

# Grade Level of Achievement: 2007-08 Report on Programs

## Highlights

### Background

This Brief describes the processes and outcomes associated with the 2007-08 Grade Level of Achievement (GLA) reporting based on the full, province-wide implementation of the GLA initiative. GLA information reported to Alberta Education is a classroom teacher's judgment of students' academic progress. GLA reported to Alberta Education is based on the learner outcomes in language arts and mathematics after a course for a specific grade level has been completed and reflects the results from the full range of classroom assessments. Given the comprehensiveness of classroom-based assessment, analysis of GLA data provides additional insights into factors that influence student achievement for students served by a range of specially focused programs. Furthermore, GLA data represent a useful, "continuous" supplement to the periodic student achievement results generated by provincial achievement tests (PATs).

The purposes for reporting GLA as defined in the GLA Handbook (Alberta Education, 2006) are to:

- provide richer information at the school, school jurisdiction and provincial levels to inform effective practices to determine the impact of specific programs on student learning (e.g., English as a Second Language, special education, etc.) and to determine processes to further refine these programs;
- use GLA as a catalyst within the school's professional learning community to focus on individual student learning needs and interests;

- determine effective practices and strategies to foster higher levels of student achievement and confidence; and
- contribute to the evidence used to report student achievement to parents/guardians, fulfilling the school's responsibility as outlined in the *Guide to Education: ECS to Grade 12* in the section entitled *Assessment as the Basis for Communicating Individual Student Achievement*.  
<http://education.alberta.ca/media/832568/guidetoed.pdf>

This report summary presents the general outcomes of the analysis of 2007-08 GLA data at the provincial level to inform the program planning and evaluation needs of Alberta Education as well as school and central office based administrators. Key purposes of reporting GLA to parents and to Alberta Education include identifying students who are under-achieving, asking why and providing solutions both individually and systemically. There are several specific benefits in reporting GLA to Alberta Education including:

- GLA shows parents how well students are achieving when compared to set learning objectives.
- GLA provides schools, school boards and the Province ways to measure the effectiveness of education programs targeting special groups like English as a Second Language (ESL) students and students with special needs.
- GLA results examined with respect to gender differences, student mobility, and student birth month show how the education needs of students can be better met if these factors are shown to be negatively affecting achievement.

- GLA enables Alberta Education and educators to improve assessment of student performance.
- GLA requires Alberta Education to be more accountable to Albertans in providing an excellent education system.

## **Key Findings from the 2007-08 Analysis**

In all, notable progress was made during the 2007-08 year of GLA implementation compared to the pilot (2006-07) year. For example:

- Usable GLA data were submitted on 353,815 students from 1,602 schools in 2007-08, compared to 220,682 students from 923 schools in 2006-07.
- The degree of school participation in the 2007-08 was 96.2 percent.

As expected, and similar to the 2006-07 analysis, the 2007-08 data demonstrate less variation for the total group than for specific sub-groupings of students. For example, students achieving at or above grade level in English Language Arts and Mathematics differed widely between students coded with severe or mild/moderate disabilities (55 to 63 percent), Canadian and foreign-born ESL students (77 and 86 percent), non-coded students (92 to 94 percent) and lastly, gifted students (98 to 99 percent).

In addition, the following differences were observed.

### ***GLA Results for Students Coded with Different Types of Disabilities***

- The percentages of students attaining at or above grade level varied substantially by specific types of severe or mild/moderate disability.
- In line with previously gathered GLA data, nearly three times as many males as females were coded with severe disabilities and

almost twice as many males were coded with mild/moderate disabilities compared to females. At the same time, males coded with different types of disabilities generally (with a few exceptions) tended to outperform coded females on GLA.

- Slightly higher percentages of mildly or moderately disabled students achieved at or above grade level in 2007-08 compared to 2006-07, while their severely disabled counterparts showed a reversed trend. However, the comparative trend analysis was based on a partial data set (about 60 percent of schools reported GLA data in 2006-07), and also embraced only two consecutive years of data collection.
- Coded groups of students (especially those with mild/moderate disabilities and Canadian and foreign born ESL) tended to perform better in Mathematics than in English Language Arts.

### ***GLA Results for Gifted Students***

- Students coded as gifted were also more likely to achieve above grade level in Mathematics. A much higher percentage of these students continue to be assessed above grade level in Mathematics than in English Language Arts or French Language Arts. Available trend data over two years points to higher percentages of gifted students performing above their enrolled grade levels in 2007-08 compared to 2006-07, both in English Arts and Mathematics. This could be an indicator of improved programming and/or more appropriate grade placement of these students.

### ***GLA Results for ESL Students***

- When comparing foreign-born and Canadian-born ESL students, both groups of students performed at a similar level in Mathematics. With previous (2006-07) GLA reporting Canadian-born ESL students appeared to be at an advantage in English Language Arts. However, the currently

available two-year trend data did not confirm this finding. Recent 2007-08 data indicate similar percentages of Canadian and foreign-born ESL students achieving at grade level in English Language Arts, and suggest foreign-born ESL students are closing the gap with their Canadian-born counterparts.

#### ***Gender-based Variations in GLA Data***

- Aligned with findings obtained with previously collected data, females slightly outperformed males on GLA (three to five percent more of them were at or above grade level compared to males).

#### ***Grade-based Variations in GLA Data***

- The percent of students below grade level increased through the elementary grades and peaked at Grades 8 and 9. Initial two-year trend data revealed subject-based variations in this pattern. While the percentage of students below grade level increased with grade for Mathematics, the proportion of students below grade level decreased with grade for English Language Arts. This finding is compatible with other quantitative and qualitative evidence pointing to the issues related to lower achievement in Mathematics in junior-high.

#### ***Variations in GLA Data Depending on the Extent of Student Mobility or Transiency***

- High mobility students change schools more often than low mobility students. Similar to results obtained using past GLA data, the negative effect of high mobility on student achievement was evident in 2007-08 GLA results. The differences between high and low mobile students with GLA below grade level ranged from five to over ten percent, depending on grade and subject.

#### ***Age Effect in GLA Data***

The age effect<sup>1</sup> was apparent in English Language Arts 2007-08 GLA data, especially in Grades 1 and 2. After Grade 3 the age effect tapered off. This relationship also unfolded in a similar way in the 2006-07 GLA data, with the only difference that it was more notable for Grade 3 and extended to Grade 5. These preliminary trend results confirm that the age effect is most apparent in early elementary grades.

#### ***The Results of Comparison of GLA and PAT Data***

- The results of comparisons between GLA and PAT outcomes for Grades 3, 6 and 9 bear much similarity to the findings in the previous GLA reporting period. Overall, there was almost 80 percent alignment between students assessed at or above grade level of achievement and earning acceptable or excellence on provincial achievement tests. The previously observed large difference between Grade 9 Mathematics Provincial Achievement Test data and GLA (only 65 percent congruence) was also observed in the recent 2007-08 GLA data. This phenomenon warrants further trend observations and analysis of why large gaps between GLA and PAT assessment results tend to occur in Grade 9 Mathematics.

## **Implications and Recommendations**

#### ***Use of This Report***

Using GLA data as a benchmark, jurisdiction and school staff may wish to compare the data in school and school jurisdiction GLA reports over time or in relationship to provincial results. This

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<sup>1</sup> Age effect is defined as older students in a grade tending to have higher average test scores than the younger students in that same grade when measured by the average PAT results for each birth month group (Alberta Learning, 2001).

can support conversations in professional learning communities and with school councils and parents regarding promising practices that have been demonstrated to improve student achievement in specific settings or may point to program areas requiring further reflection to improve student results.

### ***Opportunities for Enhanced Dialogue***

GLA data can be applied as a useful and complementary supplement to PAT outcomes. GLA provides important consistent information that would not otherwise be available for students in grades not tested by PATs. GLA also can be used on its own in grades not tested with large-scale assessments to interpret patterns and trends in student achievement, depending on the context and/or decision-making needs.

This report points to a number of potential questions that may benefit from further reflection within schools, jurisdictions, stakeholder organizations and Alberta Education. For example:

- Why is the proportion of male students coded with a severe disability so much higher than female students? Also, why do males coded with severe as well as mild/moderate disabilities tend to perform at a somewhat higher level on GLA compared to females?
- Why are gifted students more likely to have a GLA above their enrolled grade in Mathematics than in Language Arts?
- What strategies might be most effective in offsetting the negative effect of mobility on student achievement?
- What instructional adaptations might be helpful in minimizing the age effect in the early grades?
- Does the Grade 9 PAT in Mathematics or the GLA for Mathematics 9 represent the best predictor of subsequent high school Mathematics achievement?

The following implications based on GLA data analysis include, but are not limited to the following examples:

- Similar GLA progress among some groups of students coded as severely disabled and mildly/moderately disabled may point to the lack of consistency in the coding standards and procedures across the system. This finding may reflect the complexity of the learning profiles of individual students potentially combined with the fact that individuals may have multiple challenges. These patterns support the current provincial initiative targeting review of current research and best practices as well as input from Albertans in order to build a more effective special education policy framework.
- Relatively better progress by males, who represent the vast majority of the student population coded with various types of disabilities in comparison to females, may be due to the lack of special programming and attention to the needs of relatively fewer coded females or perhaps a phenomenon of over-coding of male students.
- Relative higher degree of success in Mathematics GLA in students coded as ESL or gifted in comparison to English Language Arts may be due to a number of factors. For example, it could be an indication of various language (learning) deficiencies among ESL students which support the need for an enhanced focus on language and literacy. The observed discrepancies for gifted students may be due more to curriculum issues as opposed to ability levels of these students. This possibility would lend itself to further research.
- Periodic comparisons of GLA data with PAT results (Tables 33 and 34 in the full report) may represent a useful exercise for identification and examination of issues that

would otherwise go unnoticed if only PAT data were taken into consideration. For example:

- The “discrepancies” in GLA and PAT results point to issues such as differences between teacher awarded and provincially determined marks or sources of internal and/or external bias in the provincial achievement tests. However, it would be useful to try to gain a more detailed understanding of why some students who “passed” GLA fall below the acceptable standard on PATs or vice-versa. There could be various underlying issues that explain differences between GLA and PAT results.
  - Given that student achievement in Mathematics has been a persistent issue in junior and senior high grades, it is imperative that the reasons for a large inconsistency between GLA and PAT results for Grade 9 Mathematics are uncovered.
  - GLA data is valuable for both trend and comprehensive examination of student achievement complementary to PAT results as useful check points.
- Finally, collection and analysis of GLA data raises general questions about assessment theory and practices, including standards and comparability of GLA data. Since teaching practices vary a lot in terms of methods and practices (that can depend on individual groups of students), it would be difficult and undesirable to “uniformly standardize” GLA assessment techniques. At the same time, it would be useful to support excellent assessment approaches and methodologies that would improve comparability and consistency of GLA data coming from different sources. This would require introducing consistent professional

development training and preparation in assessment for already practicing and future teachers. The concurrent Alberta Student Assessment Study will provide further insight to this issue.

#### ***Future Data Collection and Analysis***

Additional analysis of GLA results in relationship to 2006 census data will be available later in 2009 to provide an indication of the extent to which socio-economic status variables influence student achievement

#### ***Copies of the full report***

The full report may be obtained on-line at the Alberta Education Website at

<http://education.alberta.ca/admin/resources/gla.aspx>

#### ***Further Information***

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