data are gathered most effectively. The present study sought to address the following question:

What are the trends in class size throughout schools in the Edmonton Public School Board from 2002/03 to 2014/15?

With this being said, the findings of this study were interesting. As was stated recently, a trend or myth is that class sizes have been growing significantly year by year. However, as was found through backward stepwise regression analyses (see Table 1 for a summary table), much of the data found no such significant results that would attribute to increasing class sizes.

## BACKGROUND

The purpose of this *Longitudinal Class Size Study* was to gather information about class sizes and composition in the Edmonton Public School Board (EPSB). Throughout each year of the study, the intention was to track changes to teaching and learning conditions, and to “estimate the costs involved to include class size clauses in the [ATA] Local’s Collective Agreement.”

Each year, EPSB teachers were informed of the following regarding the annual survey and data collection:

For the purposes of this survey, a class is a group of students that a teacher is responsible for teaching during a set period of time. For example, a Grade 1–2 split that a teacher has all day is a single class. A period 5 CTS lab of students registered in Woodworking 10, 20 and 30 is one class.

We want to know how many students, in how many classes, are registered for the class(es) you teach on the first Wednesday in December. We also want to know how many students in your class(es) on that day have special needs. This can be determined by the funding level at which each of your students have been placed. It is important that you complete the questionnaire and return it to your ATA representative. Your ATA representative will ensure it is forwarded to the local office by the deadline.

We have asked you to identify yourself so that, if necessary, we can contact you for any clarification. The final results of the census will be published in such a fashion that no individual can be identified.

These data were later compiled and organized for the use of inferential statistical analyses (discussed further in the following sections).

### Provincial and Local Context for the Study

Prior to discussing the research questions and analyses, there is some important information to explore in terms of events that happened throughout the years that may have affected decisions related to class size in individual schools or in groups of schools.

***Moratorium on School Closure.*** The Moratorium on School Closure was passed at the Edmonton Public School Board meeting of November 30, 2010, and lasted two years to November 30, 2012.

***Teachers Call for Parties to Respond to Issues Identified in New Study.*** A new study drawing on international data identified growth, complexity and intensity as three issues needing to be addressed through adequate resources for Alberta’s schools. Below are the highlights from the study:

- Since 2008, the number of students in Alberta’s schools has increased by 70,000.
- Alberta’s classrooms are twice as likely as schools globally to include a significant number of students with special needs (51 per cent versus 26 per cent).
- Alberta classrooms include significant populations of students learning a second language (41 per cent compared with 21 per cent internationally).
- Alberta’s teachers work on average 10 hours per week more than teachers elsewhere do.
- Alberta’s teachers work the longest hours, second only to teachers in Japan.

ATA president Mark Ramsankar has stated that teachers support an inclusive education model, but are in desperate need of classroom conditions and supports that will help ensure that all students succeed (ATA 2015).

In addition to previous studies, comments have been made during the time frame of this study's data collection that may be relevant. Mark Ramsankar has asserted the following:

Alberta's teachers are propping up a system under stress and that is not sustainable. Our teachers provide world-class education while teaching longer in larger and more complex classrooms. They need more support.

Next year's budget will increase the burden on teachers by increasing class sizes and eroding classroom supports. Party leaders and all candidates need to outline how they will address these issues. (ATA 2015)

**Inclusion.** Alberta Education came out with *Setting the Direction* and engaged the public in a discussion around inclusive education in 2008. They published a series of documents called *Setting the Direction (Phases 1–4)* in 2008–2010 that was supportive of inclusion. The *Setting the Direction Framework* was made public in June 2009 and the *Setting the Direction Framework Government of Alberta Response* was released publicly in June 2010. In November 2010, a newsletter came out summarizing how all school districts and schools were to move toward inclusion of all students in regular classrooms.

The EPSB's work on inclusive learning began in the fall of 2011 as a Special Needs Task Force was struck by the EPSB trustees at their June 14, 2011, meeting. The integrated inclusive learning teams started their work in the fall of 2011 as the board policy was being developed. Ultimately, the EPSB Inclusive Learning Policy was approved on May 16, 2012.

**PowerSchool.** In 2009, a project was initiated to identify new features and functions that would be required in a student information system, including knowledge that Alberta Education was planning to change the way in which student information was exchanged with other school districts for students transferring in or out of the EPSB. Rather than continue in-house application development of its student information system, the district chose to license PowerSchool from Pearson Education. This new system was selected for its comprehensive student information features, as well as its compliance with the new Provincial Approach to Student Information (PASI) requirements. All school districts have been mandated to adopt the PASI requirements and use direct data exchange protocols with the province, which are built into PowerSchool and a small number of other vendor solutions (Edmonton Public Schools 2013).

- **September 2009:** PowerSchool pilot with 12 schools (Queen Elizabeth, D S MacKenzie, Donnan, Grandview Heights, Homesteader and Homesteader Early Ed, McKee, Northmount, Pollard Meadows, Sakaw, Steel Heights). Homesteader was split into two schools: regular and early education according to Les Stevens of EPSB.
- **September 2010:** Six more schools were added to the pilot (Dr Donald Massey, Elizabeth Finch, Esther Starkman, Johnny Bright, Florence Hallock, A Blair MacPherson).
- **September 2011:** All elementary schools switched to PowerSchool.
- **September 2012:** Michael Strembitsky, Bessie Nichols and Major General Griesbach, all junior and senior high schools and Centre High began using PowerSchool.
- **September 2013:** Metro (all night schools and summer schools) began using PowerSchool.

From the 2002/03 to 2014/15 school years, various kinds of political change and school staff turnover may have affected the data in different ways. While we recognize that class size is most often a function of school and school district decisions made at administrative and governance levels, we recognize that teachers can also play a role in setting class size at an individual classroom level. For example, when teachers retire, new energetic teachers may have taken on more students in their class, willingly, creating larger class sizes or classes with greater proportions of students requiring more teacher attention.