Enrolment Projection Methodology

Enrolment Projections are a reflection of the enrolment trends expected for the next 10 years, within a family of schools (FOS) and Board wide. The KPR Planning Services Department uses the Baragar Systems (https://baragar.com) customized software program to track and analyze data, and to generate projections.

Data sources for generating projections include:

- The Provincial Birth Registry current and historic files,
- Canada Revenue Agency's current and historic Canada Child Benefit databases,
- Current enrolment, which is the starting point for a projection and is based on the enrolment as of October 31st of a given year,
    - Grade to grade retention rates which are applied to current enrolment to generate future enrolment,
    - Feeder flow methodology that reflects student movement within the school system and programs,
- Additional data can be incorporated based on an area's specific circumstances (i.e., a new housing project and the expected pupil yield.

Birth Data

Forecasting the number of junior kindergarten (JK) students is challenging because unlike senior kindergarten to grade 12 forecasts, which use current enrolments (children already in the school system) to create the forecast, junior kindergarten forecasts attempt to predict the number of children that will enter the school system.

The Provincial Birth Registry (Department of Vital Statistics) is the data source for the annual number of births for the past 20 years. Trends vary significantly from school to school, and because the projections are done at the school level, birth projections are the first step in the enrolment projection methodology.

Population of Children by single year of age (ages 1 to 17)

Canada Revenue Agency databases (i.e., Child Tax Benefit, Universal Child Care Benefit and Canada Child Benefit) are the data sources for the annual number of children aged 1–17 by single year of age (1, 2, 3, 4, etc.). From this information, Baragar Systems is able to determine the number of school aged children living in a school's catchment area. Further, Baragar Systems uses this data to calculate the net impact of migration annually by age group. This quantifies the net impact of migration resulting from the new families moving into the area and into new housing as well as used housing, versus those moving out. Assumptions about future migration by age group form the second part of the projection methodology.

The current population from age 0 to age 17 is "aged" by applying "age group-specific" migration rates to the current population. This results in a projection of the number of children for each year of age for each of the next 15 years. This base population projection is the key variable affecting enrolment projections.

Enrolment by School, Grade, and Program

The source of data is the Student Information System (SIS) of the Board.

Grade-To-Grade Retention Rates

The grade-to-grade retention rates capture any enrolment gains or losses at a school by comparing the number of current students in a specific grade to the number of students in the previous grade in the previous year. The grade-to-grade retention rates most objectively reflect growth trends in a particular area such as the movement of families into and out of an area, new residential housing construction, and student transfers to and from the KPRDSB system.

The Baragar Systems program tracks historic student movements, and summarizes the grade-by-grade, year-by-year, progression of students. Average retention rates for each grade at each individual school are generated and applied to current enrolments to create a forecast.

"Feeder Flow" Methodology

"Feeder flow" reflects the student movement between schools and school systems, or programs, such as grade 8 students moving to grade 9 or junior kindergarten students moving into senior kindergarten French Immersion program. For example, if there are currently 30 grade 8 students at an elementary school and 28 proceed to a certain secondary school the next year, the feeder flow between that elementary and secondary school is 93%. For secondary school projections, the feeder flows are averaged and applied to the grade 8 feeder schools to generate the projected number of grade 9 students for a specific secondary school the following year.

New Housing Development

Tracking and monitoring new housing development is important to ensure enrolment projections reflect future growth, and it allows the KPRDSB to proactively plan for areas of the Board's jurisdiction where new growth Is occurring. The KPRDSB Planning Services staff regularly obtain building permit and planning information for new housing developments from local municipalities and site visits. Enrolment projections can be adjusted using a pupil yield to estimate the number of future students expected at a given school from new housing development.

A pupil yield is the number of students the KPRDSB school receives from a particular housing type, age, and geographic area. Pupil yields have been derived for both the elementary and secondary panel for different geographic regions by Watson & Associates Economists Ltd.

Pupil yields can then be used to calculate the projected number of students from a new development that are over and above what is captured by retention rates. The number of residential units in each new development plan is multiplied by the associated pupil yield to generate a projected number of students over the years. The projected number of additional students in each year is then distributed across the grades in the projection.