



SPECIAL EDUCATION IN BRITISH COLUMBIA: A POPULATION-BASED INVESTIGATION Methodology Fact Sheet

Introduction

We are pleased to share the details of research we conducted as part of our project entitled SPECIAL EDUCATION IN BC: A POPULATION-BASED INVESTIGATION. As researchers, we know the importance of effectively communicating findings, and have strived to be clear, concise, and inclusive. We had approved access to a customized collection of student-level British Columbia Ministry of Education (BC MED) data. We carefully grouped and analyzed these data to create our district- and province-level reports. Here, we explain the methods and analyses used to create these reports.

Data Privacy and Research Ethics

We gathered BC MED data about students with special needs and disabilities, regardless of their race, ethnicity, gender, age, religion, language, abilities/disabilities, sexual orientation, gender identity, socioeconomic status, or geographic location in BC.

The BC MED and the University of British Columbia's (UBC) Behavioural Research Ethics Board provided us with written approval to conduct this research.

The data were customized for our specific use by [Edudata Canada](#) (BC MED's former data broker). Data were also anonymized (broke all the links between the student and their record) and de-identified (extracted personal identities from the records) prior to their release to us.

The data were stored and analyzed in a Secure Research Environment (SRE) hosted by [Population Data BC](#), a multi-university data and education resource. It facilitates interdisciplinary research on the determinants of human health, well-being, and development.



Grant Funding

This project was funded, in part, by an Insight Development Grant awarded by the Social Sciences and Humanities Research Council of Canada (SSHRC) to Dr. Jennifer Baumbusch, Principal Investigator, Associate Professor, School of Nursing, UBC.

Number of Student-level Records

The data included 44,292 student-level records, comprised of five annual cohorts of Kindergarten students. The cohorts were comprised of students who had received *any* BC MED-recognized and -approved special needs designation(s), in one or more school years from Kindergarten through later grades.

Five Special Needs Cohorts

Each special needs cohort included all students enrolled in Kindergarten over a five-year period of time. Students could have received special needs designation(s) in *any* year(s) they were schooled in BC—not just Kindergarten.

Cohort	School Year	Number of Students
1	1999/2000	9,450
2	2000/2001	9,022
3	2001/2002	8,835
4	2002/2003	8,637
5	2003/2004	8,348

Years of Data

Our research data contained student-level variables from the 1999/2000 to the 2015/2016 school years, inclusive. We defined cohorts according to when students were in Kindergarten, then followed each cohort forward in time. We tracked their progress, in many cases, up to and including Grade 12.

Some students showed progress through grade levels each year. For others, the journeys were different. Occasionally, individual student records did not span the entire duration from

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Kindergarten to Grade 12. In these cases, students may have dropped out of school, moved out of the province, fallen sick, or died prior to reaching or completing Grade 12.

One limitation of the BC MED database was that it did not contain a variable explaining why certain students' records stopped prior to school completion. Also, some students in later cohorts may have reached Grade 12 and/or completed school after the research end date (2015/2016). We were not able to determine this definitively.

Schooling Types and Locations

The data contained records for students living anywhere in BC who were:

- publicly-schooled;
- independently-schooled;
- home-schooled; or
- any combination over time.

Special Needs Designations

Table 1 below describes each of the 12 special needs designations the BC MED routinely tracks, with its corresponding designation or “letter” code, description, funding level, and incidence rate. For example, Code A refers to Physically Dependent, which has Level 1 Funding, and has Low Incidence. Table 1 also includes an “All” grouping, in which we combine all 12 designations together.

Please note that being designated in one of the BC MED's special needs categories is not a requirement for supports and services to be provided to a student. Designation in a special needs category is for the purpose of funding alone, not service or support provision.

You can find information beyond the scope of this research, such as descriptions of the funding levels associated with all of the special needs designations, on the [BC MED website](#).

www2.gov.bc.ca/gov/content/education-training/administration/legislation-policy/public-schools/special-education



Table 1: The BC Ministry of Education’s Special Needs Designations

Code	Description	Funding Level	Incidence
A	Physically Dependent	Level 1	Low
B	Deafblind		
C	Moderate to Severe Profound Intellectual Disability	Level 2	Low
D	Physical Disabilities or Chronic Health Impairments		
E	Visual Impairment		
F	Deaf or Hard of Hearing		
G	Autism Spectrum Disorder		
H	Intensive Behaviour Interventions/ Serious Mental Illness	Level 3	Low
K	Mild Intellectual Disability	Basic per-student allocation only. No supplemental funds.	High
P	Gifted		
Q	Learning Disabilities		
R	Moderate Behaviour Support / Mental Illness		
Z*	All designations combined (A through R, inclusive)	--	--

Note 1: Table format inspired by the [BC Teachers’ Federation Priorities for Public Education Brief](#).

bctf.ca/publications/BriefSection.aspx?id=46986

Note 2: Z is a letter code chosen by the researchers for the purpose of these reports only.



Note about Autism Spectrum Disorder

With respect to Autism Spectrum Disorder (ASD), there was a change of Provincial policy on January 1, 2004, and of Ministry policy for the 2005/2006 school year -- meaning that, beginning in 2005/2006, students received an ASD designation according to the updated guidelines set out in this [Ministry policy manual](https://www2.gov.bc.ca/assets/gov/education/administration/kindergarten-to-grade-12/inclusive/special_ed_policy_manual.pdf): https://www2.gov.bc.ca/assets/gov/education/administration/kindergarten-to-grade-12/inclusive/special_ed_policy_manual.pdf. Prior to the change of Provincial policy, the designation was simply referred to as “Autism”, not “Autism Spectrum Disorder”.

Designation Recoding

In the 1999/2000, 2000/2001, and 2001/2002 school years, the BC MED identified three special needs designations (letter codes J, M, and N) that would no longer be used beginning in the 2002/2003 school year. In accordance with BC MED policy, we recoded these three designations for consistency with the other school years of data:

- **J** became **Q**: Learning Disabilities
- Both **M** and **N** became **R**: Moderate Behaviour Support/Mental Illness.

Most Common Special Needs Designation

The lengthy data meant that individual students' special needs designation(s) could vary over time. For analytical purposes, we identified students' records with their *most frequently assigned* special needs designation. In cases of ties between two or more designations, we used the specific special needs designation yielding the higher/highest funding level. (See [Table 1: The BC Ministry of Education's Special Needs Designations](#)).

As general disclaimers about all our reports: Although the large majority of students have a consistent special needs designation over time, some students may not have a consistent special needs designation over time (i.e., their designation may change over time). Also, for the large majority of students, their first/initial special needs designation is also their most common designation. In some cases, however, students' first/initial designation may not be the same as their most common designation.



Most Common School District

The lengthy data also meant that the school district(s) that individual students attended over time could vary. For analytical purposes, we identified students' records with their *most frequently attended* public school district. In cases where students attended, for example, two school districts with equal frequency over time, we assigned 50% of the students to the first of the two districts they attended and the other 50% of students to the second of the two districts they attended.

Reports

We created three reports to meet the most requested topics by our 71 survey participants. They include:

- **High School Completion:** whether students with special needs and disabilities are completing high school and, if so, with which credential;
- **Grade-to-Grade Transition:** at what pace, over time, students with special needs and disabilities are progressing through grade levels; and
- **Time to Designation:** the number of school years until students with special needs and disabilities receive their first/initial special needs designation.

Each report presents our findings and interpretations, as well as fuller descriptions.

As a general disclaimer about all our reports: Population counts and outcome measures within our reports will differ from those reported by the BC Ministry of Education, as our reports follow specific cohorts of students over time, whereas Ministry reporting allows for students to enter and exit cohorts.

Masking Rules for Low Sample Sizes

In accordance with BC MED policy, we have created district-level reports for all public school districts, and whose total count of students with special needs and disabilities was 10 or greater. We could not produce district-level reports for districts with nine or fewer students with special needs, as it could possibly identify individual students. In such cases, districts received only province-level reports.

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Even if the total count of students with special needs and disabilities in a particular district was 10 or greater, we were still required to mask (not display) a particular designation's results from the report(s) if the district sample size for that designation was nine or fewer. In contrast, if the designation-specific sample size was 10 or greater, masking was not required and the results could be fully displayed.

Province-level reports represent all releasable district-level data compiled to the level of the province.

Conclusion

Our goal in this Methodology Fact Sheet was to clearly explain the details of the customized collection of BC MED data we explored as part of our SPECIAL EDUCATION IN BC: A POPULATION-BASED INVESTIGATION project, as well as our chosen analyses. If you have any questions or comments about this document or the reports, we welcome you to get in touch with us. Our contact information is below.

For Further Information about this Fact Sheet or the Reports:

UBC's Supporting Progressive Inclusive Child-centred Education (SPICE) Lab

Telephone: 604-822-7496

Email: spice@nursing.ubc.ca

Twitter: @InclusiveEdn

Download the Province-Level Reports at:

<http://spice.nursing.ubc.ca/>

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Methodology Fact Sheet Prepared by:

Jennifer E.V. Lloyd, Ph.D., Research Associate

Jennifer L. Baumbusch, Ph.D., R.N., Associate Professor

School of Nursing

University of British Columbia

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